

## Chapter 3

# Funding of school education in Estonia

*This chapter is about the funding of school education. It deals with the level of resources available for school education and revenue sources. Furthermore, it discusses budget planning, the monitoring of funds' use as well as incentives for the effective use of school funding. The chapter places particular emphasis on areas of priority for Estonia such as the low levels of public expenditure on education, funding incentives to improve the effectiveness of the school network, equity implications of funding approaches, and the public funding of private schools. The chapter also reviews the autonomy of schools over the use of their funding, the management of school budgets and the use of EU structural and investment funds.*

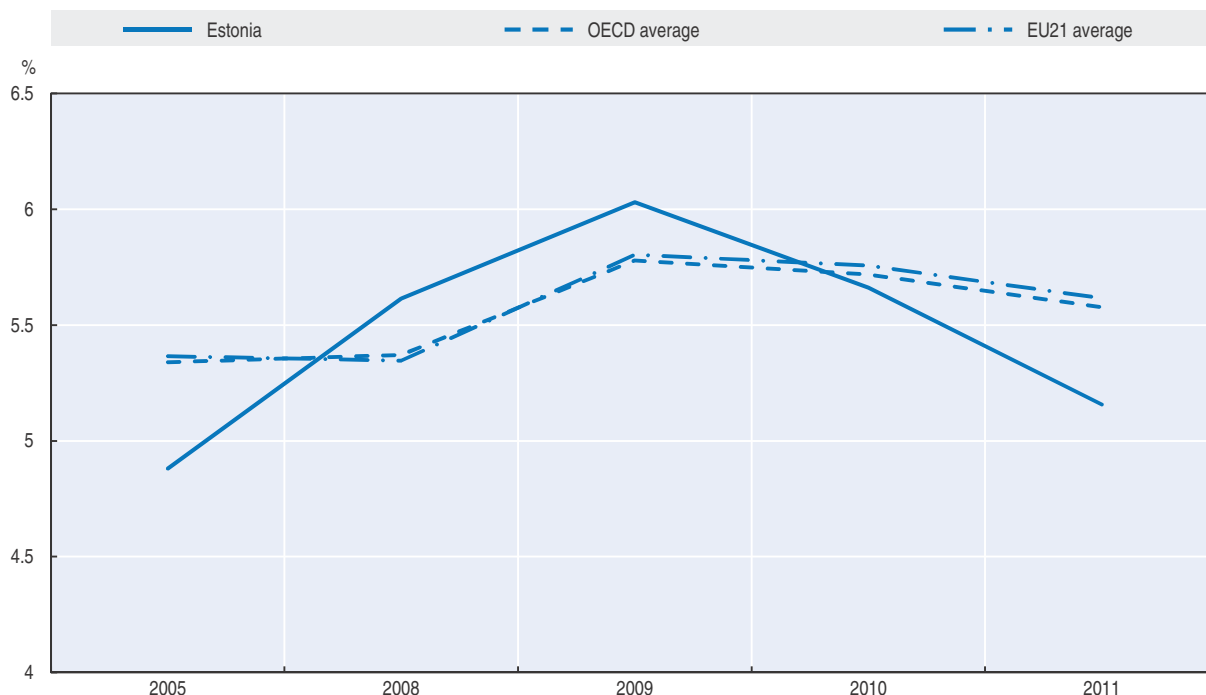
This chapter is about the funding of school education. It deals with the level of resources available for school education and revenue sources. Furthermore, it discusses the planning of resource use (e.g. definition of priorities and targets, distribution of responsibilities for resource use); the monitoring of resource use (e.g. audit systems); transparency and reporting; as well as incentives for the effective use of resources. In addition, it analyses the distribution of funding between the different levels of the administration (e.g. central and local) and between individual schools (e.g. through funding formulas and special targeted programmes). In addition, the chapter places special emphasis on funding incentives to improve the effectiveness of the school network and the efficiency of vocational education and training, while analysing the equity implications of funding approaches.

## Context and features

### *Expenditure on education*

Between 2005 and 2011, public expenditure on education in Estonia fluctuated between 5% and 6% of GDP. Between 2008 and 2010, it rose as the economy contracted while education spending remained stable (see Figure 3.1). Public education spending as a

Figure 3.1. **Public expenditure on education as a percentage of GDP, 2005-11**

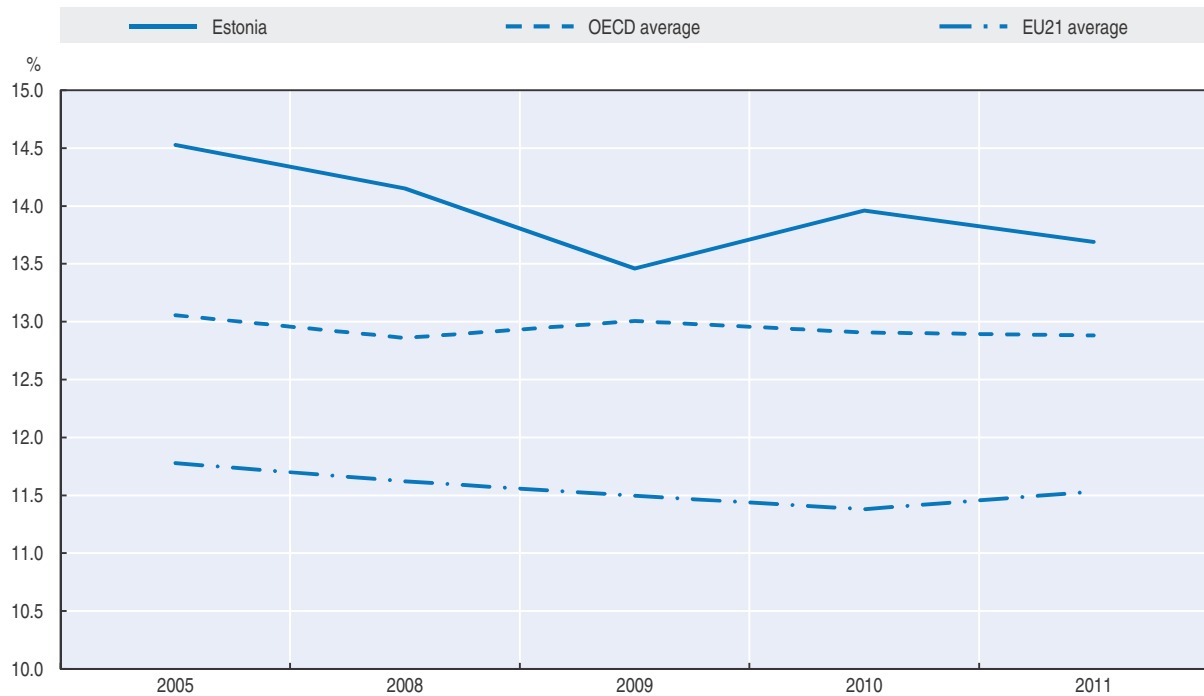


Notes: Public expenditure on education includes pre-primary, primary, secondary and tertiary education. It also includes public subsidies to households for living costs (scholarships and grants to students/households and students loans), which are not spent on educational institutions. EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which the data are available or can be estimated.

Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, <http://dx.doi.org/10.1787/eag-2014-en>, Table B4.2.

percentage of total public spending has declined from over 14.5% in 2005 to about 13.5% in 2011 (see Figure 3.2). While public education spending as a percentage of GDP is below both the OECD and EU21 averages, public education spending as percentage of total public expenditure is above the average for both OECD and EU countries (see Figures 3.1 and 3.2).

Figure 3.2. **Public expenditure on education as a percentage of total public expenditure, 2005-11**



Notes: Public expenditure on education includes pre-primary, primary, secondary and tertiary education. It also includes public subsidies to households for living costs (scholarships and grants to students/households and students loans), which are not spent on educational institutions. EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which the data are available or can be estimated.

Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, <http://dx.doi.org/10.1787/eag-2014-en>, Table B4.2.

### Sources of funding

The vast proportion of funding for school education comes from the public sector – 98.4% for pre-primary education and 98.9% for primary and secondary education, percentages which are above the OECD and EU21 averages, as can be seen from Table 3.1.

### Funding across education levels

Figure 3.3 shows public expenditure as a share of GDP by level of education in 2011. It shows that Estonia, as a percentage of GDP, spends relatively less than other OECD and EU member states in pre-primary, primary and secondary education. Public spending on tertiary education is similar in to OECD and EU21 averages but is likely to increase with the 2013 decision to eliminate tuition fees in tertiary education.

Per student spending for all levels of pre-tertiary education in Estonia is between 64% and 82% of the OECD average, except for pre-primary education where it is only 35% of the OECD average (see Table 3.2). Estonia – like most OECD countries – spends more per student on secondary education than per student on primary education. Indeed, per student spending on upper secondary education in Estonia is slightly higher relative to primary

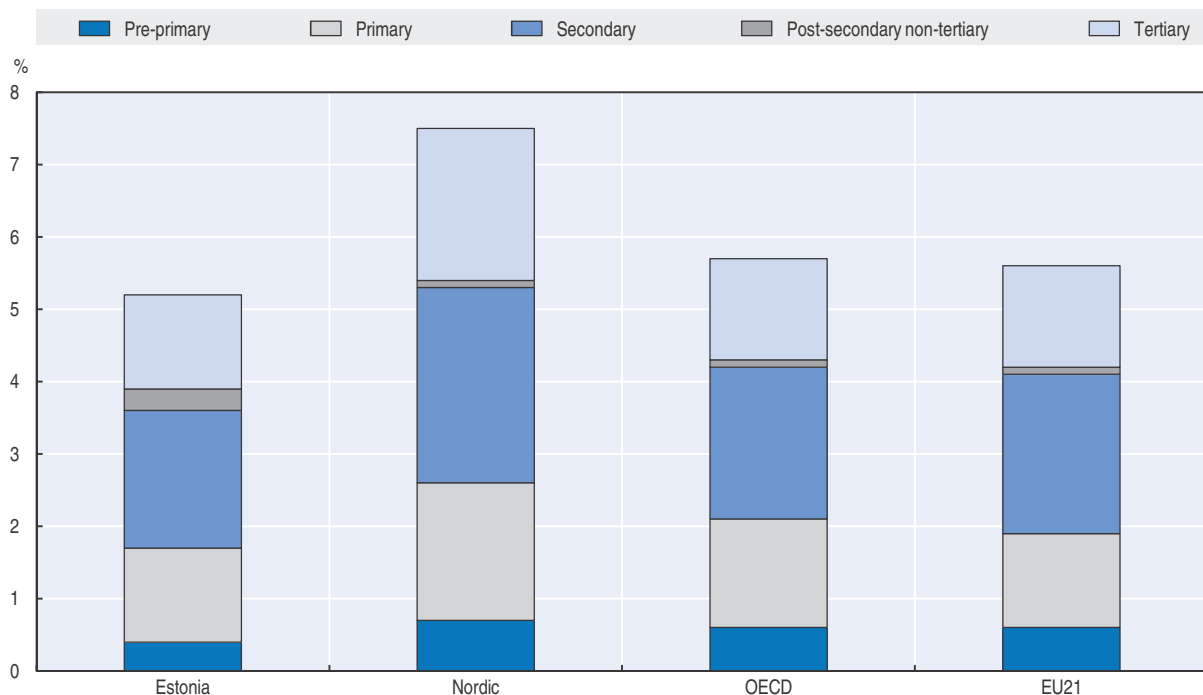
Table 3.1. **Percentages of public and private funding of education, 2011**

	Pre-primary education			Primary, secondary and post-secondary non-tertiary education			
	Public sources	Private sources		Public sources	Private sources		Private: of which, subsidies
		Household expenditure	All private sources		Household expenditure	All private sources	
Estonia	<b>98.4</b>	1.2	<b>1.6</b>	<b>98.9</b>	0.9	<b>1.1</b>	..
OECD average	<b>81.6</b>	..	<b>18.7</b>	<b>91.4</b>	..	<b>8.6</b>	0.9
EU21 average	<b>87.1</b>	..	<b>12.9</b>	<b>93.9</b>	..	<b>6.1</b>	1.1

Notes: "All private sources" includes subsidies to educational institutions received from public sources. EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which the data are available or can be estimated.

.. Not available.

Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, <http://dx.doi.org/10.1787/eag-2014-en>, Table B3.1.

Figure 3.3. **Public expenditure by level of education as a share of GDP, 2011**

Notes: Public expenditure on education includes public subsidies to households such as grants and scholarships. EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which the data are available or can be estimated. Nordic average is the unweighted mean for Denmark, Finland, Iceland, Norway and Sweden.

Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, <http://dx.doi.org/10.1787/eag-2014-en>, Table B4.6.

education than is the average for the OECD. It should also be noted that expenditure per student in upper secondary vocational programmes is higher than in upper secondary general programmes, reaching 82% of average OECD spending. Expenditure per student in secondary vocational programmes relative to expenditure per student in primary education is well above the equivalent ratio for the OECD area. This indicates that vocational secondary education is relatively well resourced in the Estonian context. Also, public expenditure in pre-primary education in Estonia relative to public expenditure in pre-tertiary education is considerably smaller than in the OECD area (see Table 3.2).

Table 3.2. **Expenditure per student, by level of education, 2011**

	Estonia				OECD average			
	Total expenditure		Public expenditure only		Total expenditure		Public expenditure only	
	Expenditure per student	Ratio to pre-tertiary education	Expenditure per student	Ratio to pre-tertiary education	Expenditure per student	Ratio to pre-tertiary education	Expenditure per student	Ratio to pre-tertiary education
Pre-primary education	2 618	0.43	2 573	0.56	7 428	0.84	6 043	0.76
Primary education	5 328	0.88	..	..	8 296	0.94	..	..
Lower secondary education	6 009	0.99	..	..	9 337	1.05	..	..
Upper secondary education	6 688	1.10	..	..	9 506	1.07	..	..
Upper secondary education – general programmes	6 153	1.02	..	..	8 613	0.97	..	..
Upper secondary education – vocational programmes	7 651	1.26	..	..	9 307	1.05	..	..
Pre-tertiary education (excluding pre-primary)	6 055	1	5 974	1	8 868	1	7 996	1
Tertiary education	7 868	1.30	5 405	0.90	13 958	1.57	9 221	1.15

Notes: Expenditure per student in USD converted using purchasing power parity (PPP) for GDP.

.. Not available.

Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, <http://dx.doi.org/10.1787/eag-2014-en>, Tables B1.1a and B3.3.

### **Funding across resource types**

Spending on staff compensation as a percentage of total current expenditure for both primary and secondary education is low in comparison to OECD countries (see Table 3.3). This is largely because the salaries of Estonian teachers are relatively low and not because student/teacher ratios are high. In fact, student/teacher ratios have fallen significantly over the last 15 years and are now low (see below). Capital expenditure on the other hand is high in comparison to the OECD average, particularly at the secondary school level (see Table 3.3). Much – though certainly not all – of the high level of investment in secondary education is the result of national government efforts to modernise vocational education and training, relying on structural and investment funds from the European Union.

Table 3.3. **Compensation of staff and capital expenditure as shares of current and total expenditure, primary and secondary education, 2011**

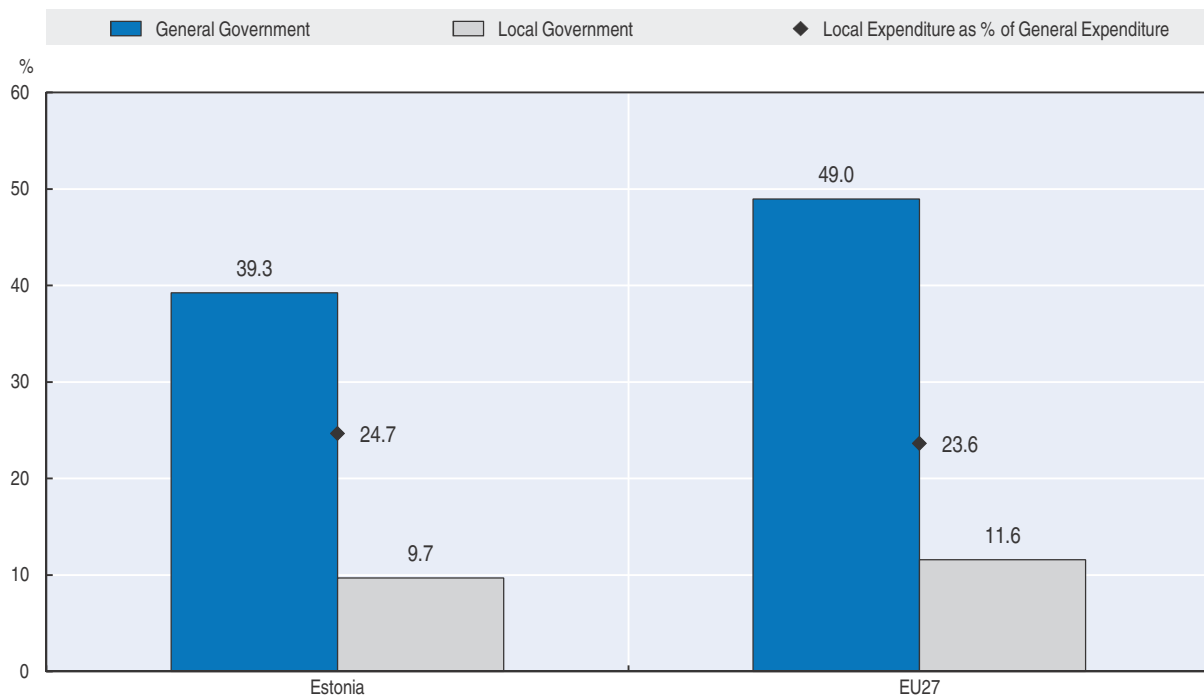
	Primary education		Secondary education	
	Estonia	OECD average	Estonia	OECD average
Compensation of all staff as percentage of current expenditure	74	80	71	78
Capital expenditure as percentage of total expenditure	9	7.7	17	7.1

Source: Authors' own calculations based on Eurostat (no date), *Classification of the Functions of Government (COFOG)* database, [http://ec.europa.eu/eurostat/statistics-explained/index.php/Government\\_expenditure\\_by\\_function](http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_expenditure_by_function).

### **Local governments play a key role in governing and funding school education**

#### **Estonia combines a small size of government with a commitment to the local governance of schooling**

Local governments play a critical role in financing and managing Estonia's school education and the fiscal instruments used to finance local governments and to finance schools are deeply intertwined. Figure 3.4 presents local government expenditure as percentage of total public expenditure and of GDP for the period 2008-12 for Estonia and the 27 member states of the European Union (EU) in 2012. As can be seen from the figure, Estonia's public sector is considerably smaller than the average for the EU as a whole. Nonetheless, Estonian local governments are responsible for a higher share of public expenditure than the average EU member state.

Figure 3.4. **General and local government public expenditure as a percentage of GDP, average 2008-12**

Note: EU27 includes all European Union member states except Croatia, for which data are not available for the period 2008-12.

Source: Authors' own calculations based on Eurostat (no date), *Classification of the Functions of Government (COFOG)* database, [http://ec.europa.eu/eurostat/statistics-explained/index.php/Government\\_expenditure\\_by\\_function](http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_expenditure_by_function).

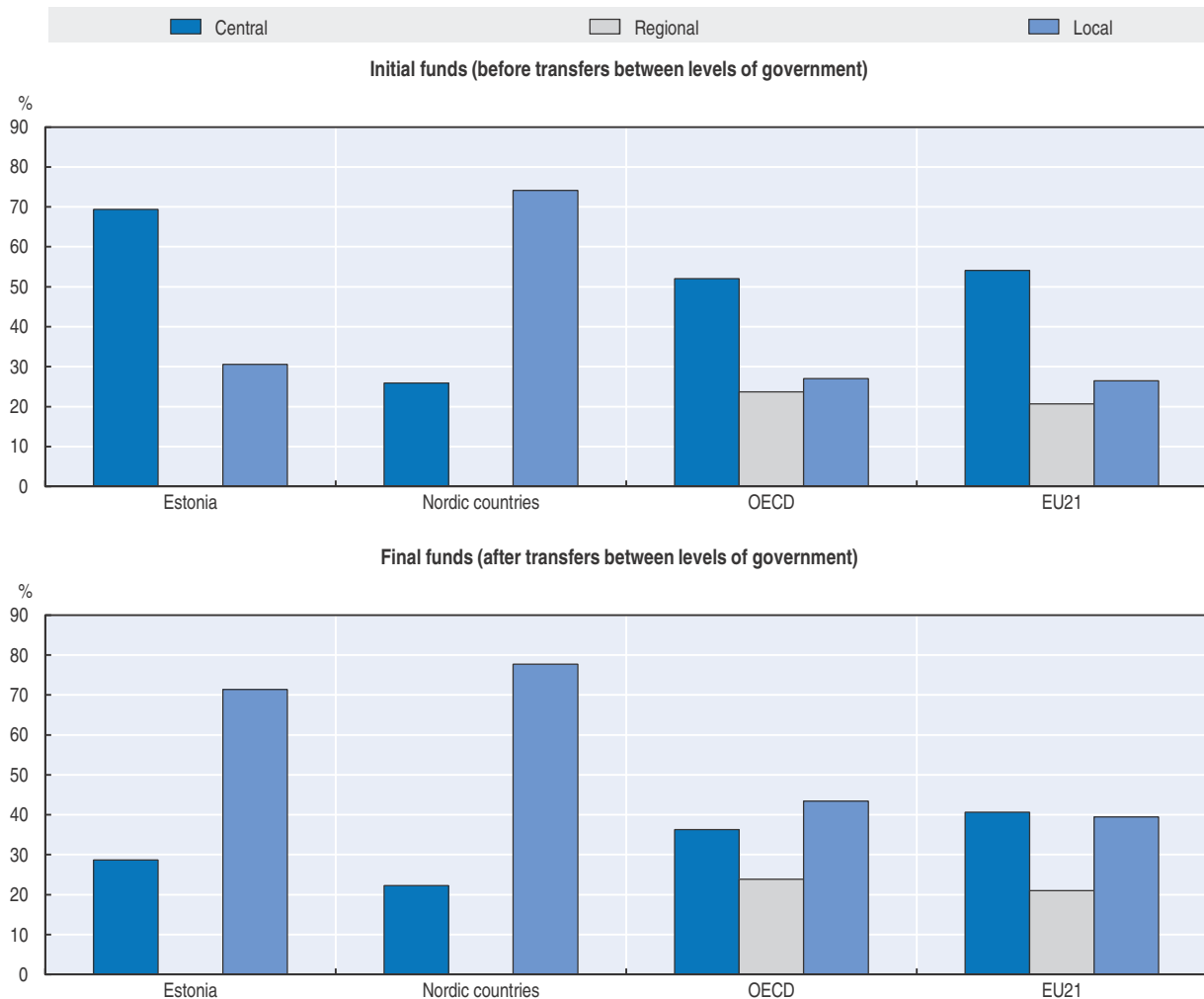
Education is largely responsible for the high share of local expenditure in total public expenditure. This can be seen in Figure 3.5, which shows the sources of public funds for pre-tertiary education, in 2011. In Estonia, local expenditure on education, both as a share of initial funds (before transfers between levels of government) and as a share of final funds (following those transfers), is above the OECD and EU averages. In particular, after transfers between levels of government, as in the Nordic countries, a significant share of public expenditure on pre-tertiary education in Estonia comes from local governments (about 70%).

It is thus fair to say that Estonia has succeeded in combining a relatively conservative posture towards the overall size of government with an admirable commitment to both public education and decentralised governance.

#### ***Education constitutes the single largest expenditure of local governments***

Education constitutes the single largest expenditure of local governments and has consistently accounted for between 35% and 38% of all local spending. Local governments fully finance pre-primary education – including teachers' salaries – out of their general revenues. For primary, secondary, and special education they receive earmarked grants from the national government to support, for example, the salary costs of educational personnel, school lunches, and textbooks (see below). There are no charges to students for textbooks, school lunches, or student transportation. With the exception of pre-primary education, there are no fees in public schools. Privately-run schools receive public funding on the same terms as public schools and can also charge tuition fees.

Figure 3.5. **Sources of public funds for primary, secondary and post-secondary non-tertiary education, 2011**

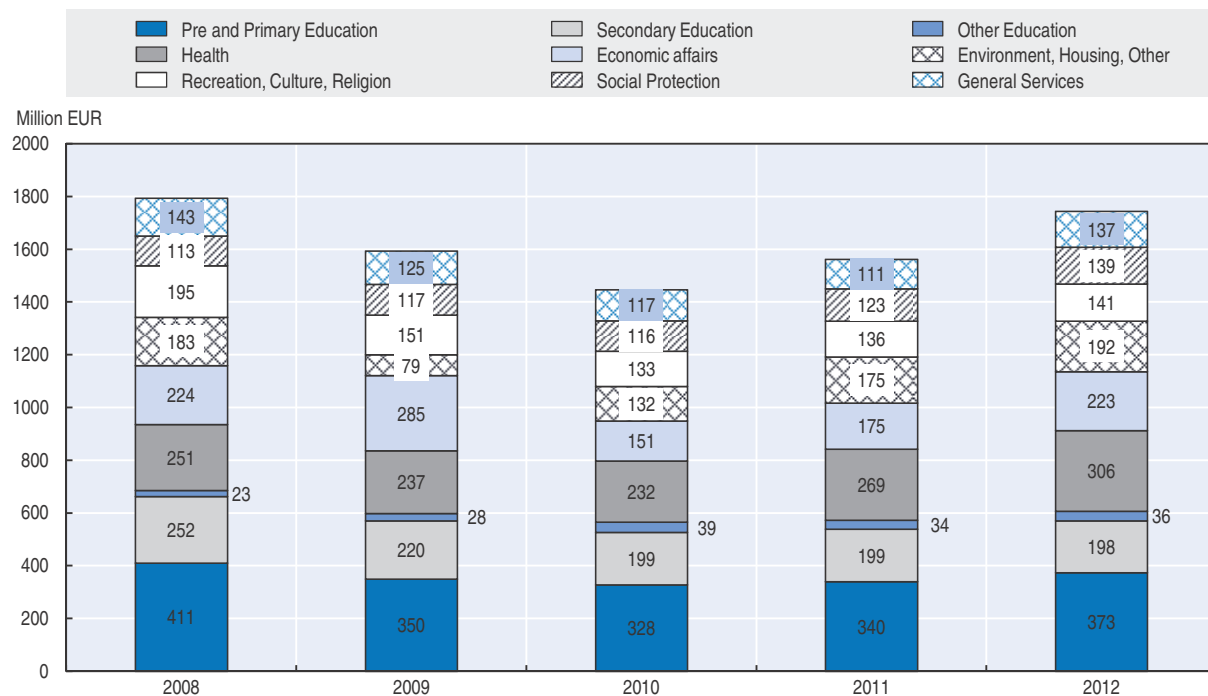


Notes: Nordic average is the unweighted mean for Denmark, Finland, Iceland, Norway and Sweden. EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which the data are available or can be estimated. The Nordic average for “Initial funds” excludes Denmark and Sweden, for which data were not available. The Nordic average for “Final funds” excludes Sweden, for which data were not available. “Regional” values for Estonia and Nordic countries are nil.

Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, <http://dx.doi.org/10.1787/eag-2014-en>, Table B4.3.

Earmarked grants from the national government accounted for about 55% of all municipal spending on primary and secondary education in 2012. On a per student basis, these grants have grown from EUR 795 per student in 2006 to EUR 1 376 in 2012 (in nominal terms). Over the same period, total local government spending per student increased from EUR 1 584 to EUR 2 468 (in nominal terms) (Ministry of Education and Research, 2015a).

Between 2008 and 2012 expenditure on pre-primary and primary education accounted for between 20 and 23% of total local spending while expenditure on secondary education accounted for between 11 and 14%. Spending that cannot be accounted for by level of education constituted another 2% to 3% of total local expenditure (see Figure 3.6). Spending on pre-primary, primary, and secondary education includes some spending on special education, some of which is provided in mainstream general schools and some in 13 municipally-run special education schools (SEN schools). Local expenditure on

Figure 3.6. **Composition of local government expenditure, in million EUR, 2008-12**

Source: Authors' own calculations based on Eurostat (no date), *Classification of the Functions of Government (COFOG)* database, [http://ec.europa.eu/eurostat/statistics-explained/index.php/Government\\_expenditure\\_by\\_function](http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_expenditure_by_function).

secondary education is typically limited to general education *gymnasiums* because the national government runs all but 3 of the 32 public Vocational Education and Training schools (VET schools). As can be seen from Figure 3.6, local government expenditure, including spending on education declined sharply in the wake of the global economic crisis of 2008-09, but has slowly recovered over the last few years.

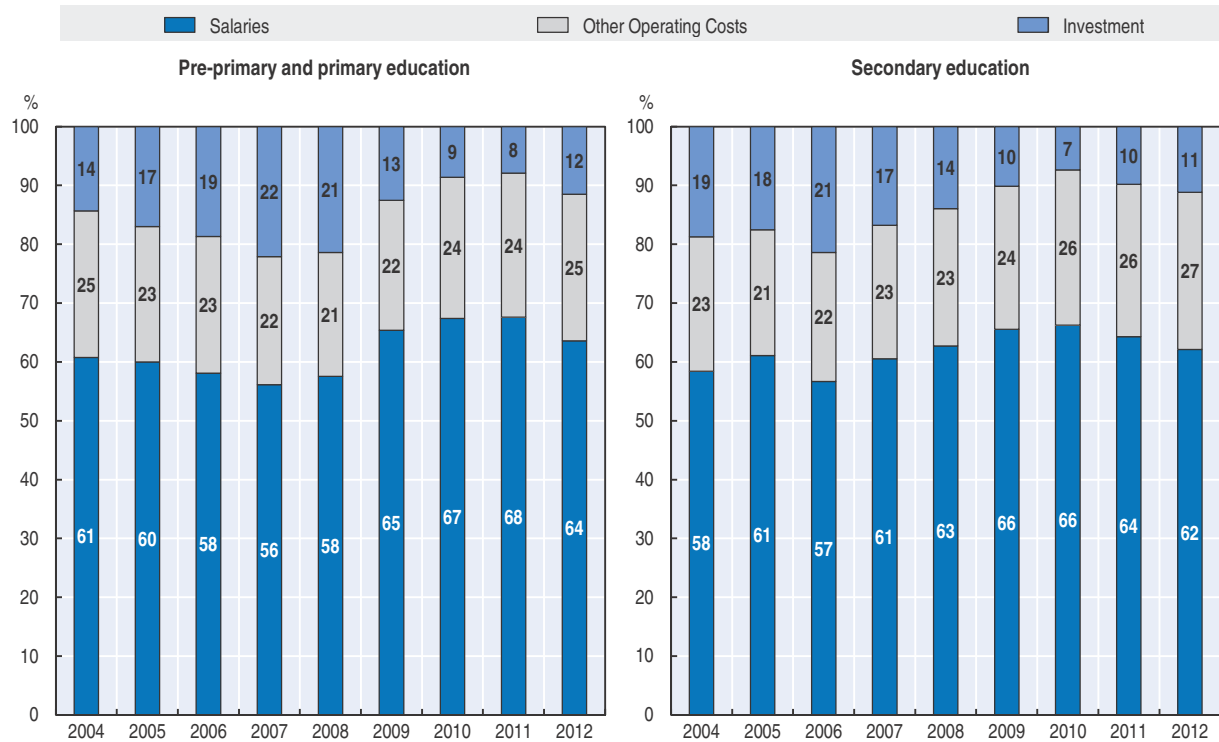
As can be seen from Figure 3.7, the share of investment in total local government spending on both primary (including pre-primary) and secondary education has fallen since 2008. In part this decline reflects the fiscal difficulties that came with the economic downturn. But recent increases in the minimum salaries of teachers and the rising costs of maintaining underutilised facilities have also contributed to the decline in investment. Nonetheless, teachers' salaries as a share of total expenditures on primary and secondary education remain on the low end of the international spectrum with most OECD countries devoting more than 70% of education expenditures to salaries. It is also worth adding that the share of investment spending is probably understated (in relation to operating costs) because some large municipalities (e.g. Tallinn) have made extensive use of leasing arrangements to purchase and or refurbish school facilities.

### ***Local governments are highly dependent on grants and transfers from the national government***

Estonian local governments are very dependent on the national government for their revenues and more than 80% of their budgets come from grants and transfers. This can be seen from Figure 3.8 which shows the composition of local government revenues in 2013. Almost 50% of local revenue comes from shared Personal Income Tax (PIT). Unlike in many countries, however, Estonia does not share with local governments a percentage of the PIT

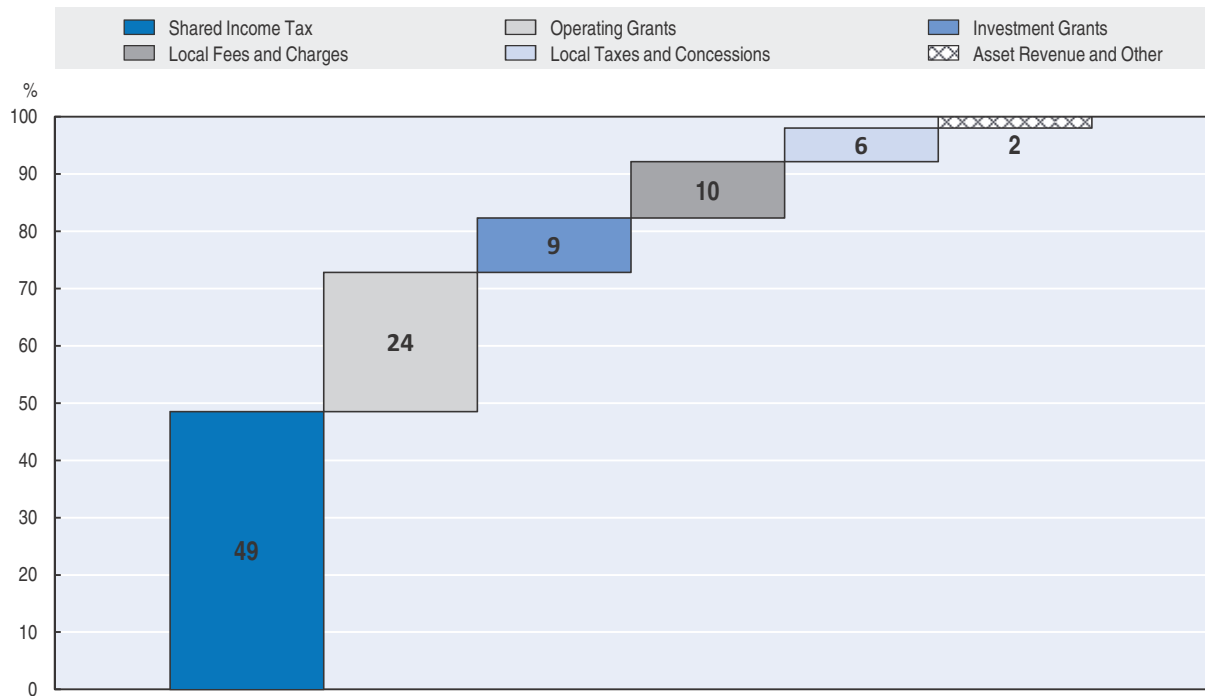


Figure 3.7. **Composition of local expenditure on pre-primary and primary education, and secondary education, 2004-12**



Source: Authors' own calculations based on Eurostat (no date), Classification of the Functions of Government (COFOG) database, [http://ec.europa.eu/eurostat/statistics-explained/index.php/Government\\_expenditure\\_by\\_function](http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_expenditure_by_function).

Figure 3.8. **Composition of local government revenue, 2013**



Source: Data provided to the OECD review team by the Ministry of Finance.

actually generated in their jurisdictions. Instead, they receive 11.6% of the gross personal income declared by their residents. This form of PIT sharing is very unusual and was introduced in 2004 to protect local governments from changes that parliament might make to the base or the rate of the tax. One important consequence of this tax sharing system has been to increase the amount of PIT that goes to poorer jurisdictions. This is because local governments receive 11.6% of the gross personal income of their residents, even if these residents do not have income above the taxable threshold (i.e. do not pay income taxes). Another important consequence is that now almost 80% of the yield of PIT goes to local governments, up from 54% in 2003 (Trasberg, 2010).

Local governments receive another quarter of their revenues in operating grants from the national government (circa EUR 335 million in 2014). The most important of these grants (circa 60% of the total) is for education and accounts for about 15% of local government revenue (or about EUR 200 million in 2014) (see below for details). Other operating grants include earmarked grants for road maintenance and social service administration as well as a freely disposable equalisation grant. Each of the earmarked grants amounts to about 2% of total revenues. The freely disposable equalisation grant is more important and amounts to about 5% of total revenue or about 20% of all operating grants. It provides local governments with any shortfall between their revenues from shared and local taxes, and a standardised measure of expenditure need based on the average cost of providing a basket of local government services to different age groups in the population (Ministry of Finance, 2010).<sup>1</sup> Finally, local governments can also receive investment grants from the national government. In recent years, these grants have been largely provided for by the EU structural and investment funds and account for about 10% of local revenue.

Taken together, income from shared PIT, operating grants, and investment grants account for the vast majority of local government revenue. Indeed, less than 20% of local budgets come from sources over which local governments have some rate-setting and collection powers.<sup>2</sup> As a result, Estonian local governments have extremely limited fiscal independence and are much more “revenue takers” than “revenue makers”. As such, they are more likely to demand additional financial support from the national government to improve services than they are to tax their own citizens.

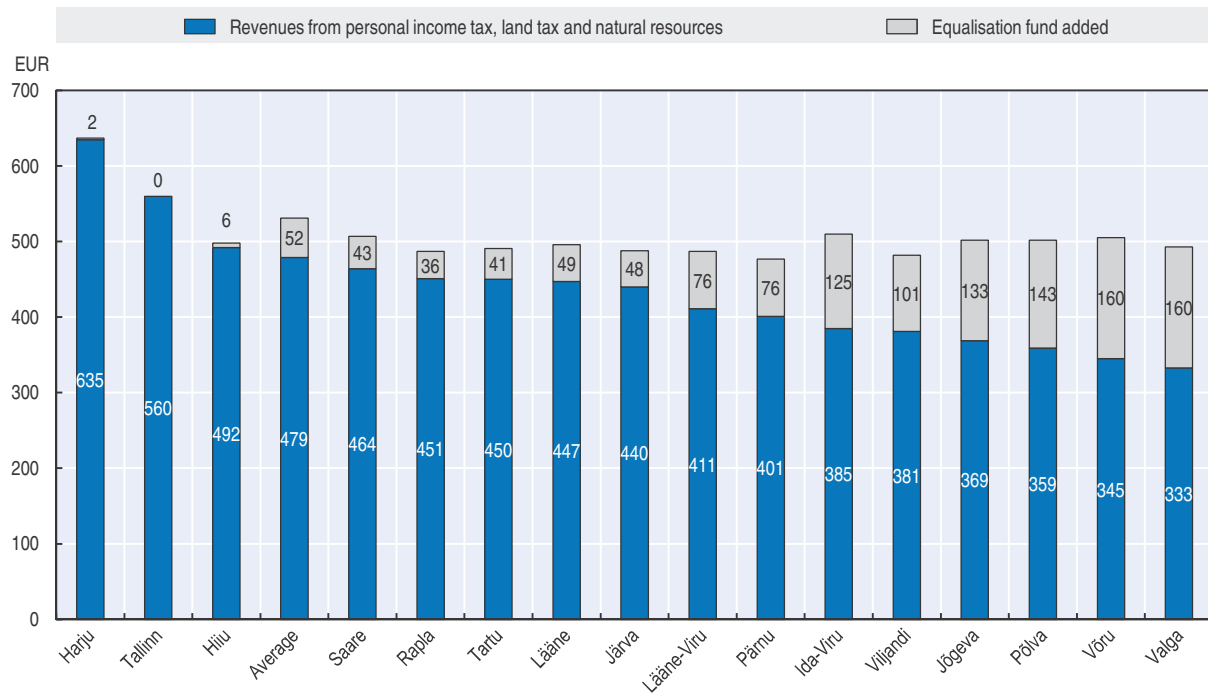
At the same time, the overall operation of the intergovernmental finance system has insured that the per capita revenues of local governments are remarkably similar across jurisdictions with very different socio-economic characteristics. This can be seen in Figure 3.9 which shows the per capita revenues of local governments from shared taxes, own taxes and the equalisation grant aggregated at the county level. Indeed, it is likely that if the other operating and investment grants were included in the picture, local governments in the poorest counties might have per capita revenues substantially higher than those of their richer counterparts.<sup>3</sup>

### **Funding municipal schools**

#### ***The education grant to municipalities***

The funding for municipal schools comes through a number of different channels. Pre-primary schools, including teachers’ salaries, are fully funded by municipal governments from their general revenues, though some urban jurisdictions have received dedicated grants from the state to support investment into the creation of new pre-primary

Figure 3.9. Allocation of the equalisation fund by county in EUR per capita, 2010



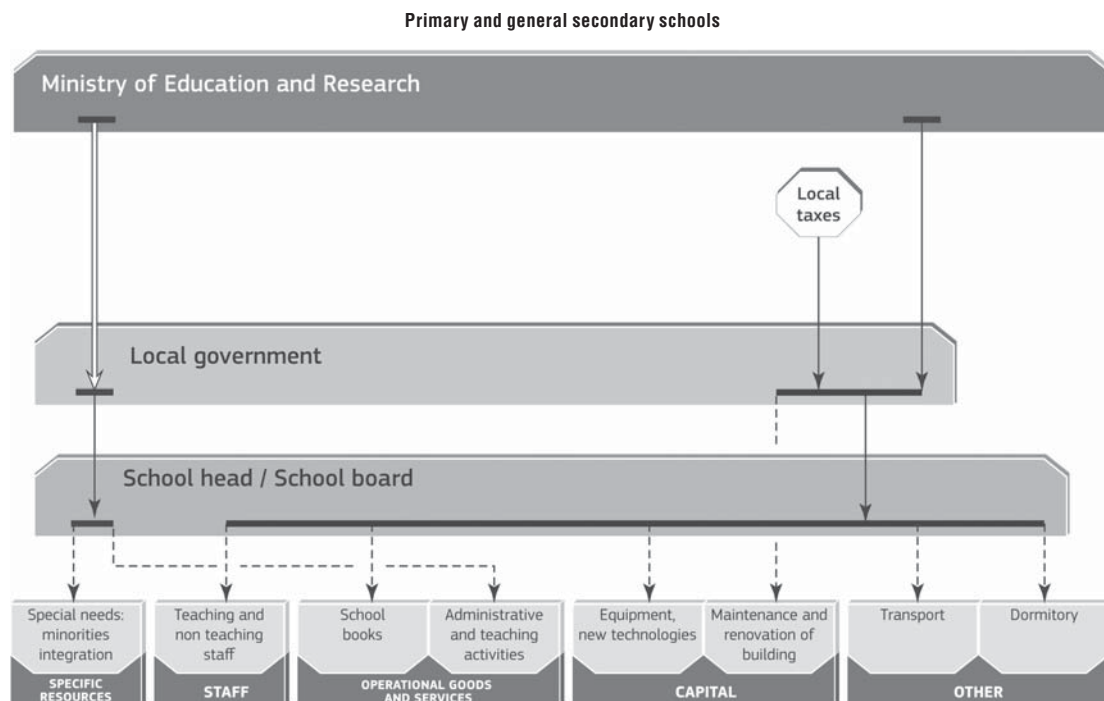
Source: Data provided to the OECD review team by the Ministry of Finance.

facilities. Municipal primary and secondary schools, as well as municipally-run special education schools receive all their funds from local governments. But local governments receive grants from the national government to support these institutions.

The education grants that municipalities receive from the national government to fund the recurrent costs of primary and secondary education (including special education) are built around four earmarked components: one for study materials (namely textbooks), one for school lunches, one for professional development of both teachers and school leaders and, by far the most important, one for salaries of both teachers and school leaders.<sup>4</sup> The way these components – particularly the one for teachers' salaries – have been calculated, allocated and accounted for in the system has been the subject of continual and often contested adjustment.

The flow of funding from the state to primary and secondary schools via municipalities and the resources that the funding stream purchases are shown in Figure 3.10.

In 1994, an initial effort was made to allocate the grant for teacher salaries on a per student basis. But it was not until 1998 that a genuine per student formula was introduced. This formula was relatively simple and contained first six, and then eight coefficients that adjusted per student payments on the basis of the demographic and socio-economic characteristics of different groups of municipalities. Demographic decline however put increasing pressure on small primarily rural jurisdictions to close schools and in 2008 the formula was radically overhauled to provide greater protection for schools in rural jurisdictions. This revision essentially removed the per capita element of the formula for schools in rural areas, and instead provided financing on a per class basis (Levačić, 2011).

Figure 3.10. **Flow of funding from the state to primary and general secondary schools through municipalities**

Source: European Commission/EACEA/Eurydice (2014), *Financing Schools in Europe: Mechanisms, Methods and Criteria in Public Funding*, [http://eacea.ec.europa.eu/education/eurydice/documents/thematic\\_reports/170en.pdf](http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/170en.pdf).

In 2012, however, the government returned to the use of a per student formula. As before, the formula is based on assumptions about the number of full time professional staff necessary to teach the programmatic hours of the national curricula at different Year levels. Normative class sizes are used to determine the number of teaching positions to which municipalities with different student populations are entitled. For example, at the basic education level, the formula used in 2015 allocated teachers' salaries on the assumption that the average class should have three possible values: 24 students for municipalities with a student-teacher ratio equal or above 15; 21 students for municipalities with a student-teacher ratio between 7.8 and 14.9; and 10 students for municipalities with a student-teacher ratio of 7.7 or below (see Ministry of Education and Research, 2015a). These assumptions are then adjusted by coefficients designed to reflect the additional teaching time associated with teaching students with special needs and students with Russian as language of instruction (for potential extra classes of Estonian). Once the total number of teaching hours – and hence full-time equivalent (FTE) positions – has been determined for the municipality this figure is then multiplied by a national minimum salary for teachers and increased by 20% to determine a teacher salary budget for the municipality.

As with the initial per student formula, the current formula contains coefficients designed to provide smaller municipalities with additional funding while also pressuring them to consolidate school networks. This is difficult because over half of all municipalities have only one school (see below). The government is also committed to keeping primary

schools close to where the students live. As a result, the formula is constructed more to encourage municipalities to consolidate facilities at the lower secondary school level (Years 7-9) than it is to force the closure of primary schools.

In part for pedagogical reasons, and in part because local governments have been slow to consolidate secondary schools in the face of falling enrolment the national government has recently decided to recentralise general upper secondary education by establishing state-run *gymnasiums* in all county capitals. The national government also expects to eventually take over municipally-run special schools and vocational institutions. It is also requiring that new schools created by municipalities separate lower secondary education from upper secondary education, and the Years 10-12 be taught in separate facilities. As explained in Chapter 2, the plan of the government is that, by 2020, the distribution of responsibilities between the state and municipalities for managing public schools will be as follows: municipalities take responsibility for pre-primary and basic education schools; and the state takes responsibility for *gymnasiums*, VET schools and special education schools.

### ***The salary bill***

The national setting of minimum teachers' salaries allows the government to regulate salaries in the sector while giving local governments and school directors a fair amount of autonomy in determining actual pay levels (see also Chapter 5). The national government has adjusted the amount of the education grant to its mandated increases in teachers' salaries while decoupling salary scales from a rigid system of professional advancement (see also Chapter 5).

The average salary of teachers has increased considerably in recent years (see also Chapter 5). This increase has been driven by national government decisions to raise the salary of teachers. But it is only recently that teacher salaries have caught up with the national average. Further increases are anticipated because the national government wants to raise average teachers' salaries to the same level as those of specialist workers with tertiary education in order to improve the attractiveness of the profession, which is reflected in the Estonian Lifelong Learning Strategy 2020. In the years immediately following the economic downturn the salaries of teachers in municipally-run schools dipped below those of their colleagues in state-run facilities (see Figure 5.1) (Ministry of Education and Research, 2015a). Apparently, this was due in part to the fact that some municipalities were not conveying the full value of the education salary grant to schools, and in part because not all school directors were using the salary grant for teachers' salaries.

Local governments have refrained from using their own revenues to increase the salary funds they allocate to schools and the total amount of salary expenditures in the system have remained remarkably close to the size of the salary grant. Average teachers' salaries are also very similar across municipalities, though in some smaller municipalities they are somewhat lower, probably because directors need to employ more teachers to support small classes.

### ***Funding individual municipal primary and secondary schools***

Local governments cover the entirety of the costs incurred by their primary and secondary schools and determine the respective budgets. They determine how to allocate funding to individual schools, including that originating from the earmarked grants from the state. The latter cover teacher and school leader salaries, school meals and textbooks, as well as a budget for professional development for individual schools (until 2015 each

municipality used to receive the equivalent of 1% of the “salary grant” for professional development of teachers and school leaders but, since then, this amount is determined on the basis of a per student model). This means that other operating costs such as maintenance, support staff, non-pedagogical staff or heating are covered by the municipalities’ own resources. Some investment funds may also come from the general municipality budget.

Tallinn and some other larger jurisdictions have developed their own per student formulas to allocate salary funds and funds for other operating costs to schools. The formulas used to allocate salaries seem to mimic those of the national government. In municipalities with small numbers of schools the allocation of both sets of funds is done largely on a historical basis, with local governments making only marginal adjustments in school budgets from year to year.

Most local governments do not seem to contribute general municipality revenues to the salary funds of schools. They also do not get involved in determining class sizes, staffing patterns or decisions about teachers’ actual salaries. Instead, these decisions are left entirely to school directors. This has given school directors a large amount of operational autonomy (see also Chapter 4). At the same time, it has given rise to a form of “dual budgeting” in which local governments do not consider school salary or employment patterns their concern (Levačić, 2011).

Schools are allowed to receive donations and parental contributions, and to earn income from the rental of their facilities. Schools, however, do not have independent bank accounts and these revenues must be turned over to municipalities where they are attributed to the schools’ accounts.

Local governments whose students commute to schools in other jurisdictions are required to pay the “importing jurisdiction” the average per student amount that they spend on the non-salary operating costs of their schools. This makes possible inter-jurisdictional school choice. Some municipalities earn considerable income from commuting students.

A few local governments run Vocational Education and Training schools (VET schools) and schools for children with special educational needs (SEN Schools). The per student grants that local governments receive for these schools are calculated using special coefficients. For VET schools, these coefficients differ with the particular type of study being pursued (see also below). For SEN schools they are based on the severity of the disability and the type of curriculum the student is being taught (see below).

### ***Funding pre-primary education***

Pre-primary schools are funded by two main sources: the general revenues of municipal budgets and parental contributions. While there are municipal fees for pre-primary schools these are capped at 20% of the national minimum salary (about EUR 70 per month) (Ministry of Education and Research, 2015a). The salaries of pre-primary teachers are typically 20% to 25% below those of teachers in primary and secondary schools (see Chapter 5). Local governments cut pre-primary salaries substantially during the crisis and subsequently were slow to increase them while the national government was aggressively raising the minimum salaries of primary and secondary teachers. Not surprisingly, this has generated a fair amount of salary pressure from pre-primary teachers and recently their trade union has begun to push for substantial pay increases. This pressure is likely to increase over time. Budgets of individual pre-primary schools are decided by individual municipalities.

### **Funding vocational education and training**

As of the 2014/15 school year, the national government runs 30 of the 33 public VET schools. There are five private VET schools, which typically focus on single professions such as information technologies (IT), catering, or hairdressing. VET schools also provide professional training programmes for adults who have completed either basic or general secondary education. Enrolment rates, however, have been falling and dropout rates are high (Ministry of Education and Research, 2015a) (see also Chapter 1). In 2013/14, 19.4% of students enrolled in vocational secondary education (ISCED 3B programmes) and 24.5% of students enrolled in vocational secondary courses based on basic education (ISCED 3C programmes) dropped out (data provided by the Ministry of Education and Research). Over the last ten years, the national government has invested heavily in modernising VET schools and their transformation into effective centres of Lifelong Learning is one of the Ministry of Education's strategic objectives.

The number of VET students who are enrolled in work-based apprenticeship programmes is very small and the financial contribution of the private sector to the system is low. Unlike in many other countries there are no legal requirements for firms or industries to make financial contributions to the state-run vocational system and firms that do not contribute are not taxed to help pay for the system (Ministry of Education and Research, 2015a).

Funding levels in VET are set by the State Commission for Vocational Education that determines which programmes are of highest priority, what they should cost, and how many students should be enrolled in them. The occupational profiles of VET schools are determined in three-year cycles, a decision that involves the national government, representatives of industry, and the schools themselves. Once these profiles have been determined, schools receive a per student payment designed to fully fund the operational costs of their programmes at the assumed level of enrolment (state-commissioned places). Schools are also allowed to enrol additional students on a fee basis, to accept donations, and to earn income from the sale of goods and services. Some VET schools earn as much as 15% of their revenues from the sale of goods and services. This income can be used to pay salaries or to supplement them. VET schools receive the per student payments set during the planning process by the state commission even if the anticipated number of students failed to enrol, or if students drop out. As a result, many of these institutions are being funded on the basis of their historical costs.

### **Funding special schools**

State funding for state SEN schools is based on a per student formula that is designed to cover the full operating costs of the institution. State funding for municipal SEN schools follows the same principles as the funding of municipal mainstream schools, i.e. it covers salaries of teachers and school leaders, study materials, school meals and professional development for teachers and school leaders. Other operational costs are covered by municipalities. In both the cases of state and municipal SEN schools, the coefficients in the formula are designed to reflect the severity of the disability and the type of curriculum the student is being taught.

***Funding of privately-run schools***

Privately-run schools receive public funding on the same terms as public schools and can also charge tuition fees. They can also return profits to owners. The decision to provide private schools with public funds is designed to increase the amount of school choice in the education system. The national government provides private schools with a grant for teachers' salaries that is calculated in the same way as it is for municipal public schools. Since 2011, municipal governments are also required to provide private schools in their jurisdiction with the average amount of per student funding they provide to municipal schools for their non-salary operating costs (Ministry of Education and Research, 2015a). Recently, some municipalities have stopped paying their portion of these costs to private schools and the matter has been taken to the courts.

***EU structural and investment funding***

Since Estonia's accession to the European Union, funds from the European Regional Development Fund (ERDF) and the European Social Fund (ESF) have played an important role in the education sector and in recent years have accounted for about 10% of total expenditure on education, including Research and Development (Ministry of Education and Research, 2015a).

For both the 2004-06 and 2007-13 periods the bulk of the funding from both Funds were focused on modernising VET institutions, improving tertiary education and supporting research and development, notably within the knowledge triangle. With respect to the modernisation of VET schools, the ESF was used to support curriculum development, while the ERDF funded infrastructure improvements.

The Operational Programme for Cohesion Policy Funds 2014-2020 (Ministry of Finance, 2014a) gives a prominent role to education as one of 11 Thematic Priority Axes under the designation "Qualifications and skills meeting the needs of society and the labour market". This priority axe contains three investment priorities and a number of specific objectives as described in Table 3.4. It is planned that, during this period, the European Social Fund will contribute about EUR 195 million (to which a national counterpart of about EUR 34 million will be added) to fund investment priorities 1 and 3 while the European Regional Development Fund will contribute about EUR 218 million (to which a national counterpart of about EUR 38 million will be added) to fund investment priority 2 (school network) (Ministry of Finance, 2014a). This Operational Programme was developed to respond to priorities identified in the National Reform Programme "Estonia 2020" as described in the "Partnership Agreement for the use of European Structural and Investment Funds 2014-2020" established with the European Commission (Ministry of Finance, 2014b).

***Targeted policies and support to specific groups of students***

There are a number of programmes designed to support specific needs of students. These include programmes to provide additional support for immigrant students to learn Estonian and to follow individualised curricula; the Language Immersion programme (*Keelekümblus*) which provides additional Estonian language instruction for Russian-speaking students in pre-primary school and basic school, covering 6 000 students and 1 000 teachers; and programmes that provide housing and travel allowances to VET and other commuting students based on socio-economic need.



**Table 3.4. Investment priorities and specific objectives for education in the Operational Programme for Cohesion Policy Funds 2014-2020**

Investment priority	Specific objectives
<b>Investment priority 1:</b> Reducing and preventing early school-leaving and promoting equal access to good quality early-childhood, primary and secondary education including formal, non-formal and informal learning pathways for reintegrating into education and training. (Financed by the European Social Fund – ESF)	<b>Specific objective 1:</b> Reducing school and education drop-out rates and supporting career choices through high-quality educational support services. <b>Specific objective 2:</b> Improving the teaching competence of teaching staff, principals and youth workers in order to implement a teaching approach that supports the personal and social development and develops the learning skills, creativity and entrepreneurial ability of each learner at all levels and in all forms of education. <b>Specific objective 3:</b> Modern and innovative study materials have been introduced.
<b>Investment priority 2:</b> Investing in education, training and vocational training for skills and lifelong learning by developing education and training infrastructure. (Financed by the European Regional Development Fund – ERDF)	<b>Specific objective 4:</b> A general education school network that takes into account demographic changes, is based on the principles of inclusive education and ensures equal access to high-quality education in all regions of Estonia.
<b>Investment priority 3:</b> Enhancing equal access to lifelong learning for all age groups in formal, non-formal and informal settings, upgrading the knowledge, skills and competences of the workforce, and promoting flexible learning pathways including through career guidance and validation of acquired competences. (Financed by the European Social Fund – ESF)	<b>Specific objective 5:</b> Studies in vocational and higher education institutions are more in line with labour market needs and support entrepreneurial ability. <b>Specific objective 6:</b> Increased share of adults with professional and occupational qualifications, improved key competences for lifelong learning, and improved employability.

Source: Ministry of Finance (2014a), Operational Programme for Cohesion Policy Funds 2014-2020, [www.struktuurifondid.ee/public/EE\\_OP\\_EN\\_2\\_12\\_2014.pdf](http://www.struktuurifondid.ee/public/EE_OP_EN_2_12_2014.pdf).

Some additional financial support is also allocated through the per student formula to municipalities with large numbers of schools whose primary language of instruction is Russian (e.g. in Ida-Viru County), and recently some special programmes have been put in place to provide additional training and financial support to teachers in Russian language schools.

### **Funding of school infrastructure**

Both the national government and local governments have recently made impressive investments in school infrastructure. As noted above, the national government has used EU structural and investment funds to modernise VET facilities and is currently building a number of new *gymnasiums* in county capitals. It has also supported the infrastructure investments of local governments in pre-primary schools and general education schools with dedicated investment grants.

For their part, local governments have maintained high investment rates in the sector. Major cities have also entered into public-private partnerships to renovate or build school facilities. In these partnerships private companies undertake the necessary investments at their own cost and then lease back the facilities to local governments who eventually become their full owners. Indeed, because expenditures on leases are considered operating expenses, these arrangements lead to an underestimation in the official statistics of how much new investment local governments have supported.

### **School autonomy to manage budget**

As indicated above, school directors have wide operational autonomy with regards to determining staffing patterns and teachers' salaries (see also Chapter 5). They can split classes, hire extra staff, and increase salaries so long as all full-time teachers are receiving

at least the state-mandated minimum salary. They also can rent school facilities and solicit donations and parental contributions (see also Chapter 4). Schools however, do not have their own bank accounts and all expenditures are paid for by their owners.

### **Procurement of services**

Most local governments have centralised the procurement of some school services such as catering, building repairs, and the purchase of heating fuel and other school supplies. But rather than entering into one-size-fits-all contracts with the private providers, municipalities have developed more sophisticated agreements that guarantee school directors some range of choice, for example in choosing school meal plans.

State-run institutions conduct the procurement of services independently (i.e. per institution) unless joint procurement agreements are made by the central purchasing body. The Ministry of Education and Research's State Assets Department co-ordinates procurement activities which refer to state real assets and ensures the purposeful and efficient use of assets. All major decisions about the repair, improvement, and disposition of assets in the control of state-owned schools are supervised by the Ministry.

### **Budget planning**

Unlike many countries, Estonia has taken important steps to integrate its annual budgeting processes into longer-term strategic frameworks at all levels of governance. By law, the national government, local governments and indeed schools must have Strategic Development Plans. For local and national governments, these plans must be linked with four-year medium-term expenditure frameworks (MTEF). These frameworks establish the parameters around which annual budgets are made, but are then adjusted in light of those budgets.<sup>5</sup>

At the national level the most important strategic document is the National Reform Programme "Estonia 2020" (Government of Estonia, 2014), adopted in the context of the Europe 2020 strategy. It identifies 17 major challenges facing the country and divides them into four basic fields, one of which is education. The priorities in education are then further defined by the Estonian Lifelong Learning Strategy 2020, which in turn serves as the platform for financial planning in the sector between 2014 and 2020 (see Chapter 1). Strategic priorities and goals are expressed in concrete financial terms in the Ministry of Education and Research's four-year medium-term expenditure framework. The strategic priorities and goals are implemented through nine programmes.<sup>6</sup>

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

School directors are responsible for developing school budgets. As at the national level, most local governments operate according to well defined budget calendars and in the spring provide school directors with budget ceilings for the next fiscal year. These figures are then adjusted in the fall when enrolment becomes clearer. In municipal schools, school budgets are reviewed by democratically elected boards of trustees composed of parents, teachers and students before receiving final approval by the local government (see Chapters 1 and 4). In state-run schools, budgets are also reviewed by boards of trustees or advisory bodies (in VET schools), but these boards contain not only teacher and parent representatives, but external experts and, for VET schools, representatives of industry. The Ministry of Education and Research grants final approval for the budgets of state schools.

### **Monitoring, transparency and reporting**

Oversight over the use of resources in the education sector is exercised both internally and externally, and by different institutions at different levels of the system. Municipal governments are legally required to have internal audit commissions, as are all state agencies. These commissions are required to make judgments about whether the institutions they are responsible for examining have complied with the law as well as whether they are spending money efficiently and effectively. Local governments are also periodically required to commission external audits of their managerial and financial systems.

The Ministry of Finance has the right to audit the accounts of local governments and schools, as well as those of all state agencies. When these audits concern local government expenditures funded by their general budgets, then the audits can only be for legal compliance. When, however, they concern expenditures made from earmarked grants the Ministry of Finance has the right to assess both legal compliance, and broader questions of purposefulness, effectiveness and efficiency. The same rules apply for the National Audit Office. This Office conducts risk-based assessments of the public sector and plays a substantial role in controlling the finances of both local governments and state agencies, including those in the education sector.

The National Audit Office's local government department employs about 30 people and conducted its last comprehensive audit of local government finances in 2007. It will conduct another one in 2015. Because of the internal and external auditing requirements that already exist for the local governments the Office avoids conducting basic compliance audits for them. Instead, the Office typically conducts problem-solving audits on sample populations of about 15 local governments.

The Office also has a small, three-person team dedicated to auditing the education sector. Over the last five years this team has conducted audits of tertiary education, VET and SEN schools and state activities designed to promote research and development. One of its most recent audits concerned the use of the education grant by local governments and schools. The mixing of local and national government funds both by level of education (e.g. pre-primary and primary education) and by function (e.g. salaries for support staff are not covered by the education grant) make these audits difficult.

But the National Audit Office found that not all national government support was being spent as intended, particularly with respect to teachers' salaries (National Audit Office, 2007). Some local governments were continuing to pay the salaries of professional support staff from the grant after the Ministry defined these salaries as a local

responsibility in order to encourage schools to procure these support services from the new regional counselling centres. Some local governments were also using income earned by schools for their own purposes. To correct some of these problems new codes were introduced into the national budget classification scheme and the situation seems to have improved. Nonetheless the Office's next major audit of local governments will also focus on school finance.

State oversight over the educational process is the responsibility of the External Evaluation Department of the Ministry of Education and Research (see Chapters 2 and 4). But this responsibility is shared with county-level school inspectors who are employees of the Ministry of the Interior (see Chapter 4). Since 2006, the basic model of school evaluation has been changed from one based on cyclical external evaluations, to one based on school self-evaluation. This shift means that schools are no longer visited regularly by inspectors on specified schedule. Instead, the External Evaluation Department sets priorities for thematic evaluations of different levels of the school system, and different problems within it, and then works with the inspectors to execute the evaluations and develop improvements. The Ministry estimates that about 10% of all schools are visited for thematic evaluations every year (see Chapter 4).

The Ministry expects that the new regional counselling centres co-ordinated by the Innove Foundation will play an ever greater role in helping schools conduct self-evaluations in accordance with a quality management approach and in providing professional development services to schools. Towards this end the Ministry has created a publicly available list of educators and directors who are qualified to facilitate the self-evaluation process (officially trained advisors, see Chapter 4). It also expects to make greater use of external standardised student assessments to identify schools at risk. Not surprisingly, there is both institutional tension and overlap between the county-level inspectors working for the Ministry of Interior on the one hand, and the Ministry of Education and Research and the regional counselling centres on the other. Schools, teachers and parents often address complaints about the educational process to the county-level inspectors when the Ministry of Education and Research would prefer to see these complaints directed to the new regional counselling centres.

Oversight over the educational system is also exercised by the Chancellor of Justice. This Office acts as an independent ombudsman and investigates complaints about whether public services are being provided in accordance with the constitutional principles of fair and equal treatment. Recently, much of its activity in the education sector has concerned complaints about the shortage of places in pre-primary schools, and its ruling has prompted plans for the national government to support pre-primary school development in Estonia's four largest municipalities.

Estonia has invested heavily in the public sector use of informational technologies (IT) and has developed an impressive network of databases to track taxation, public sector expenditure, the labour market, social welfare services, and the education system. Of particular importance is the Estonian Education Information System (EHIS, *Eesti Hariduse InfoSüsteem*) which has comprehensive registers for teachers; students; educational institutions; curricula and licences; and educational research. Much of the data contained in the system are available to the general public ([www.ehis.ee](http://www.ehis.ee)).

As far as the review team could tell, Estonian educators are committed to their profession despite the fact that they feel it is not valued in society (see Chapter 5). Similarly, it also seems that a significant number of Estonian citizens are actively engaged in their children's schools, namely through boards of trustees, despite the fact that along most other dimensions Estonian citizens demonstrate levels of civic (dis)engagement that are similar to those of other post-communist countries (Howard, 2003). Both professional commitment and citizen engagement constitute important pillars of Estonia's system of educational accountability.

## Strengths

### ***There is a considerable effort in resourcing education while keeping a small public sector***

A particularly good indicator of a country's relative effort in resourcing education is the amount spent per student as a percentage of GDP per capita compared with other countries, since this takes account of differences in per capita GDP. From Table 3.5 it can be seen that Estonia spends about the same proportion of GDP per capita than the OECD average on primary and lower secondary education and two percentage points more on upper secondary education. However, it spends considerably less, as a proportion of GDP per capita, on pre-primary education. This might be partially explained by low teacher salaries in pre-primary education. At the same time, Estonia has kept the overall size of the public sector smaller than most of its counterparts in the European Union. Hence, the commitment to both fiscal prudence and public education is rather admirable.

Table 3.5. **Annual expenditure per student by educational institutions relative to GDP per capita, Estonia and comparator countries, 2011**

	Pre-primary education (3 years and older)	Primary education	Secondary education		
			Lower secondary education	Upper secondary education	All secondary education
Estonia	11	23	26	29	28
Finland	15	21	32	22	25
Latvia	22	25	25	25	25
OECD average	21	23	26	27	26
EU21 average	20	22	26	27	26

Notes: EU21 average is the unweighted mean for the 21 countries that are members of both the European Union and the OECD and for which data are available or can be estimated.

Source: OECD (2014), *Education at a Glance 2014: OECD Indicators*, <http://dx.doi.org/10.1787/eag-2014-en>, Table B1.4.

Good levels of public spending on education relative to the country's resources has allowed Estonia to provide free textbooks, school lunches, and relatively easy physical access to primary and secondary schools. It will now also make possible tuition-free tertiary education. Low cost education services, universal school meals and textbooks contribute to equity in the system by avoiding the stigmatisation of students from underprivileged households or groups.

In addition, Estonia has an extensive network of SEN schools and programmes that ensure that children with special needs have access to public education. Estonia has also made major investments in Vocational Education and Training and is clearly committed to developing an effective system for Lifelong Learning.

***Education performance is high given the current levels of education investment***

As measured by international standardised student assessment results, the Estonian education system performs well and is reasonably efficient despite low student teacher ratios. Indeed, the results of Estonian secondary students on the 2006, 2009, and 2012 PISA surveys demonstrate steady improvement across all measures. Estonian students are ranked among the best in Europe (and the world) in math (4th and 11th), reading (4th and 11th) and science (1st and 4th) (see also Chapter 1). This is in a context where public investment on education, relative to national resources, is only around the OECD average.

Moreover, differences in scores between Russian-speaking students (25% of the total) and native Estonian speakers has fallen, between 2006 and 2012, from 66 to 36 points in reading, 40 to 31 in mathematics, and 43 to 36 in science (with 40 points representing about a year of academic study). The number of students repeating years has fallen to less than 1% and only 4% of students do not continue their studies after completing Year 9. However, the share of 18-24 year-olds who have left the education system after completing only basic education was in 2014 at 11.4%, hence above the EU average of 11.1% (Eurostat Labour Force Survey data, 2015). Overall, there has been progress in improving performance and equity in the system with public investment in education only around the OECD average (relative to the country's resources) (see also Chapter 1).

***The operation of intergovernmental finance provides a good foundation for the decentralised governance of schools***

The overall operation of the intergovernmental finance system has provided local governments with adequate, predictable, and equitable revenues, thus establishing a strong foundation for the decentralised governance of the country's schools. In particular, the systems for equalisation and Personal Income Tax (PIT) sharing have worked to ensure that even small, rural and/or economically disadvantaged municipalities have been able to modernise their schools, increase pre-primary enrolment, maintain easy physical access to schools with low student/teacher ratios and provide afterschool educational activities through non-school institutions. Ceilings on pre-primary fees have also made the system affordable for most households.

The largest single expenditure that local governments make from their general revenues goes to pre-primary education. And their single largest source of general revenue is a share of PIT. So PIT sharing is closely tied to the ability of local governments to provide pre-primary education. The fact that local governments have been able to raise the average rate of pre-primary enrolment to figures above 90% of all 3-6 year-olds is due in large part to Estonia's generous PIT sharing regime, and in particular to the fact that it shares not the yield of the tax, but 11.6% of its total base – a system that provides more money to poorer municipalities than would otherwise be the case. However, as it has been pointed out above expenditure per student in pre-primary education remains low by international standards, which is partly explained by the low salaries of pre-primary teachers.

Local governments have demonstrated an impressive commitment to improve their school systems and over the last ten years have consistently devoted between 10% and 20% of all education spending to investment (these high investment rates have been to a large extent supported by EU structural and investment funds). Local governments have also actively used non-school cultural institutions – so called Hobby Schools – to provide students with a broad range of afterschool programmes in the arts and sciences.

### ***A number of features of the funding approach facilitate the achievement of policy objectives***

Though teachers' salaries remain relatively low, the national government has significantly raised them over the last few years (see Chapter 5). Importantly, it has done this by increasing the size of the earmarked education grant that local governments receive for teachers' salaries in line with its own decisions to raise their minimum salaries, thus ensuring that the cost of national government policy decisions are not fully imposed on local governments.

The ability to align the education grant with the number of programmatic hours taught at a given level of instruction has made it possible to adjust the grant to meet both changes in curricula and per class norms. The calculation of the grant also includes coefficients for students with special needs attending both SEN schools and mainstream schools. In theory, these coefficients should help facilitate the integration of students with less severe disabilities into mainstream schools.

Comprehensive funding for school textbooks, school lunches and teacher professional development of teachers and school leaders have been provided through separate earmarked grants, making it easy for the national government to ensure that they have been spent in accordance with their specified purposes.

The funding system has now developed new provisions to ensure greater access to counselling services. These services will now be provided through regional counselling centres (also called Pathfinder centres), relieving (often very small) schools of the costs of trying to maintain support personnel in-house. The new regional counselling centres should also eventually improve the quality and availability of in-service training programmes for teachers.

Jurisdictions with large numbers of schools (e.g. Tallinn) have developed clear and transparent formulas to allocate to schools funds for their operating costs other than teachers' and school leaders' salaries. These formulas have facilitated the operational autonomy of schools and have allowed school directors to both save money, and reallocate it across budget lines – at least on an annual basis.

The system of financing for VET schools is flexible and can be adjusted to the needs of the labour market. The adjustment takes place through the involvement of representatives of different economic sectors in the education planning process at the national and school levels. There has been significant investment in improving the government's ability to monitor the labour market, creating the potential for making the VET planning process more evidence-based. New VET professional standards will also increase the flexibility of the vocational school system by better integrating more general educational elements of the programme into vocational training. This should also improve the efficiency of the system. VET schools can also generate a significant amount of freely disposable own revenues.

### ***There has been some adjustment of the school network to the demographic decline***

Declining enrolment has put increasing pressure on both the national government and local governments to rationalise resource use across the school system (see Chapter 1). Despite frequent and sometimes inconsistent changes in the formula that the national government has used to allocate the education salary grant to local governments, the formula has nonetheless exerted pressure on local governments to rationalise their school networks in the face of declining enrolment.

There has been some adjustment of the school network to the demographic decline. As can be seen from Table 3.6, between 2005/06 and 2013/14, in general education, school owners have responded to the 22.1% decline in student enrolment by closing 9.5% of their schools (57). This has mostly been undertaken by municipalities as the number of state-run facilities has stayed about the same (from 31 to 30 schools) and the number of private schools has actually increased from 33 to 47. Table 3.7 extends this information to other levels and types of education and includes teacher numbers, but for a shorter period of time (2008/09 and 2013/14). It shows that, in this period, in general education, the 8.2% decrease in student numbers (10% in the municipal sector) was accompanied by a decrease of 4.6% in the number of schools (7.7% in the municipal sector) and of 5.7% in the number of teachers (7.9% in the municipal sector). For the same period, there was a significant 21.3% drop in the number of upper secondary students in vocational education (21.9% in the dominant state sector). This was accompanied by a decrease of 11.1% in the number of schools (6.5% in the state sector) and of 21.8% in the number of teachers (13.0% in the state sector). The gap between the fall in enrolment and the decline in both teacher employment and the number of schools is not surprising because closing schools and putting teachers out of work is among the most difficult political decisions that democratically-elected officials ever face – at any level of governance. Overall, local governments and the state have used their ownership powers over schools to make some adjustment to their school networks to meet the challenges of the demographic decline.

When faced with a similar decline in enrolment (and a similarly ambiguous policy environment with respect to who is really responsible for paying teachers' salaries), Polish local governments responded by reducing the number of schools faster than they reduced the number of teachers. This is different from the pattern in Estonia. Polish local governments, however, have proved much more willing to use their general budget revenues to pay for the “extra” teachers, perhaps because education is regarded (not entirely correctly) as a local government own function, and because Polish local governments raise a higher share of their revenues from local fees, charges and taxes (Herbst et al., 2012).

Table 3.6. **Number of students and schools, general education, 2005/06 and 2013/14**

	2005/06	2013/14	% change
<b>Students – total</b>	<b>173 822</b>	<b>135 392</b>	<b>-22.1</b>
State	3 794	3 862	1.8
Municipal	165 636	124 657	-24.7
Private	4 392	6 873	56.5
<b>Schools – total</b>	<b>601</b>	<b>544</b>	<b>-9.5</b>
State	31	30	-3.2
Municipal	537	467	-13.0
Private	33	47	42.4

Notes: Data refer to “stationary studies” (aimed at individuals compelled to attend school or whose learning is both a full-time activity and the related school-level instruction is more important than independent learning). Data include all general education, including adult upper secondary schools and special schools.

Source: Ministry of Education and Research (2015b), *Haridussilm* (The Eye of Education), [www.haridussilm.ee/](http://www.haridussilm.ee/), based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, [www.ehis.ee](http://www.ehis.ee)).



Table 3.7. **Number of schools, students and teachers, 2008/09 and 2013/14**

	2008/09	2013/14	% change		2008/09	2013/14	% change		
Pre-primary education	Number of schools			General education	Number of schools				
					State	30	30	0.0	
	Municipal	591	595		0.7	Municipal	506	467	-7.7
	Private	46	57		23.9	Private	34	47	38.2
	Total	637	652		2.4	Total	570	544	-4.6
	Number of students				Number of students				
					State	3 294	3 862	17.2	
	Municipal	60 019	65 879		9.8	Municipal	138 502	124 657	-10.0
	Private	2 091	2 805		34.1	Private	5 723	6 873	20.1
	Total	62 110	68 684		10.6	Total	147 519	135 392	-8.2
	Number of teachers (FTE)				Number of teachers (FTE)				
					State	563	585	3.9	
	Municipal	6 902	7 188		4.1	Municipal	11 350	10 455	-7.9
Private	273	312	14.3	Private	540	699	29.4		
Total	7 175	7 500	4.5	Total	12 452	11 739	-5.7		
Vocational education	Number of schools			All levels	Number of schools				
	State	31	29		-6.5	State	61	59	-3.3
	Municipal	3	3		0.0	Municipal	1 100	1 065	-3.2
	Private	11	8		-27.3	Private	91	112	23.1
	Total	45	40		-11.1	Total	1 252	1 236	-1.3
	Number of students				Number of students				
	State	15 535	12 133		-21.9	State	18 829	15 995	-15.1
	Municipal	2 760	2 369		-14.2	Municipal	201 281	192 905	-4.2
	Private	272	119		-56.3	Private	8 086	9 797	21.2
	Total	18 567	14 621		-21.3	Total	228 196	218 697	-4.2
	Number of teachers (FTE)				Number of teachers (FTE)				
	State	1 340	1 166		-13.0	State	1 903	1 751	-8.0
	Municipal	233	213		-8.6	Municipal	18 485	17 856	-3.4
	Private	250	48		-80.8	Private	1 063	1 059	-0.4
	Total	1 824	1 427		-21.8	Total	21 451	20 666	-3.7

Notes: FTE = Full-time equivalent. Data refer to “stationary studies” (aimed at individuals compelled to attend school or whose learning is both a full-time activity and the related school-level instruction is more important than independent learning). Data include all general education, including adult upper secondary schools and special schools. Data on teachers refer to full-time equivalents. Data for vocational education refer to vocational studies in secondary education.

Source: Ministry of Education and Research (2015b), *Haridussilm* (The Eye of Education), [www.haridussilm.ee/](http://www.haridussilm.ee/), based on the Estonian Education Information System (*Eesti Hariduse InfoSüsteem*, [www.ehis.ee](http://www.ehis.ee)).

As owners of schools, municipalities have also adjusted their school networks in ways that cannot be seen in the gross numbers on school closure. For example, many municipalities have reduced the number of upper years in existing schools in order to leave lower years (1-3, 1-6) closer to students’ homes, while trying to consolidate higher years in one or two facilities.

The current formula for allocating education salary grants to local governments provides some incentives for multiple municipalities to work together to consolidate the teaching of lower secondary education into a single facility: the municipality that closes Years 7-9 will continue to receive funding for the students it loses for the next few years, while the municipality that takes these students in turn will receive whatever coefficient of support that was being applied to these students before consolidation. Also, as of 2015, the coefficients that will be used to allocate both the education salary grant and the

equalisation grant will be stated in law and not subject to annual changes. This is intended to provide local governments with a more stable financial platform for planning their school networks.

The payment of the per student amount of the non-salary operating cost of their schools by municipalities which send their students to a receiving municipality also plays an important role in facilitating network adjustment by ensuring that importing municipalities have incentives to take in students from other local governments. It however, also makes it harder for municipalities with smaller numbers of students to maintain reasonable class sizes because they inevitably lose some students to larger, neighbouring municipalities. This is particularly true for local governments that border on big cities where the possibilities for students to travel to schools outside of their home jurisdiction are greater because of public transport, or because parents are commuting to work.

### ***The national government is committed to rationalise the upper secondary school network***

The national government is committed to rationalising the network of upper secondary schools by creating a new state-run *gymnasium* in every county capital. The objective is that these new state-run *gymnasiums* will not only make the system more efficient, but also make it possible to provide all upper secondary school students with quality instruction. A significant share of EU structural and investment funds earmarked for education during the 2014-20 period will be used for this purpose (see Table 3.4) (Ministry of Finance, 2014a).

The national government is providing some incentives for local governments to consolidate their upper secondary school networks. Local governments that reorganise their school networks by reducing or eliminating the number of schools that provide upper secondary education will be eligible for special investment grants. The national government will also fully cover the cost of transportation of students who commute from another municipality to attend one of the new state-run *gymnasiums*. Investments will also be made to improve dormitories for commuting students.

### ***A number of policy features facilitate school choice***

The provision of public funding to private schools has increased school choice, encouraged the growth of private involvement in the education system, and increased the diversity of institutions from which innovative pedagogical strategies can be drawn. Also, the requirement that local governments whose students attend schools in other municipalities pay those municipalities the average per student non-salary operating costs of their schools has facilitated school choice and network rationalisation by ensuring that money follows students to where they attend school.

### ***Schools have considerable autonomy over the use of their funding***

The Education Grant for teachers' salaries (for municipal schools, distributed to individual schools via the municipalities) has given school directors large amounts of operational autonomy with respect to salary and employment decisions. School directors have a high degree of operational autonomy and control over school budgets including the ability to hire and dismiss teachers, set their salaries (above the national minimum), earn

and retain own income (within the budget year), and pay for in-service teacher professional development (with a earmarked budget provided by the state), despite the fact that accounting functions are at the municipal level.

All public schools are allowed to accept donations and to retain fees earned from renting assets. Some VET schools also generate as much as 15% of their revenues from the sale of goods and services produced by their students. Donations are typically registered in school accounts and referenced in both the school budget and school development plans (both of which are publicly available), though perhaps more so for municipal schools than state-run facilities. Most local governments seem to have established reasonable rules to divide income asset between schools (e.g. 75%) and their own budgets (e.g. 25%). In state-run facilities, if rental fees are above operational costs and refer to a long-term rental, the fee is transferred to the Ministry of Finance; if rental is one-off and only covers operational costs, the fee is transferred to the school.

### ***Budget planning for education is strategic***

At the national level, annual budgeting processes are embedded in a strong legal framework and linked in practice to strategic documents and medium-term expenditure frameworks that connect spending decisions to priorities. Actors at all levels of the system share a common understanding of these priorities as well as the basic budget decisions that are supposed to make them achievable. Linkages between strategic and budget frameworks help to provide governments with a clearer picture of where public finances are being spent, to allocate resources to policy priorities, and to make it easier to track spending against the achievement of policy outcomes (OECD, 2011).

Though there is always room for improvement (see OECD, 2011), budget planning seems to be well organised and reasonably well linked to policy priorities. Budgetary resources have tracked policy decisions to increase teachers' salaries; improve VET education; create separate, state-run upper secondary schools; expand the capacity of pre-primary schools, and consolidate the provision of career, psychological, and lifelong learning counselling.

Many countries have laws that require that annual budgets be linked to medium-term expenditure frameworks and by extension to longer-term strategic goals. But often these linkages exist only on paper. The situation in Estonia however seems somewhat different. Indeed, in meetings with the review team, officials from a broad range of government agencies demonstrated a remarkable fluency with the objectives laid out in the strategic documents of the government and of the Ministry of Education and Research. Moreover, most of them talked very clearly about the relationship between these objectives and the funding levels laid out in the budget. This suggests that not only is longer-term planning the norm at the national level, but that horizontal co-ordination within and between ministries is well developed. Indeed, given the fluency with which non-governmental actors talked about both the country's educational goals and the state-budget, it is clear that this conversation extends beyond the government itself.

### ***The monitoring and transparency of resource use seems effective***

#### ***Robust systems of oversight are in place***

Estonia has relatively robust vertical and horizontal systems of formal and informal oversight. These systems allow for the prudent decentralisation of managerial authority as

well as the continuous monitoring and periodic adjustments of the system by more centralised agents. These systems exist for both state-run and municipal schools but are probably stronger in the latter.

Estonia has decentralised very significant levels of public sector expenditure control to democratically elected governments whose single most important function lies in the area of education. These local governments are not subject to the fiscal discipline that comes with having to raise taxes in their own name. Nonetheless, municipal governments have invested heavily in their schools while also developing systems that make it easier to further decentralise responsibilities to them. School accounts are typically maintained by the education departments of municipal governments. These departments are generally staffed by people who have been involved with the sector for most of their professional careers.

Larger municipalities have developed remote, electronic accounting systems for their schools. These systems relieve schools of the costs of keeping their own accounts while also giving them the ability to monitor their budgets on a day-to-day basis. They also allow municipalities to track funds to their final uses as well as to impose various degrees of expenditure control on schools' directors. This, however, does not seem to be their primary function and most municipal officials and school directors seemed to regard these systems more as tools that permit the responsible decentralisation of managerial powers than as instruments for hierarchical control. None of the directors that the review team spoke with openly complained about municipal officials micro-managing their financial decisions.

The results of external oversight and control produce concrete and visible adjustments in the governance and functioning of local governments, state institutions and schools. This means that institutions and the people who inhabit them are learning from their mistakes. Also, regulating the flow of private contributions to schools for the income earned by renting their facilities seems relatively unproblematic.

In sum, ensuring that decision makers use funds for schooling in compliance with the law does not seem to be particularly problematic. In part, this is because higher level authorities can track financial flows with relative ease. In part, it is because of high levels of horizontal accountability that ensure that budgets, revenues, and expenditures are fairly continuously being reviewed by different stakeholders, including at the school level through boards of trustees.

### ***There are good levels of transparency***

The strategic documents defining state, local government, and school priorities are publicly available as are the budgets of all public institutions. The public's easy access to both strategic and financial documents increases social oversight of the education system, in many ways mitigating more rigid forms of external control.

Estonia has established information systems that make it relatively easy to monitor public sector behaviour and at least with respect to education the country seems to have maintained or developed both high level of professional commitment and significant social oversight. It is in the context of these relatively robust systems of vertical and horizontal oversight that both resource utilisation and resource management need to be understood. Together they are allowing Estonia to decentralise responsibilities to lower levels of governance while making it possible for actors at all levels of the system to monitor each other's behaviours and to periodically adjust the rules and standards which guide them.

The budgets of all municipal schools must be publically available on their websites, while those of state schools are available on the website of the Ministry of Education and Research. All schools are required to have three-year development plans and to publish them alongside their school statutes on their respective websites. In both municipal and state schools, these plans are drafted in co-operation between the boards of trustees and school directors. And, as elsewhere, annual budgets are supposed to be aligned with the priorities defined in these plans. But because the vast majority of school revenues go towards fixed operating costs, these development plans typically focus more on strengthening school identities and communities. Nonetheless, the board of trustees' members the review team talked to generally felt that school development plans were important and did affect how resources were actually spent. So again, horizontal social control over public sector behaviour seems fairly well developed in Estonia at the school level.

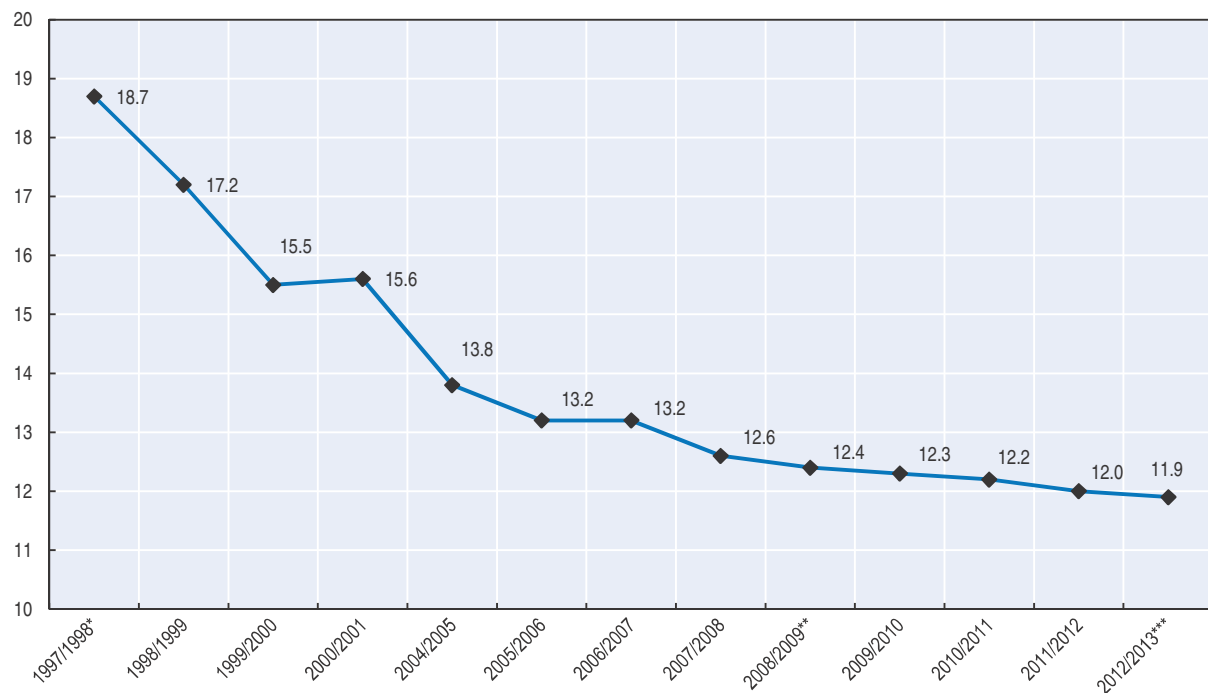
## Challenges

### ***There are a range of pressures for further public spending while inefficiencies can identified***

In the coming years, the provision of free tuition for tertiary education students (conditional on student performance); the commitment to further raise the salaries of primary and secondary school teachers; demands to increase the salaries of pre-primary education teachers; and the need to make investments in the rationalisation of school networks as well as modernising VET will all put pressure on the public purse. As always, figuring out how much of this additional expenditure should come from cuts in other spending, the general tax payer, or private firms and individuals will remain a challenge.

Of particular concern is the low public spending on pre-primary education (see Table 3.5), compared to the OECD average. This leads to low salaries for teachers at this level of education, with possible implications for the quality of the services offered. Part of the explanation for the low level of spending lies on the fact that funding comes from municipalities' own resources, which are often scarce. Evidence from the United States (Cunha et al., 2006) and Europe (Wößmann, 2008) shows that investing as early as possible in high quality education for all, and particularly in supporting students from disadvantaged backgrounds, yields larger returns because early cognitive development makes it easier to acquire skills and knowledge later in life. The substantial long-lasting effects of early education on economic and social outcomes are particularly high for children from disadvantaged backgrounds, whose home environments may not provide them with the foundational skills necessary to prosper at later educational stages. In light of this, it is difficult to understand why parents are charged fees in pre-primary education while a new policy of free tuition in tertiary education, which grants considerable private benefits to graduates, was established in 2013.

Over the last 20 years the efficiency of the school system has declined as enrolment has fallen. This can be seen from Figure 3.11. Student teacher ratios dropped from about 19 to 1 in 1998, to under 12 to 1 in 2013. In the short-term, the demand for school services at pre-primary and primary levels will increase, but in the long run the number of students in the school system will keep dropping (see Chapter 1).

Figure 3.11. **Number of students per full-time equivalent teacher, general education, 1997/98 to 2012/13**

\* Per student formula introduced.

\*\* Per class formula introduced.

\*\*\* Per student formula re-introduced.

Source: Data provided to the OECD review team by the Ministry of Finance.

### **Local governments have little ability to raise revenues to improve the quality of their services**

Estonian local governments have very limited revenue raising powers and 80% of their budgets come from national grants and transfers. On the one hand, this makes it difficult for local government officials to tax their citizens in order to meet their demands for different or higher quality services. On the other hand, and equally important, it encourages both local officials and their citizens to see any local financial difficulties as the result of insufficient national government support. The resulting “fiscal illusion” further depresses the willingness of both local officials and citizens to use local taxes to improve local services.

In particular, the system of capping parental contributions for pre-primary education may work against equity considerations if local governments find themselves unable to create or sustain new places in pre-primary schools without higher parental contributions. There are indications that some municipalities are not able to respond to the demand for pre-primary education places of their inhabitants.

### **Further improvement is needed in the VET sector**

Despite Estonia’s commitment to, and investments in vocational education, the VET system is still a work in progress. Enrolment continues to fall; drop-out rates remain high; employers contribute little to the system; and there are no incentives in the funding system for schools to ensure that students complete their studies (see also Chapters 1

and 2). A study by the National Audit Office of the VET schools suggested that many of the investments in the sector were made without sufficient analysis of future labour market trends (National Audit Office, 2005) while another audit suggested improvements to the process of determining state-commissioned places as an approach to public funding (National Audit Office, 2009). In this regard a positive development has been the development of a system of labour market monitoring and future skills forecasting (OSKA), to be implemented by the Estonian Qualification Authority from 2015 onwards (European Commission, 2014). However, a stable model for determining, pricing and funding different types of VET programmes has yet to emerge.

To help reduce drop-out rates in VET schools the national government is considering introducing provisions that would make funding fully or partially dependent on completion rates or rates of job placement. Performance-based allocation mechanisms have the potential to bring improvements to institutions' efficiency, for instance, through improved degree completion rates or lower costs of provision. However, performance-based funding mechanisms should be carefully implemented because they can have undesired effects. For instance, if institutions are funded on the basis of completion rates or credits accumulated by students, some may be tempted to lower their standards in order to improve their funding. This requires adequate quality assurance mechanisms in place. Another possible effect is to induce risk-avoiding behaviour among teachers and school leaders leading to an emphasis on outputs that are easily attainable and measurable.

### ***The national government is sending ambiguous signals about school consolidation***

The national government has reacted to declining enrolment ambiguously. On the one hand, national policy makers, concerned about the declining efficiency of the system have periodically tried to exert pressure on municipalities to rationalise their school networks by tightening up the formula used to allocate teachers' salaries. On the other hand, however, many of these adjustments have been designed to, or have *de facto*, allowed smaller municipalities to preserve existing staffing levels by decreasing the normative class sizes used to determine the number of teaching positions that municipalities with different small student populations are entitled to.

While national policy makers are clearly disturbed by the declining efficiency of the system, they have also been sending mixed signals about who should really be responsible for closing facilities. And not surprisingly, local government officials have exploited these mixed signals by insisting that the national government fully fund existing levels of employment despite declining enrolment, "because teachers' salaries are the responsibility of the national government". None of this is particularly surprising because neither local governments nor national policy makers want to be seen as politically responsible for forcing school closure or laying-off teachers. Indeed, similar "blame games" are being played out in all Central and Eastern European Countries that are trying to address demographic decline in a decentralised context.<sup>7</sup>

### ***"Dual budgeting" by the state and municipalities is adding to the ambiguity***

A striking structural aspect concerns the separation of the budget process for teachers' and school leaders' salaries (by the state) from the budget process for other school operating costs at the municipal level. In many ways this system of "dual budgeting" has served Estonia well by ensuring that school directors have fairly autonomous control over the pedagogical process while allowing the national government to regulate minimum

teachers' salaries. On the one hand, it encourages the idea that the national government is responsible for teacher salaries and that it should determine how much labour really needs to be employed in schools. On the other hand, it encourages local governments to ignore the decisions of school directors that may have systemic implications – like keeping salaries low in order to maintain small classes – while discouraging them from developing system-wide personnel policies to facilitate network consolidation, policies that might include severance payments for redundant teachers or higher salaries for new entrants or for those remaining in the system.

Indeed, “dual budgeting” combined with the limited financial autonomy of local governments makes it very unlikely that local governments will turn to their electorates and say: “Our desire to maintain small schools and small classes is costing us more than what we receive from the national government in financial support. So if we want to have more teachers than the norms allow, or to pay them better, or to provide additional hours of instruction, then we need to raise local taxes.” At the same time, it is making it difficult for the national government to clearly specify minimum class or school sizes, and to adjust funding levels to these norms, because it doesn't want to be seen as forcing network consolidation or layoffs.

#### ***Responsibilities for teacher employment and salaries are unclear***

This dual budgeting and the frequent and ambiguous changes in the formula for allocating the Education Grant for teachers' salaries has encouraged the idea that teachers' salaries and employment are not an important concern of local governments. It has also made it unclear which level of government should really be responsible for bringing teacher employment closer in line with declining enrolment.

#### ***There is little acknowledgement of the interrelated need to restructure employment***

The discourse about network rationalisation is typically framed in terms of facility utilisation rates, and to lesser extent educational quality, while avoiding the equally thorny – or thornier – problem of restructuring employment. In the course of the interviews of the review team with Estonian educators at all levels, it felt like overstaffing was the “thing that shall not be named”. This avoidance is making it difficult for reformers to creatively link other questions concerning the use of professional labour in the system as a whole, with the problem of network consolidation.

This reticence to talk directly about the apparent oversupply of teachers (see also Chapter 5) in the system meant that aspects of teacher employment that people openly discussed were not being linked to the issue of restructuring when it seemed they could be. For example, the OECD review team was often told that Estonia's teaching force is now among the oldest within the OECD area, and that there are serious problems attracting young, talented people to the profession (see Chapter 5). But these problems were not associated with poor prospects for professional advancement that new entrants into the field may face because of over-staffing, and the problem of attracting younger people to the profession was framed as a salary problem, or a prestige problem, but not a “space” problem. At the same time, no one raised the possibility of providing incentives to older teachers to retire.

Also, and perhaps more interestingly, the review team had a number of conversations in which policy makers highlighted the need for more skilled educators in various segments of the system. Thus, those concerned with the difficulties Estonia faces with



mainstreaming special needs students in mainstream schools hoped that these schools could be provided with additional teachers to ensure the success of the process. Similarly, the officials responsible for establishing the new regional centres for career counselling, and psychological support complained about their problems staffing these institutions with experienced personnel. And finally, those concerned with increasing the access of Russian-speaking students to Estonian tertiary education institutions stressed the need to provide them with more intensive Estonian language training. But again, nobody seemed to see potential linkages between the shortage of highly qualified teachers in some areas of the system and their oversupply in others.

### **There is a lack of co-ordination to rationalise the school network**

Jurisdictional fragmentation is making it harder for Estonia to rationalise its secondary school facilities because many of its municipalities are too small to maintain effective and efficient secondary schools, and in some cases primary school facilities. Indeed, as can be seen from Table 3.8, more than half of all local governments have only one school. These jurisdictions will fight bitterly to prevent these schools from being closed. At the same time, however, only 13% of the total student population attend these schools, and the majority of them attend Years 1-6.

**Table 3.8. Jurisdictional fragmentation and average class sizes, 2013**

		Local governments with only one school	Local governments with more than one school	Total
Number of local governments		117	93	210
Number of students by Year	1 to 6	10 214	62 720	72 934
	7 to 9	5 301	28 913	34 214
	10 to 12	2 221	22 085	24 306
	<b>Total</b>	<b>17 736</b>	<b>113 718</b>	<b>131 454</b>
Average class size by Year	1 to 6	11.4	13.6	
	7 to 9	11.1	13.5	
	10 to 12	15.1	20.0	

Source: Data provided to the OECD review team by the Ministry of Finance.

The county-level governments that could run upper secondary schools are, however, too weak financially and politically to manage this responsibility. This is creating serious co-ordination problems with respect to the consolidation of secondary schools, a pressing task now that enrolment has bottomed out at this level of education (see also Chapter 2).

Recently, the Ministry has decided that the best way to facilitate network consolidation is by essentially “recentralising” upper secondary education. This is part of the broader strategy to clarify responsibilities for the management of public education between the state and municipalities, in view of giving responsibility, in the medium-term, to the state for upper secondary education (both general and vocational) while leaving the responsibility for pre-primary and basic education to municipalities. This new policy is being expressed in two ways. First, rules have been introduced that prevent local governments from creating new full-cycle schools for Years 1-12. Moreover, any new or reorganised school can no longer combine upper secondary education with other levels of

education. This will force sparsely populated municipalities to close their upper secondary education programmes because they will not have enough upper secondary school age students to create self-standing *gymnasiums*.

Second, and more importantly, the national government is moving to establish at least one new state-run *gymnasium* in every county so that secondary school students from municipalities too small to sustain upper secondary schools will be forced to send their students to a modern *gymnasium* designed for between 250 and 750 students. These facilities, it is argued, will make it possible to provide better quality education at a more affordable price.

It is also expected that the separation of upper secondary education from basic schools will encourage students completing Year 9 to more seriously consider their educational options and not just to continue on in the school they know. As such, the “recentralisation” of secondary education is also part of a broader strategy of improving the alignment of the education system with the needs of the labour market by encouraging more students to eventually choose vocational education as they leave basic school.

The Ministry of Education and Research has set an ambitious target of reducing the number of schools with upper secondary education from almost 200 to less than 100 by 2020, and that eventually all *gymnasiums* have more than 250 students. Four new facilities have already been established and the Ministry is negotiating with local governments about where the next ones should be established (see Box 3.1 for the example of Jõhvi). These negotiations are not easy because local governments understand that the new state-run facilities will compete with their own schools for teachers and students – including students who currently commute to their schools from other municipalities. Indeed, the Ministry is expecting its modern, well-equipped facilities and well-staffed schools to be particularly attractive to commuting students, in part because their local governments will no longer have to pay the per student amount associated with the non-salary operating costs of another municipality’s schools. So to encourage local governments to co-operate with its plans, the Ministry is offering them investment resources to restructure and consolidate their schools with upper secondary education into basic schools. The objective is that, by 2020, the schools run by municipalities no longer include upper secondary education (Years 10-12). In fact, over the 2014-20 period, the Ministry expects to divide the EUR 250 million in investment resources contained in the current round of EU structural and

#### Box 3.1. State upper secondary school in Jõhvi

In Jõhvi the national government has decided to consolidate the upper years of the existing Estonian-speaking and Russian-speaking schools into a new state run *gymnasium*. About 120 students from each school are expected to attend. But the *gymnasium* is being built for 500 students in the hope that it will attract most of the secondary school students from the surrounding municipalities. Whether students from surrounding municipalities will choose to leave their home town schools and commute to the new state run *gymnasium* in Jõhvi is an open question. In part, it will depend on the availability of convenient transport, in part on whether surrounding municipalities choose to close the upper years of their existing schools, and in part on how well the integration of Russian-speaking and Estonian-speaking students goes in the new *gymnasium*. If there are challenges along any of these dimensions it is quite possible that the new *gymnasium* will function below capacity.

investment funding, more or less evenly between the costs of building new state *gymnasiums*, and the costs of helping local governments who agree to co-operate with funds necessary to restructure their basic schools.

How much these side payments will actually cost, and whether state-run *gymnasiums* will attract the students necessary to justify their construction or sustain their operating costs remains an open question. It is not hard to envision scenarios in which competition between state, municipal, and (to lesser extent) private schools, for students, teachers and funding, gets fierce. Indeed, there is nothing in the plan that guarantees that newly constructed state-run *gymnasiums* will attract the students necessary to fill them, and while the negotiations between the national government and the larger jurisdictions in which the new *gymnasiums* are supposed to be located will surely lead to a decrease in the number of municipally-run schools that offer Years 10-12, they are not being required to close them.

Perhaps, most importantly, the municipalities whose students are supposed to commute to the new *gymnasiums* will be allowed to run full-cycle Years 1-12 schools for as long as they can afford to. As such, it is entirely possible that the construction of new state *gymnasiums* will actually compound the sector's efficiency problems while generating all sorts of unhealthy competition between municipalities, private schools and the state for a declining number of students. It is not clear whether the national government's attempt to resolve these co-ordination problems by creating state-run secondary schools will work in an environment where students will continue to be free to go to municipal or private schools. At the same time, some forms of network infrastructure important for education seem to be undervalued given the importance that the national government now seems to be placing on the consolidation of upper secondary school. These include student dormitories and regional public transport and road networks. However, new state *gymnasiums* will offer accommodation for those students who need it and transportation support will be provided.

### ***There are some concerns about the public funding of private schools and the licensing of new privately-run schools***

Private schools are entitled to the full amount of funds that are being spent in public schools: on the one hand they are entitled to the same per student salary subsidy from the national government that municipal governments receive for their schools. On the other hand, local governments are legally obliged to provide them with funding equal to the average amount they spend on the other operating costs of their schools. They can also charge tuition fees. In practice, this may amount to subsidising richer households to pay for services they might well purchase on their own at a higher price and to cheaply opt out of the public school system in the name of school choice.

Not surprisingly, the number of private schools has grown rapidly in recent years and while school choice is important, the level of the subsidy may be unnecessarily and imprudently high. In short, the generosity of the subsidy may work against the objective of network consolidation given that state and municipally-run schools will be competing with private schools for students in an environment characterised by overcapacity.

A major concern is that new entry by private schools, encouraged by the funding system, has resulted in smaller schools and class sizes and hence a higher cost school system with no evident increase in student learning outcomes. In fact, class size in the

private sector is considerably smaller than in the state and municipal sectors: 15 in primary education (2nd lowest figure within the OECD area), against an overall country average of 17; and 12 in lower secondary education (the lowest figure within the OECD area), against an overall country average of 16 (OECD, 2014, see also Chapter 5).

***Rules governing the carryover of school funds from one budget year to the next need to be clarified***

Municipal schools in many jurisdictions seem to have problems retaining funds across budget years despite the fact that this is apparently allowed by the law. These problems depress the willingness of schools and school directors to mobilise revenues from donations, asset income, or the sales of goods and services. They can also result in inefficient spending as schools seek to spend their annual budget within the time limit rather than wait and spend on items that are more useful for the school. Another disadvantage of not being fully able to carry over unspent funds is that schools are unable to save for large capital projects, though this would require the ability to carry over unspent surpluses for several years. However, allowing unregulated carry-over of budget surpluses can lead some schools to accumulate excessively large balances and consequently not spend money that was intended for the current generation of students.

***There are some equity concerns***

In municipal schools, parents often contribute funds to their children's schools or classes for specific purposes such as special events, artistic performances, and class outings. Typically, these funds are held "off-budget" with their expenditure under varying degrees of social and/or directorial control. In their interviews with the review team, some actors expressed concerns that these private contributions were undermining the equity of the system and needed to be better regulated. Other actors felt that the contributions were generally modest, that people knew what was going on, and that contributions were not tied to services rendered just for "their children", but for the class or the school as a whole. It is not clear how this question is regulated in state-run facilities. In VET schools however, the OECD review team believes it is less of an issue simply because the poorer and more geographically dispersed households of VET students have less to contribute, and identify less with their schools.

In addition, overtime, income differentiation across both households and local governments may work against poorer families (in poorer municipalities) participating in pre-primary education: because the salaries of pre-primary school teachers are not financially supported or regulated by the national government, local governments that cannot afford to raise pre-primary education salaries may dilute the educational role of pre-primary schools. Others may try to raise teachers' salaries, but then feel compelled to raise prices. The rules that cap pre-primary education fees at 20% of the national minimum salary ensure that "nobody pays too much". Nonetheless, such fees are regressive. They could be made more equitable by allowing local governments to differentiate the fees households pay in relationship to their income.

With one important exception, household payments for tutoring services to prepare students for important external examinations seem to be a marginal feature of the system. But the households of Russian-speaking students do often seem to spend considerable sums on helping their children master Estonian in the run-up to the external examination

marking the completion of basic education. This underscores the problems previously discussed concerning the ability of Russian language students to get adequate Estonian language instruction, which is inequitable.

### ***The integration of annual budgeting with strategic planning has some limitations***

The integration of annual budgeting with strategic planning at the local level with respect to the critical issue of network consolidation remains weak. As is the case with national ministries, local governments are required to align their annual budgets with both four-year expenditure plans, and longer-term Strategic Development Plans. Here, however, it is less clear that the requirements for multiyear financial planning are working as well in the education sector as they seem to be at the national level. The basic reason for this lies in the system of dual budgeting that has grown up around the Education Grant that local governments receive from the national government for teachers' salaries. As described earlier, the amount of money put into the grant fund and the formula used to allocate it have changed frequently over time and have progressively put pressure on local governments to close facilities and reorganise school networks in the face of demographic decline.

At the same time, however, this pressure has been inconsistent and sometimes couched within an unstated assumption that the national government will continue to fund schools at existing levels of teacher employment. Demographic decline has made this assumption increasingly expensive and ultimately untenable. But for the same political reasons that make local governments reluctant to close schools and let go of teachers, the national government has been unwilling to openly declare that funding levels are tied to specific expectations about class and school sizes, and that local governments who do not meet these norms will have to pay the additional costs out of their other revenues. And without such a declaration from the national government there is no good reason for local governments to take it upon themselves to incur the political and financial costs of network adjustment because "teachers' pay is the responsibility of the national government".

This does not mean that there is no long-term budget planning at the local level. On the contrary, there seems to be a fair amount of it with respect to pre-primary schools, the development of non-school educational facilities, school management systems, and other education-related community activities. Moreover, at least some larger municipalities have responded to the national government's plans to separate upper secondary education from basic schools and to build state-run *gymnasiums* by drawing up their own consolidation plans. Nonetheless, in most jurisdictions the linkages between annual budgets and strategic development planning remain weak in the critical area of network planning.

### ***There is scope to adjust the use of European Union structural funds***

Analyses of the use of EU structural funds for the operational programmes for 2004-06 and 2007-13 provide indications that some adjustments can be made to the implementation of projects which benefit from EU structural funding.<sup>8</sup> An audit by the National Audit Office of the use of EU structural funds for social (including educational) infrastructure of local governments (National Audit Office, 2012) revealed a number of challenges, including: i) investments into school infrastructure (construction and renovation of schools, mainly in general education) were made with little consideration of future operating costs and with little account of demographic developments (i.e. the need for school consolidation); ii) no transparent and explicit criteria were used to select the funded projects; and iii) no adequate impact evaluation was designed and conducted. This highlights that the link between

co-funding from EU structural funds and national education policy is not always strategic. The report also notes that the grants were used for the intended purposes and their impact in terms of the provision of additional public services was visible. The report makes a range of recommendations which were taken into account by the concerned ministries in the preparation of the Operational Programme for Cohesion Policy Funds 2014-2020 (Ministry of Finance, 2014a).

Another study by the Praxis Centre for Policy Studies (Haaristo et al., 2013), commissioned by the Ministry of Education and Research aimed at evaluating the mid-term implementation of seven European Social Fund (ESF) measures in the area of general education and youth work in Estonia, which were part of the Operational Programme for Human Resource Development 2007-13. These include areas such as regional counselling centres, career services, professional development for teachers and study materials for special needs students. Three central issues emerged as the main implementation weaknesses, which should receive special attention in the implementation of the 2014-2020 Operational Programme:

- The development of interventions often lacked a clear rationale based on a clear assessment of challenges and needs. The report recommends comprehensively documenting the issues the interventions are supposed to address, followed by a clear definition of goals.
- The monitoring of the implementation was hindered by the inadequacy of indicators often with vague links to objectives. The report recommends a better selection of indicators for proper monitoring.
- The financial sustainability of the measures did not receive enough policy attention (i.e. no strategies were established to ensure the continuity of the activities/interventions once EU structural funds are no longer available). The report points to the risk of discontinued development of some policy areas if funding stops and no funding alternatives are available.

## Policy recommendations

### ***Establish average minimum class sizes and specific earmarked grants***

Funding formula elements that sustain small classes do not promote efficiency unless the schools thus protected are only those that must be retained to ensure student access to schools (i.e. access within a reasonable distance and provided locally for early learning). An option to be considered in order to consolidate the school network is the specification of a threshold class size or average school class size below which students would not be funded from the state grant, unless the school is identified as meriting “protection” in order to maintain student access in remoter areas. This would promote class consolidation if the minimum class size specified is sufficiently high, though such a rule might well face considerable opposition from some stakeholders.

The government could define an average minimum class size below which a school is not funded from the state budget if the school’s average class size remains consistently below the threshold size for a given number of years – for example three years. Average class size would be measured as the average number of students per year level, since a small school would not be forming more than one class per year level. Different class size thresholds should be defined for different education levels and rural locations. Primary education classes, in particular in Years 1 to 6, need to be smaller in rural areas than

classes for secondary aged students, who are capable of travelling longer distances to school. Hence, regulations about the average minimum class size could take into account the extent to which early learning is to be provided locally. The same rules should apply to private schools already included in the network of schools. This strategy would imply using a salary grant formula to fund municipalities which takes into account data at the individual school level.

Within the extent of the state funding resulting from the regulated average minimum class size, school owners and schools would retain their autonomy on class organisation, including in deciding the actual size of specific classes within schools. This could possibly be assisted with extra resources coming from the school owner's own revenues. In particular, if local governments want to maintain schools with average class sizes below the regulated average minimum class size, they would pay for the additional costs out of their general budgets. Moreover, in this context, local governments would need to play a more active role in monitoring and controlling the education process, at least with respect to class sizes, professional support services, and statutory salary increases. This regulation could still be combined with the continued setting of minimum teacher salaries by the national government and the continued provision of local governments with 20% more in salary funds than the minimum class-size norms called for so that the broad framework of decentralised salary setting would be maintained.

Average minimum class sizes should be announced by the national government as a new national policy that will be phased in over a specified number of years to allow adjustment, but enforced. This sort of declaration is necessary if local governments are going to turn to their electorates and say, "This is the national government's policy. It is being made for understandable educational and fiscal reasons. We can try to keep our costs within the funding envelope we are getting, we can cut other costs, or we can raise taxes." The regulations on minimum average class sizes established by the national government make it clear the conditions for state funding of municipal education while preserving municipal autonomy in determining the size of both municipal schools and classes.

In order for local governments to have real choice, consideration could be given to increasing, at the margin, their own-revenue raising powers. Indeed, in as much as local choice remains a principle of the Estonian school system for a responsive and a creative school system, and in as much as the state clarifies the lower boundaries of that choice through average minimum class sizes, then a case can be made for expanding (at the margins) the upper range of choice for local governments by increasing their fiscal autonomy. For example, many of the intergovernmental finance systems in Nordic countries give local governments substantial control over personal income tax rates. Some Central and Eastern European Countries have also started to do this (e.g. Croatia, Montenegro) by giving local governments the right to impose a local surcharge – within limits set by law – on the national government's rate, while others are considering it. Ideally, expanding the own revenue powers of local governments would also be accompanied by some jurisdictional consolidation to decrease the incentive such taxation might create for people to move from one jurisdiction to another – particularly from urban to suburban ones. At the same time, this would require strengthening the equalisation system for those local governments whose fiscal capacities are weaker. It is recognised, however, that moving in this direction requires considerations that go beyond the education system.

In order for local governments to have real choice, consideration could be given to increase, at the margin, their own-revenue raising powers. Indeed, as much as local choice remains a principle of the Estonian school system (at the margins) for a responsive and a creative school system, and in as much as the state clarifies the lower boundaries of that choice through average minimum class sizes, then there might be a case to increase (at the margins) the upper range of choice for local governments by increasing their fiscal autonomy. For example, most of intergovernmental finance systems in Nordic countries give local governments some control over personal income tax rates. Some Central and Eastern European Countries have already done this (e.g. Croatia, Montenegro) by giving local government the right to impose a local surcharge – within limits set by law – on the national government’s rate, while others are considering it. Ideally it would also be accompanied by some jurisdictional consolidation to decrease the incentive such taxation might create for people to move from one jurisdiction to another – particularly from urban to suburban ones. At the same time, this would require increasing the robustness of the equalisation system for those local governments whose fiscal capacities are weaker. It is recognised, however, that moving in this direction requires considerations that go beyond the education system.

As an alternative to introducing a minimum class size threshold, further measures could be taken to put financial pressure on school owners with small schools and classes such as by modifying the existing compensation mechanism used to give more funding per student to small municipalities. This would involve increasing, for the smaller municipalities, the normative class sizes used to determine the number of teaching positions that municipalities with different student populations are entitled to.

An additional measure is to define the minimum number of students required before a school is approved for inclusion in the network, for instance with an average class size of 20 for Years 1-9 and of 25 for Years 10-12. Maintaining a sufficiently high class size threshold before schools are included in the network would go some way to address the problem that new entry from the private sector, stimulated by receiving the same per student formula allocation as public schools, has resulted in reducing average school size and thus the efficiency of the school system. This suggestion is consistent with the recent efforts of the Ministry of Finance and representatives of local governments (Association of Municipalities of Estonia, Association of Estonian Cities) to define minimum school sizes in relationship to the distance of schools from each other. As with average minimum class sizes, this initiative forces the national government to set norms that nobody wants to meet, and thus to bear the first wave of political protest against the decision. But it leaves local governments to do all the hard work afterwards, hard work for which they also need a political shield in the form of national policy.

In addition to the financial incentives provided by an appropriately designed funding formula, the government needs to implement other policy measures to encourage or enforce school and class rationalisation. In particular, this involves co-ordination and co-operation among municipalities, as suggested in Chapter 2.

Finally, the government should also consider using earmarked grants to provide local governments with additional funding for:

- mainstreaming students with special educational needs
- providing additional Estonian language instruction for Russian-speaking students



- providing targeted support to families unable to meet the co-financing requirements of municipal pre-primary schools
- subsidising school transport and the maintenance of dormitories.

More debatable is whether funding for school lunches or study materials (e.g. textbooks) needs to be earmarked, given the horizontal level control in the system. Or put another way, so long as it is publicly known that free lunches and free textbooks are a universal entitlement and the national government is calculating X amount per student for one, Y amount for the other, earmarking is probably unnecessary. This adjustment could be gradually introduced as municipalities gain capacity to manage their education budgets.

### ***Strengthen approaches to consolidate upper secondary education***

The review team supports the government's goal of "recentralising" general upper secondary education as an important step to simplify the governance of public schooling in Estonia whereby, in the long-term, a clear division of labour will be established: municipalities managing pre-primary and basic education; and the state managing *gymnasiums*, vocational education and special schools. This would be part of the larger strategy to clarify responsibilities in the education sector. In this way, the national government's policy of not allowing local governments to create new schools that combine the teaching of primary and lower secondary education with Years 10-12 is a step in the right direction. However, as explained earlier, the implementation of the "recentralisation" policy is faced with a number of challenges and needs to proceed with considerable caution. The following strategy is suggested:

- Local governments should be required to create separate upper secondary schools of reasonable scale by a certain date or close down whatever upper secondary classes they may have. This will make it clear that the political decision to consolidate upper secondary education is being made by the national government, but local governments themselves will have to implement the policy over a reasonable period of time. This process will demonstrate which local governments are in a position to offer upper secondary education in efficient ways, i.e. offering quality education at an adequate scale.
- Local governments which demonstrate the ability to run upper secondary education within operation parameters defined by the state (e.g. in terms of scale, quality and diversity of offerings) and which express an interest in keeping the management of upper secondary education could be allowed to do so under formal agreements signed with the state. While the state would manage the overall framework for upper secondary education provision, it could delegate the management of upper secondary education to some local governments (e.g. commissioning student places within given parameters it defines). This would allow the largest cities, if they so wish, to keep operating their general upper secondary schools under a regulatory framework defined by the state.
- State-run *gymnasiums*, as currently planned, could then be targeted to meet the demand for general upper secondary education in those geographical areas where the corresponding municipalities are not able to offer such service according to the parameters established by the state. The need for one state-run *gymnasium* per county will depend on the provision of general upper secondary education by large municipalities which results from the assessment described above.

Implementing this strategy will mean that students in many municipalities will now have to commute to upper secondary schools elsewhere, meaning most probably in the nearest largest town. Here, the biggest policy challenge will be to ensure that these commuting students have places to go, and that the importing municipalities treat them as they treat their own students.

The strategy proposed is likely to imply that not every county needs a state-run *gymnasium*, particularly in the case of the counties where the largest cities are located. This would avoid picking up unnecessary fights with the large municipalities that can run *gymnasiums* of scale and under the right conditions will happily take in commuting students. Here it is important for policy makers to recognise that there are limits to their ability to anticipate the demand for places in new state-run *gymnasiums* if on the one hand they are competing for students with municipal and private schools in the municipalities in which they are located, and if on the other hand it is unclear when students from surrounding areas will choose to abandon their local school and commute somewhere else.

In short, it's not hard to anticipate scenarios in which the state builds new *gymnasiums*, pays larger municipalities considerable amounts of money to restructure their basic schools to agree to the deal, and still finds itself losing the battle to fill its new facility because the local children stay local, some of the commuting children like municipal or private schools better, and other commuting children decide to stay home even if upper secondary education they are getting is small and limited. Efforts to win this competition by creating super modern facilities or paying teachers could easily poison state-local relations in the largest municipalities, while actually also working against the goal of increasing VET enrolment.

In this context, it seems to the review team that the national government should be extremely cautious about constructing state-run *gymnasiums* (or renovating existing infrastructure), though it clearly may be called for in some places. Instead, as proposed above, the government should first assess which large municipalities are capable and willing to offer general upper secondary education, within regulatory parameters established by the state, and then follow a county or regional-based approach to define where the new state-run *gymnasiums* should be located. In this scenario, national and EU investment funds are not used to build a new state-run *gymnasium* in each county or to help larger jurisdictions reform their basic schools. Instead, they are used to:

- Help larger municipalities expand the capacity of their *gymnasiums* to receive students commuting from municipalities too small to sustain their own.
- Help smaller municipalities close their upper secondary education classes in return for investments in communication networks and their remaining basic schools (as is already the case).
- Pay the municipal fees that larger municipalities would otherwise charge to smaller municipalities for commuting upper secondary school students.
- Ensure that regional road systems, public transport networks, and dormitories make commuting as easy as a possible.
- Amend the governance structures of schools in which there are significant numbers of commuting students to ensure the representation of both their parents and their local governments.

This strategy will require a lot of tough negotiations to succeed. Indeed, for the process to get off the ground, the national government would have to make it clear to all parties that for both educational and fiscal reasons *gymnasiums* of less than a specified size will be rapidly phased out and that students in municipalities too small to maintain such institutions will be required to commute. Municipalities that will lose upper secondary schools will have to be ensured that commuting will be made as easy as possible, and that their students will not be treated like second class citizens in the schools they end up attending. Municipalities receiving these students will also have to ensure they will be provided support in expanding capacity where needed, and in covering the share of operating costs represented by commuting students.

### ***Accommodate the side-effects of school consolidation***

The national government should be moderate about the increases of teacher salaries until substantial progress has been made in restructuring school networks and in developing plans for reallocating or removing teachers made redundant by school or class closures (see Chapter 5).

Equally importantly, county-level plans for consolidation (as suggested in Chapter 2) should be accompanied by strategies and funds to redeploy and retire teachers currently employed in schools or classes scheduled to be closed. Here, it is important to note that there are a number of areas in which some teachers made redundant by school closures could gain new relevant functions. These include engaging them to help mainstream special needs students in mainstream schools and classes; employing them as mentors and advisors in the new regional counselling centres; and using them to provide additional language training to Russian-speaking students (see also Chapter 5).

School closures and network rationalisation may also significantly increase disparities in the per capita revenues of local governments because small municipalities will lose some (or all) of both their education grant and the Personal Income Tax share that comes with school employment. They may also see the costs of pre-primary education rise, at least in as much as pre-primary education has been provided in facilities shared with primary schools, and supported by teachers employed in those schools. Taken together, this may put pressure on rural municipalities to reduce access to pre-primary education. The national government should counter these pressures with additional targeted support.

### ***Give careful attention to equity objectives as school consolidation policies are implemented***

It is essential that the equity dimension remains a key feature of school network design and planning. There is a need for a continuous monitoring of the equity implications of all restructuring or rationalisation decisions. The specific needs of the socially disadvantaged groups, students with special educational needs or ethnic minorities have to be considered and the implications of rationalisation measures need to be carefully analysed. It is proposed that this dimension receives the greatest attention when creating the new institutional frameworks for effective network design and planning with guarantees such as the participation of the representatives of the most vulnerable groups or the obligation of adding an equity clause to each restructuring or rationalising measure.

The national government should also consider loosening the restrictions on local governments to charge parents fees for pre-primary education. This could be done by allowing them to introduce higher payments for families whose household income

exceeds a certain national or regionally-defined threshold. Fees would then be set in association of parental ability to pay.

### ***Adjust the public funding of private schools***

The national government should reconsider its policy of providing private schools exactly the same amount of money that is spent on students in public schools given that private schools are allowed to charge fees. Providing such substantial subsidies to generally wealthier households to opt out of the public school system raises serious equity issues and over the longer term quality issues by depriving public schools of the input of often more engaged parents and students. It also runs against the state's objective of consolidating public education into schools of an effective scale and in this light can be considered counter-productive. The easiest way to do this would simply be to drop the requirement that municipalities provide private schools within their territory with the same amount of money they spend per student on the non-salary operating costs of their schools.

Also, decisions on allocating public funding to education services should increasingly depend on needs analysis and quality assessment, for instance to approve entry of a new private school in the school network. Only services of proved quality should get public funding and only new services whose need has been identified should be allowed to become part of the school network.

### ***Invest in pre-primary education***

The current financing of pre-primary provision requires reform. While coverage rates for children aged 3-5 have reached good levels, public spending on pre-primary education relative to GDP per capita remains very low by OECD standards. This is reflected in very low salaries for pre-primary education teachers (see Chapter 5), possibly resulting in lower quality of pre-primary services. The low level of public funding in pre-primary education is partly explained by the fact that it is provided by municipalities which often have very limited own resources. The result is the inability for some municipalities to meet parental demand and their need to charge parental fees. The latter might affect in particular disadvantaged families.

At present, the Ministry of Education and Research is addressing this problem through ad hoc extra public funding for those municipalities which have more difficulties in meeting parental demand, particularly in urban areas. However, since pre-primary education is so important in preparing a child for a successful school career, it is recommended that, as additional public resources become available for education (e.g. as a result of school consolidation), the Ministry of Education and Research progressively assumes responsibility for the full public funding of pre-primary education, transferring public funds for pre-primary education to municipalities as it does for primary and secondary education (e.g. through the education grant). This should also progressively lead to the removal of fees in pre-primary education, which are difficult to justify in light of the greater social returns pre-primary education has relative to tertiary education (where tuition fees were eliminated in 2013).

### ***Strengthen funding approaches for vocational secondary education***

Improving the attractiveness and efficiency of vocational secondary education involves making programmes more relevant for the labour market and for regional development, further involving employers and improving student completion rates. A

holistic strategy could combine: a funding approach that gives institutions more stability and better incentives to improve completion rates; improved career guidance for students; more committed engagement from employers; and ensuring regional development strategies are taken into account.

In order to strengthen the stability and predictability of the funding of vocational education and training it is recommended to introduce national level mid-term planning for professional profiles and the associated financing with a definition of publicly-funded student places, per occupation and VET school, for three-year periods instead of the current annual decisions by the State Commission for Vocational Education.

A priority to address the dropout rate challenge in vocational education in Estonia should be the improvement of career guidance services both prior to enrolment in vocational education and during vocational studies. However, reducing the dropout rate may require a more complex set of policy instruments at upper secondary level. For example, creating an early warning system that effectively helps the identification of students at risk of dropping out, as well as building the necessary prevention capacities of teachers and institutional capacities of VET schools are important instruments. These school-based systems work well if vocational schools themselves are interested in improving their retention capacity; therefore the application of financial incentives is an important condition of the success of such initiatives. Since the reduction of early school leaving is one of the headline targets in the Europe 2020 strategy, various international co-operation projects already accumulated a great deal of good policy practices both in relation to policies and school-based early detection, prevention and intervention techniques (RESL.eu, 2014).

One of the possible incentives for improving completion rates in vocational schools is already being considered by Estonian authorities: adding a performance-based component to the funding of individual vocational schools. However, for the reasons explained previously, introducing a performance-related component to funding needs to be done with caution to avoid non-desired effects (see below). Box 3.2 provides the example of the approach to performance-based funding of VET providers in Finland. Also, the national government should adjust the funding to individual VET schools to ensure per student funding is based on the actual number of enrolled students, i.e. funding levels based on attributed commissioned places should be adjusted during the school year to take into account places which remained vacant and students who dropped out.

Indicators used in performance-based funding systems should relate to aspects to be enhanced in institutions such as internal efficiency (e.g. costs, completion rates) and external efficiency (e.g. quality of graduates). A wide range of indicators are used in countries which have implemented performance-based allocation mechanisms. Indicators more associated with study completion are student graduation/completion rates, number of credits accumulated by students, average study duration, ratio of graduates to beginners, or number of degrees awarded. Other indicators focus on the labour market outcomes of students: employment rates of graduates, or the extent to which employment is in a field related to the area of studies. However, some prerequisites need to be in place for the successful introduction of performance-based funding. It is important to use simple measures which are more readily available and can easily and reliably be interpreted as measures of performance. Also, there should be administrative capacity in place to manage and interpret a great deal of information. Lastly, the measures being used should

### Box 3.2. Performance based funding for vocational secondary schools in Finland, 2006

In Finland performance-based funding of VET service providers was introduced in 2002 when education providers were granted separate state subsidies based on their performance. The system became a part of the unit price determination in 2006. Performance-based funding is approximately 2%, roughly EUR 20 million of the whole funding of vocational education. The allocation of performance-based funding is based on the performance-based funding index, which has been created from the combination of the following indicators:

- Effectiveness: job placement (40% of weight in index) and further studies in higher education (15%).
- Processes: drop outs (15%) and ratio of qualification certification holders to entrants (13%).
- Staff: formal teaching qualifications (11%) and staff development (6%).

When the performance-based funding index is calculated, indicators are assigned different “weights” of importance, as shown above.

Source: Kyrö, M. (2006), *Vocational education and training in Finland: Short description*, Cedefop Panorama Series, No. 130.

be transparent to all stakeholders involved. This highlights the need to achieve political agreement among a broad range of stakeholders regarding the terms for introducing an output-based component for institutional funding.

One possible way to minimise the potential undesired effects of the performance-based component of funding to vocational schools is keeping the actual weight of the performance-based allocation limited, as is the case in Finland. Introducing such component in a small scale (e.g. 2-5% of funding) is probably sufficient to provide the desired incentives for institutions to improve student completion rates. Also, instead of comparing absolute results of schools within a year, a strategy is linking financial incentives to the evolution of school results over the years. Before introducing any performance-based elements into the funding of vocational schools, it is recommended to run experimental funding schemes in a limited number of schools where effects are carefully monitored.

Exploring various ways and incentives to increase the contribution of companies to the costs of vocational education and training is also recommended. One option is to establish a vocational education and training fund to which those enterprises, which do not invest in training directly, contribute. Also, the introduction of tax allowances could encourage increased employers' contributions. An additional possibility is to expand the opportunities for dual training in which companies contribute to the costs of apprenticeships by paying apprentice salaries.

Also, including discussions of the future evolution of vocational education into the regional development forums and negotiations proposed in Chapter 2 would probably be a good idea, both with respect to VET schools as such and VET schools as centres of lifelong learning. This would also help to ensure that the regional discussions of network consolidation included not just parents, teachers, and government officials – be they local or national – but representatives of the private sector.

### ***Improve the conditions for schools to use their funds***

The rules permitting fiscal carry overs for publicly-run schools should be clarified and/or strengthened. It may also be desirable to allow schools to maintain independent bank accounts for special purpose funds. If so however, the amount of funds held on these accounts should be easily visible to both local governments and the public at large. Municipalities should also be required to define rules that clearly govern how income from asset rentals will be divided between the school and the municipality's budget.

### ***Improve the use of EU structural funds***

EU structural funds represent a sizeable proportion of the investment in Estonia's education system and it is fundamental to align the design of the related operational programme to the education national strategy. This is now done as the 2014-2020 Operational Programme gave full consideration to both the priorities identified in the Lifelong Learning Strategy 2020 and the country specific recommendations under Europe 2020. The plans for the current 2014-20 period put more emphasis on the reform of the general education system than before. Investment funding will be focused on consolidating the upper secondary schools' network and reorganising basic schools, possibly based on the analysis developed by the Praxis Research Centre (Põder et al., 2014). Support is also anticipated for the new regional counselling centres, and – through the Ministry of the Interior – the development of new pre-primary schools in the four largest municipalities. Funds will also be used for curriculum development and the development of digital training materials, as well as to support new apprenticeships for 6 000 VET students (see Table 3.4). Overall, the review team considers that the current Operation Programme offers a better balance between large investment drives (e.g. investment in the modernisation of infrastructure), which may not always take into account future operational costs, and investment in policies affecting teaching and learning more directly.

It is also expected that the implementation of the new Operational Programme will overcome the challenges identified in the implementation of previous operational programmes. This involves: the development of interventions with clear goals, based on well-identified policy priorities and with appropriate account of future needs; the inclusion of an important component of impact evaluation as part of the design of interventions; the development of adequate indicators to monitor the implementation of interventions; the establishment of transparent criteria for the choice of the interventions which benefit from funding; and devising strategies to ensure the financial sustainability of the interventions beyond the period of the operational programme.

### **Notes**

1. It was beyond the remit of the review team's mission to examine the mechanics of these calculations but they undoubtedly also have important distributive consequences that need to be considered as the intergovernmental finance system evolves.
2. Estonian legislation considers local PIT income an "own revenue" when it should be considered a shared tax.
3. This may be so for at least two reasons. First, the grant for education provides substantially more money to smaller, more rural and generally poorer jurisdictions on the grounds that these jurisdictions must have smaller classes. Second, the allocation of investment grants frequently favours poorer jurisdictions that have not been able to build basic infrastructure in the past.

4. In addition, municipalities can receive extra specific support from the state on a contractual basis. Examples include support targeted at dormitories; additional support to Ida-Viru County for teacher salaries; funding for the Language Immersion Programme (*Keelekümblus*) and Estonian language extra classes for new immigrants and Russian-speaking students; and funding for the further development of talented students, teachers and school leaders.
5. See OECD (2011) for a more extensive and in some places more critical role of these planning efforts.
6. These programmes are: general education; vocational education; higher education; adult education; teacher and school leadership education; learning resources; study and career counselling; labour market and education co-operation; and school network (Ministry of Education and Research et al., 2014).
7. It is perhaps worth adding that at least some countries – such as Serbia – that did not decentralise education to local governments and where the national government remains responsible for both school networks and teacher employment have had an even harder time adjusting to demographic decline than those who did decentralise.
8. A more general overview of the use of EU Cohesion Funds in Estonia providing an historical perspective and some references to education can be found in Kondor-Tabun and Staehr (2015).

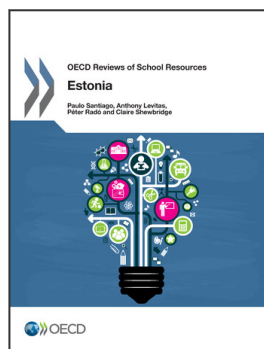
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