



Who bears the cost of early childhood education and how does it affect enrolment?

- Local governments are the main contributors to the financing of early childhood education, particularly with regards to core goods and services such as staff salaries and school buildings.
- Households and other private entities bear a greater share of the cost than in other levels of education, particularly for ancillary services such as meals, school health services and transport.
- Public expenditure on educational institutions, transfers and subsidies to the private sector, and the way funds are allocated, can help increase participation in early childhood education.
- Increased spending on early childhood education does not always translate into higher enrolment, as funds may be used to improve the quality of learning, through raising teachers' salaries, investing more in school facilities or prioritising a smaller number of teachers per student.

How important is early childhood education in national educational systems?

Governments are aware of the importance of investing in early childhood education and care, especially at the pre-primary level. Investing in young children's education is a way to improve social equity. In most OECD countries, particularly the European ones, the amount of public expenditure on early childhood education is substantial (OECD, 2017a) and there are high levels of participation at this level.

Early childhood education is an increasingly significant part of the education system in OECD countries: 7 out of 10 children are enrolled at the age of 3 and almost 9 out of 10 children at the age of 4. Participation is also relatively high among younger children: almost 40% of 2-year-olds are enrolled in early childhood education in OECD countries. It is important to note that at least one year of free early childhood education and care is now the norm in most countries for all children (OECD, 2017a). This pattern has been encouraged by the OECD Programme for International Student Assessment (PISA), which found that 15-year-olds who had had at least two years of pre-primary education performed better. This is true in about half of the 57 countries with data available, even after accounting for their socio-economic background (OECD, 2017a).

The structure of early childhood programmes varies across OECD and partner countries, with different theoretical starting ages (typically between two and four years of age) and different durations (typically two to four years). One of the main differences across countries is whether early childhood educational development programmes (ISCED level 01) exist at all at national level. Countries also differ in whether they provide integrated programmes covering both early childhood education and care: these are available in three-quarters of OECD and partner countries. These are some of the reasons behind the large variations in the amount of resources countries invest in early childhood education, ranging from 0.1% to 2% of GDP (OECD, 2016).¹

The institutional setup and the amount of expenditure are only some of the factors influencing access to early childhood education. Other factors influencing participation in education at very young ages include which institutions support the financing of education at this level, and whether and how the private sector and households contribute towards the costs.

Early childhood education, also referred to as ISCED level 0 (in the ISCED 2011 classification), consists of programmes with an intentional educational component which cover children below the age of entry into primary education (ISCED level 1). Programmes at ISCED level 0 are typically designed to support children's early cognitive, language, physical, social and emotional development and to introduce young children to organised instruction in an institutionalised setting. They can be divided into two categories: ISCED 01 refers to early childhood educational development programmes (typically for children aged 0 to 2 years) and ISCED 02 to pre-primary education (typically for children aged 3 to 5). For further information see Indicator C2 in *Education at a Glance* (OECD, 2016).

Who pays for what in early childhood education?

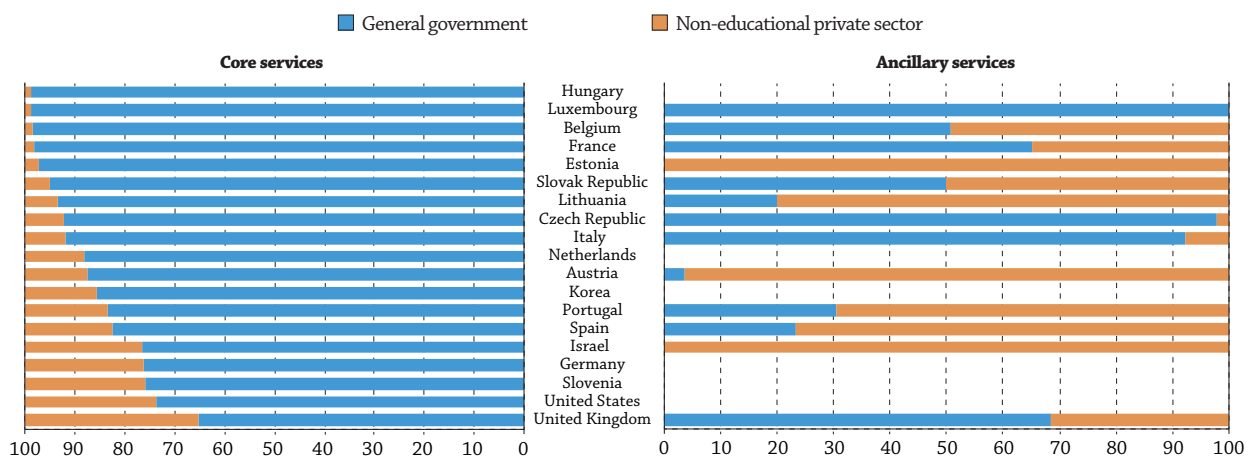
In most countries, financing for early childhood educational institutions comes from both public and private sources, but the share each sector provides differs significantly. In countries like Belgium, Ireland, Luxembourg and Latvia the public sector covers almost the entire cost of early childhood education whereas in Australia, Japan, Portugal and the United Kingdom, households contribute a much larger share.

1. Figures exclude childcare expenses.



Japan is the only country with available data where other non-educational private entities (such as religious bodies, special interest groups or private educational and training enterprises, both for-profit and non-profit) pay a significant share. Figures on private funding for early childhood education must be taken with caution as data may be under-reported or missing in some countries and the effect may not be negligible (OECD, 2017a). For these reasons, it is difficult to infer whether the share of private funding influences participation in early childhood education.

Figure 1. Public and private share of total expenditure on institutions, core and ancillary services (2013)



Note: Pre-primary education only for Belgium, Hungary, Korea and the United States.

Countries are sorted in descending order of their public share of financing for core goods and services. Countries for which no data were available are not presented in this figure.

Source: OECD (2017b).

As well as its importance to the education of very young children, early childhood education is relevant to facilitating women's return to work. However, as the public sector does not fully cover the costs of early childhood education, the private sector is left to pay for a larger part of the total expenditure on early childhood education than at other educational levels.

On average across OECD countries, the private sector finances 31% of expenditure on early childhood educational development programmes and 17% of pre-primary programmes (OECD, 2016). In particular, the private sector contributes more towards non-core expenses, while the public sector still covers on average close to 90% of the cost of core goods and services for countries with data available. Core services include expenses such as teaching staff, school buildings, school books and teaching materials but educational expenditure also includes peripheral educational goods and services such as ancillary services, general administration and other activities.

Ancillary services are peripheral services provided by educational institutions, and include student welfare services such as meals, school health services, and transport to and from school. The private sector covers a larger share of the costs of early childhood education's ancillary services (54% on average across countries with available data), particularly in Estonia and Israel where private financing may even cover the full cost of ancillary services.

The role of transfers and subsidies

Even though governments in many countries subsidise private expenditure on early childhood education, public transfers and payments to households and other private entities are generally low compared to total expenditure.² However, a few countries provide support to the private sector which covers a higher share of their costs. For example, in Australia, Colombia and Denmark the private sector bears one-fifth or more of the cost of early childhood education, but also receives considerable financial support from the public sector in the form of transfers (more than 5% of the total government expenditure on early childhood education).

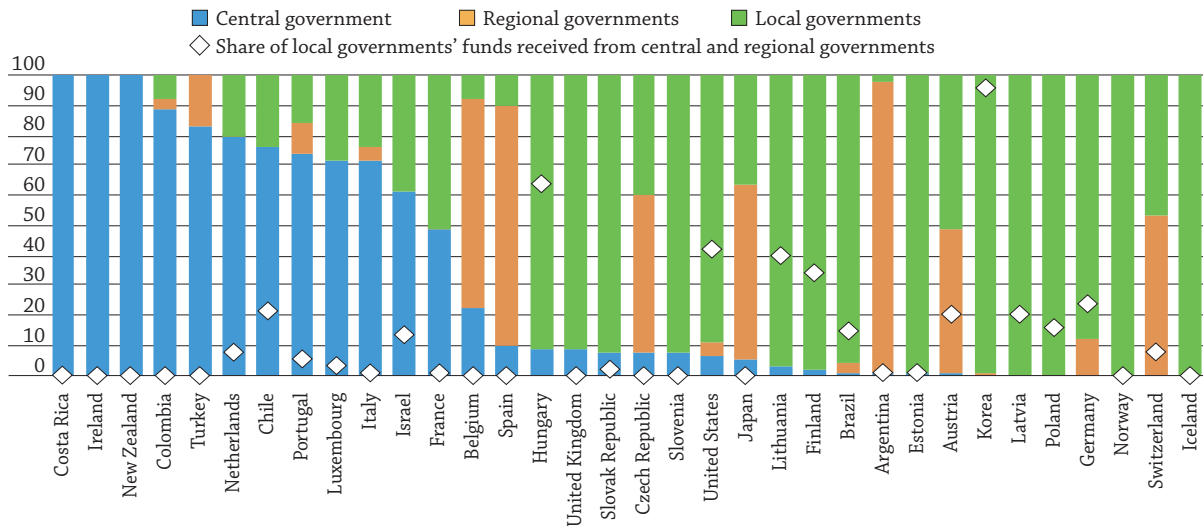
Intergovernmental transfers are more relevant to the financing of early childhood education than transfers from the public to the private sector. On average, local governments in OECD countries receive financial transfers from central and regional governments amounting to 13% of total public expenditure on education. In some countries such transfers are even more significant: local government's share of total public expenditure in Korea, Hungary and the United States increases by 96, 63 and 42 percentage points respectively after financial transfers from central and regional governments (Figure 2).

2. Public to private transfers exclude any tax benefits to students or their families, such as tax credits or deductions from taxable income, and any allowances that are independent of the educational status of a child.

8.9
2014
5.5
5.6
25
25
2013



Figure 2. **Share of total public expenditure on early childhood education by level of government after intergovernmental transfers (2013)**



Note: Pre-primary education only for Argentina, Hungary, Korea, Turkey and the United States. Countries are sorted in descending order of the central government's share in total public expenditure (after intergovernmental transfers). **Source:** OECD (2017b).

Early childhood education is more decentralised than higher levels of education in both its funding and its governance. This affects the way educational services are organised and delivered rather than directly influencing enrolments. The devolution of funding and decision making to the local level brings them closer to families and local needs, but may also widen differences in access and quality across regions (OECD, 2017a).

Local governments contribute the largest share of public funding for early childhood education. On average across OECD countries, local governments provide 48% of total public funding, even before accounting for transfers from regional and central governments. In OECD and partner countries, public funding ranges from being entirely financed by central government (for example in Costa Rica, Ireland and New Zealand) to almost entirely financed by local governments (Estonia, Iceland, Norway, the Slovak Republic and the United Kingdom). In other countries, such as Argentina, Belgium and Spain, regional governments play a bigger role. Despite these differences, similar enrolment rates may be found in countries with different funding models (for example, Germany and Spain).

How can total spending on early childhood education improve participation among young children?

As the relevance of early childhood education increases in many countries, governments face choices on how to facilitate access to education for young children. One of the key variables that governments control is the level of public expenditure, comprising both expenditure on educational institutions, and transfers and payments to the private sector (including households).

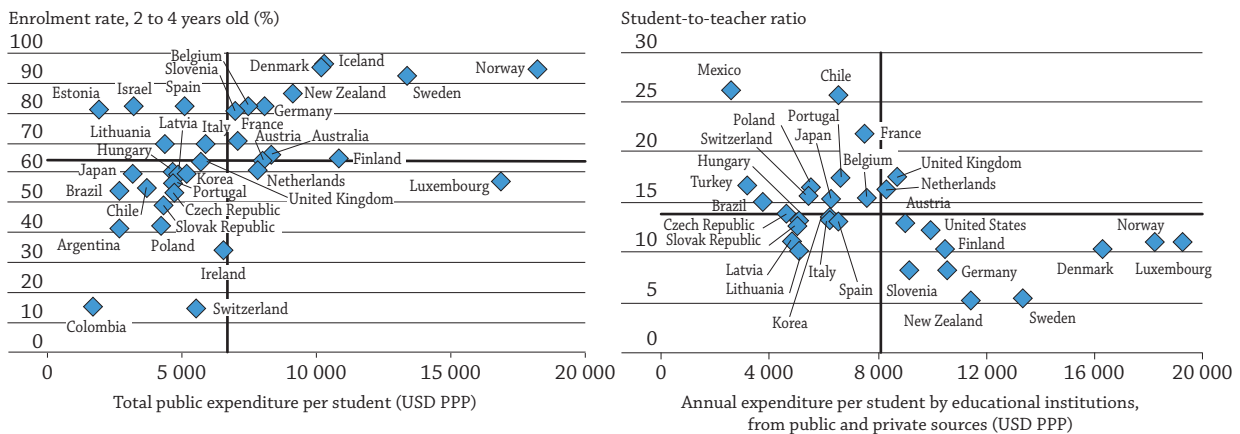
Enrolment rates are correlated with the level of public expenditure (Figure 3, left hand side): countries with the highest public expenditure per student are also the ones with the highest enrolment rates, and vice versa. For example, Iceland, Norway and Sweden have enrolment rates of over 90% for children aged 2 to 4, whereas Ireland and Switzerland have both low levels of expenditure per student and low enrolment rates. On the other hand, Luxembourg has one of the highest levels of public expenditure per student but its enrolment rates are below 60%. This is due to an allocation of funds that has prioritised the quality of the setting over higher enrolment, with low student-to-teacher ratios and much higher teachers' salaries than the OECD average. A number of countries have also been able to reach enrolment rates above 80% for 2-4 year-olds despite relatively low government spending, such as Israel and Spain, where the private sector covers close to 25% of educational institutions' total funding.

Higher expenditure from public and private sources does not always translate into more teachers per pupil. The right hand side of Figure 3 shows that the number of students per teacher is related to the financing made available for early childhood education, but this is not true for all the countries with available data. For example, Slovenia and the Netherlands both have a similar expenditure per child in pre-primary education, but the pupil-to-teacher ratio in Slovenia is much higher: around 16 children per teacher compared to 8 in the Netherlands. More funding may instead translate into higher teachers' salaries, greater spending on teaching material or more investment in school facilities. In fact, while the Netherlands allocate more to teachers' salaries (OECD, 2016, Indicator D3), Slovenia devotes a greater share of spending to teaching materials and supplies, maintenance of school buildings, students' meals and rental of school facilities.

28.32
33.7
36.5
100%



Figure 3. Comparison of per-student expenditure, enrolment rates and student-to-teacher ratios in early childhood education (2013)



Note: Pre-primary education only for total public expenditure per student and enrolment rates for Argentina, Colombia, Hungary, Italy and Korea. Pre-primary education only for total annual public expenditure per student and student-to-teacher ratios for Belgium, Finland, Hungary, Korea, Turkey and the United States. The black lines represent averages across the plotted countries. For details please see Annex 3 of Education at a Glance 2016 (<http://www.oecd.org/edu/education-at-a-glance-19991487.htm>).
Source: OECD (2017b), OECD (2017c), OECD (2017d), OECD (2017e), OECD (2017f) and OECD (2017g).

The bottom line: Early childhood education is becoming a more important element of the national educational systems of OECD countries. Countries have developed a variety of different institutional setups and financing systems to promote participation in early childhood education. Local governments are key to financing this level of education, while the private sector also plays a major role in some countries, in particular by paying for ancillary services. Participation in early childhood education is broadly related to the amount of resources made available by the government and the private sector, and to the way those funds are allocated.

For more information

- OECD (2017a), *Starting Strong 2017: Key OECD Indicators on Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264276116-en>.
- OECD (2017b), *Education Database: Educational expenditure by source and destination*, OECD Education Statistics (database), <http://dx.doi.org/10.1787/c1267206-en> (Accessed on 8 June 2017).
- OECD (2017c), *Education at a glance: Educational finance indicators*, OECD Education Statistics (database), <http://dx.doi.org/10.1787/c4e1b551-en> (Accessed on 8 June 2017).
- OECD (2017d), *Education Database: Enrolment by age*, OECD Education Statistics (database), <http://dx.doi.org/10.1787/71c07338-en> (Accessed on 8 June 2017).
- OECD (2017e), *Education Database: Enrolment data adjusted to financial year*, OECD Education Statistics (database), <http://dx.doi.org/10.1787/d69f6708-en> (Accessed on 8 June 2017).
- OECD (2017f), *Education Database: Population data*, OECD Education Statistics (database), <http://dx.doi.org/10.1787/ccca3172-en> (Accessed on 8 June 2017).
- OECD (2017g), *Education at a glance: Student-teacher ratio and average class size*, OECD Education Statistics (database), <http://dx.doi.org/10.1787/334a3b64-en> (Accessed on 8 June 2017).
- OECD (2016), *Education at a Glance 2016*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2016-en>.

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<p>Visit www.oecd.org/education/education-at-a-glance-19991487.htm <i>Education Indicators in Focus (previous issues)</i> <i>PISA in Focus</i> <i>Teaching in Focus</i></p>	<p>Next topic <i>How have teachers' salaries evolved and how do they compare to those of other professions?</i></p>
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