

Indicator B2. How do early childhood education systems differ around the world?

Highlights

- Early childhood education and care (ECEC) has experienced a surge of policy attention in OECD countries in recent decades, with a focus on children under the age of 3. On average across OECD countries in 2018, 26% of children under 3 were enrolled in early childhood education (ISCED 0).
- Universal or near-universal participation in at least one year of ECEC is now the norm in OECD countries, which is significant progress towards one of the education targets of the United Nations' Sustainable Development Goals (SDG 4.2.2). Enrolment rates for 5-year-olds in pre-primary or primary education was at or above 90% in all countries with available data in 2018 except Colombia, Finland, the Russian Federation, Saudi Arabia, the Slovak Republic and Turkey.
- The ECEC workforce is at the heart of high-quality education. On average across OECD countries, there are 7 children for every teacher working in early childhood educational development services (ISCED 01) and 14 in pre-primary education (ISCED 02).

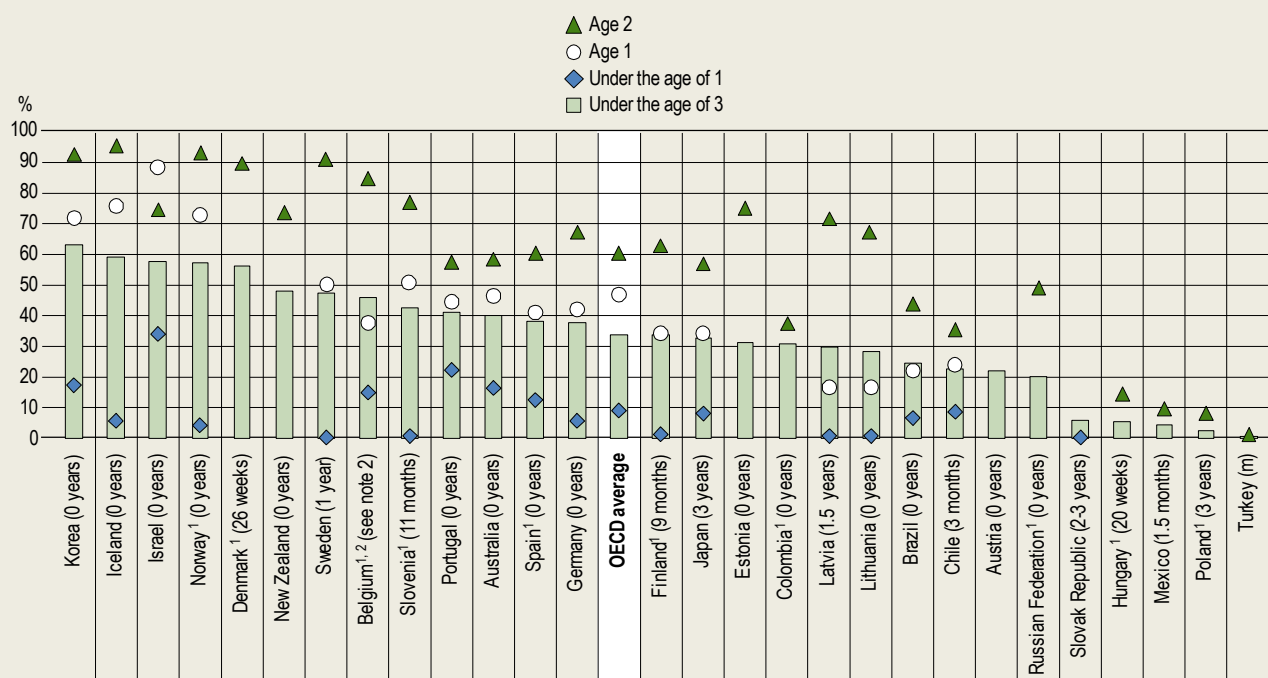
Context

The benefits of ECEC services are not limited to better labour-market outcomes and higher fertility rates. There is an increasing awareness of the key role that ECEC plays in children's development, learning and well-being. Children who start strong will be more likely to have better outcomes when they grow older. This is particularly true for children from disadvantaged socio-economic backgrounds, because they often have fewer opportunities to develop these abilities in their home-learning environments (OECD, 2017^[1]).

Economic prosperity also depends on maintaining a large share of the population in employment, and the increasing number of women entering the labour market has contributed to greater government interest in expanding ECEC services. High-quality ECEC services and other provision aiming to improve people's work-life balance give parents greater opportunities to enter employment and make it possible for individuals to combine work and family responsibilities (OECD, 2018^[2]; OECD, 2011^[3]; OECD, 2016^[4]).

Such evidence has prompted policy makers to design early interventions, to take initiatives that aim to enhance the quality of ECEC services and improve the equity of access to ECEC settings, lower the starting age of compulsory education, and to rethink their education spending patterns to gain "value for money" (Duncan and Magnuson, 2013^[5]). Despite these general trends, there are significant differences across OECD countries in the quality of ECEC services provided to young children, the types of ECEC services available and the usual number of hours per week each child attends.

Figure B2.1. Enrolment rates of children under the age of 3 in early childhood education and care, by age (2018)
All ECEC services (Early childhood education [ISCED 0] and other registered ECEC services outside the scope of ISCED 0)



Note: Figures in parentheses refer to the age when ECEC systems start offering intentional education objectives.

1. Excludes other registered ECEC services.

2. Age at which ECEC services start offering intentional education objectives: 3-6 months for the Flemish Community and 2 years for the French Community. ISCED 0 enrolment rates are underestimated since only the Flemish Community of Belgium has reported data on ISCED 01.

Countries are ranked in descending order of the enrolment rates in ISCED 0 of children under the age of 3.

Source: OECD (2020), Table B2.1. See *Source* section for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

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Other findings

- On average, 34% of 1-year-olds and 46% of 2-year-olds were already enrolled in ISCED 0 programmes in 2018. In Japan, 33% of 1-year-olds and 50% of 2-year-olds are enrolled in ECEC services outside ISCED 0.
- A bachelor's degree or equivalent (ISCED 6) is the most prevalent qualification for teachers in ECEC (ISCED 0) in around three-quarters of OECD countries with available data.
- The estimated expenditure on all children aged 3 to 5 enrolled in ECEC and primary education amounts to an average of 0.6% of gross domestic product (GDP). Only in Iceland and Norway does it equal or exceed 1.0%.

Analysis

Types of early childhood education and care services

There is a growing consensus among OECD countries about the importance of high-quality early childhood education and care (ECEC). However, the type of ECEC services available to children and parents in OECD countries differ greatly. There are variations in the targeted age groups, governance of centres, funding of services, type of delivery (full-day versus part-day attendance) and the location of provision, whether in centres or schools, or at home (OECD, 2017^[1]).

The organisation of national ECEC systems is diverse across countries, primarily regarding the highest administrative authorities in charge and whether the system is split or integrated at the national level. More than 70% of the OECD countries with available data have integrated early childhood education and care services, where one or more authorities are responsible for administering the whole ECEC system and setting adequate intentional education for children from the ages of 0 or 1 until they start primary education (see Box B2.1 in (OECD, 2019^[6])).

Generally, formal ECEC services can be further classified into two categories:

The ECEC services reported in the ISCED 2011 classification (OECD/Eurostat/UNESCO Institute for Statistics, 2015^[7]). To be classified as ISCED level 0, ECEC services should:

- have adequate intentional educational properties
- be institutionalised (usually school-based or otherwise institutionalised for a group of children)
- have an intensity of at least 2 hours per day of educational activities and a duration of at least 100 days a year
- have a regulatory framework recognised by the relevant national authorities (e.g. a curriculum)
- have trained or accredited staff (e.g. educators are required to have pedagogical qualifications).

The other registered ECEC services that are considered an integral part of countries' ECEC provision but do not comply with all the ISCED 0 criteria to be considered an educational programme (e.g. *crèches* in France or *amas* in Portugal). Many countries do have such programmes but not all are able to report the number of children enrolled in them. For this reason, the data are explicitly presented separately in Tables B2.1 and B2.2. This distinction is also made in the analysis below where averages can only be presented for ECEC services reported in the ISCED 2011 classification.

Informal care services (generally unregulated care arranged by the child's parent either in the child's home or elsewhere, provided by relatives, friends, neighbours, babysitters or nannies) are not covered by this indicator (see the *Definitions* section for more details).

Enrolment in early childhood education and care

Enrolment of children under the age of 3

Participation in high-quality ECEC in the first years of children lives can have a positive effect on their well-being, learning and development in the short and the long terms (OECD, 2018^[8]) (OECD, 2018^[2]). The length of parental leave and the age when ECEC services start becoming available influence the age at which children start these services. For instance, only 7 of the 22 countries with available data have enrolment rates of over 10% for children below the age of 1, namely Australia, Belgium, Ireland, Israel, Korea, Portugal and Spain. In contrast, once children reach the age of 1, 34% will be enrolled in ECEC (ISCED 0) on average, with enrolment rates of at least 50% at this age in Israel, Korea, Norway and Slovenia. Iceland also belongs to this group of countries (where enrolment rates exceed 50%) when the number of children in ECEC services outside ISCED 0 are taken into account. In Japan, one-third of 1-year-olds are enrolled in ECEC services outside the scope of ISCED 0. By the age of 2, enrolment in ECEC services has become the norm in many OECD countries. On average across OECD countries in 2018, 46% of 2-year-olds were enrolled in ECEC (ISCED 0). This proportion is 80% or more in Belgium, Denmark, Iceland, Korea, Norway and Sweden but less than 10% in Costa Rica, Japan, Luxembourg, Mexico, the Netherlands, Poland, Switzerland and Turkey. This latter group of countries do have children in ECEC services outside ISCED 0: in particular, in Japan half of children are enrolled in ECEC services outside ISCED 0 (Figure B2.1).

Despite significant differences across countries, a common pattern is emerging. The share of children under the age of 3 enrolled in ECEC is rising in most countries with available data for the years 2005 and 2018. The rise has been particularly marked in many European countries (i.e. by 15 percentage points or more in Germany, Lithuania, Norway, Portugal, Slovenia

and Spain), as a result of further stimulus from the objectives set by the European Union (EU) at its Barcelona 2002 meeting, to supply subsidised full-day places for one-third of children under the age of 3 by 2010 (OECD, 2017^[1]). Globally, the rise in ECEC provision over recent decades is strongly correlated to the increase in women's participation in the labour force, particularly for mothers with children under 3. Countries with higher enrolment rates of children under 3 in 2018 tend to be those in which the employment rates of mothers are highest (see Table B2.1 in (OECD, 2018^[2])).

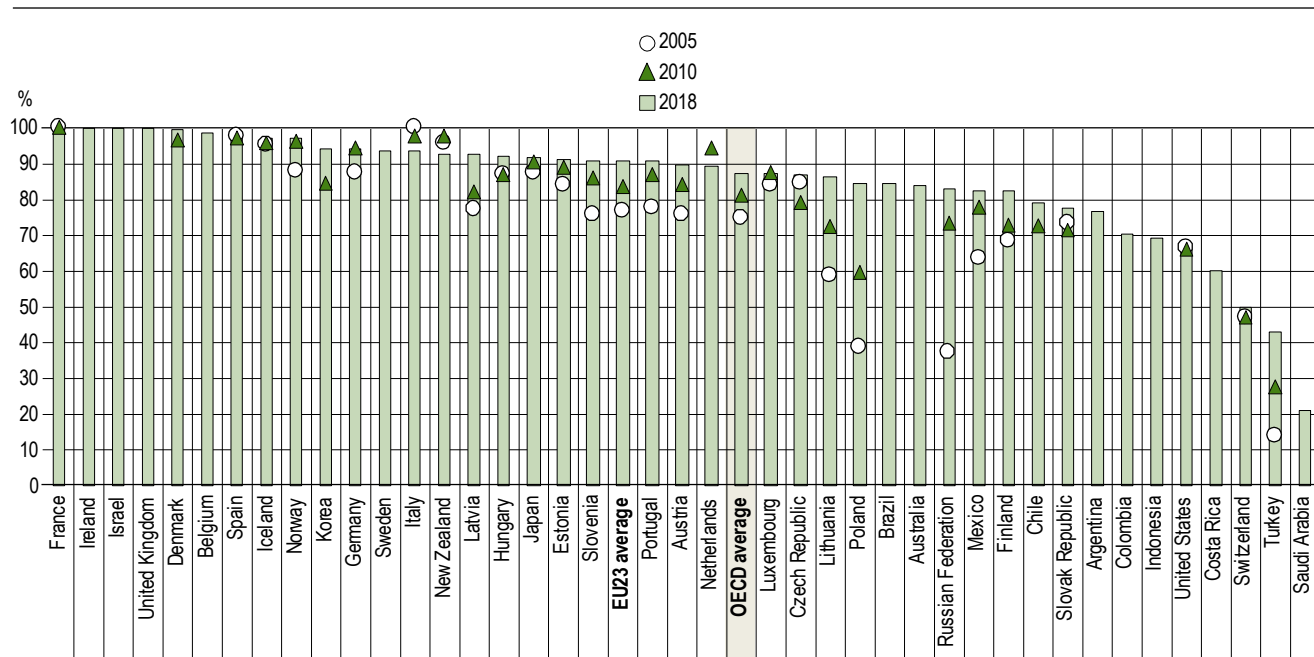
Enrolment of children from age 3 until entry to primary education

In many OECD countries, ECEC begins for most children long before they turn 5 years old and there are universal legal entitlements to a place in ECEC services for at least one or two years before the start of compulsory schooling (Box B2.1). On average, 88% of 3-5 year-olds are enrolled in ECEC (ISCED 0) and primary education – usually in pre-primary education (ISCED 02) at that age. In about half of the 41 countries with available data, the enrolment of children between the ages of 3 and 5 is near universal, i.e. at least 90% (Table B2.2).

The highest enrolment rates of 3-year-olds in ECEC (ISCED 0) are found in Belgium, Denmark, France, Iceland, Ireland, Israel, Norway, Spain and the United Kingdom, where they exceed 95%. Almost nine out of ten 4-year-olds (88%) are enrolled in pre-primary and primary education across OECD countries. In the EU23 countries (countries that are members of both the EU and the OECD), 91% of 4-year-olds are enrolled. OECD enrolment rates at this age vary from 98% or more in Belgium, Denmark, France, Ireland, Israel, Spain and the United Kingdom, to less than 50% in Saudi Arabia, Switzerland and Turkey (Table B2.2).

Figure B2.2. Change in enrolment rates of children aged 3 to 5 years (2005, 2010 and 2018)

Early childhood education (ISCED 0) and primary education



Countries are ranked in descending order of the enrolment rates of 3-5 year-olds in 2018.

Source: OECD (2020), Table B2.2. See Source section for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

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This situation is the result of the expansion of ECEC services over recent years in many countries. Between 2005 and 2018, the average enrolment of 3-5 year-olds in pre-primary or primary education in OECD countries rose by more than 10 percentage points. A few countries have seen spectacular increases in ECEC over this period, for example Lithuania, Poland, the Russian Federation and Turkey. In contrast, other countries have not shown much change. For instance, Switzerland reported one of the lowest enrolment rates in 2005 and this is still the case in 2018 (Figure B2.2). This is due to

the fact that there are almost no compulsory education programmes for 3-year-olds in Switzerland and the offer corresponding to ISCED level 02 is intended for children aged 4 and over.

Over this period, the increased focus on ECEC policy has resulted in the extension of compulsory education to younger children, increased provision of free ECEC for some ages and targeted population groups, universal provision for older children and, in some countries, the creation of integrated ECEC programmes from the age of 1 until entry into primary education. For instance, compulsory education coincided with the start of primary school in most countries a decade ago. In contrast, compulsory education started at pre-primary level in around one-third of countries with available data in 2018 and at the age of 3 in France (from September 2019), Hungary, Israel and Mexico (Table B2.2 and Box B2.2).

Enrolment of children by type of institution

Parents' needs and expectations regarding accessibility, cost, programme, staff quality and accountability are all important in assessing the expansion of ECEC programmes and the type of providers. When parents' needs for quality, accessibility or affordability are not met by public institutions, some parents may be more inclined to send their children to private pre-primary institutions (Shin, Jung and Park, 2009^[9]).

In most countries, the share of children enrolled in private institutions is considerably larger in early childhood education than at primary and secondary levels. Private institutions can be classified into two categories: independent and government-dependent. Independent private institutions are controlled by a non-governmental organisation or by a governing board not selected by a government agency and receive less than 50% of their core funding from government agencies. Government-dependent private institutions have similar governance structures but they rely on government agencies for more than 50% of their core funding (OECD, 2018^[10]). On average across OECD countries, about half of the children in early childhood educational development services (ISCED 01) are enrolled in private institutions. This average, however, hides huge discrepancies across countries. In Chile, Denmark, Hungary, Latvia, Lithuania, the Russian Federation, Slovenia and Sweden, 20% or less of the children in early childhood educational development programmes attend private ECEC institutions, while in Indonesia, Ireland, Israel, Korea, New Zealand, Portugal, Turkey and the United Kingdom, more than three-quarters of all children attend private institutions (Table B2.3).

Public institutions are usually less common for children under the age of 3 than for older ones. About two-thirds of children enrolled in pre-primary education (ISCED 02) attend public institutions across OECD countries, and almost three-quarters of children across EU23 countries, reflecting the development of policies promoting the public provision of ECEC among most European countries. In a few countries, however, pre-primary remains mostly private: in Australia, Indonesia, Ireland, Japan, Korea and New Zealand, at least 75% of children attending pre-primary programmes are in private institutions (Table B2.3).

Staffing of early childhood education and care

Qualifications among teaching staff

Prospective teachers should be provided with high-quality initial training. The type of qualification, duration of training and the programme content provided can influence how well initial teacher education prepares teachers for their role. Evidence from the literature shows that the level and duration of initial staff training are positively associated with overall ECEC quality (Manning et al., 2017^[11]). Highly qualified staff result in a more stimulating environment and high-quality pedagogical practices, which boost children's well-being and learning outcomes (Box B2.2).

The most prevalent level of qualification for almost all ECEC teaching staff is a tertiary qualification. In 18 out of the 25 countries with available data, an individual can teach in ECEC (ISCED 0) with at least a bachelor's degree or equivalent (ISCED level 6). However, there are some exceptions. In the Slovak Republic, pre-primary teachers can start teaching with an upper secondary diploma, but an increasing number of teachers now have a bachelor's or master's degree. In Germany, they can begin teaching after graduating from a tertiary professional programme (e.g. *Erzieherausbildung*, at ISCED level 6); in Austria and Israel, they typically graduate from a two-year short-cycle tertiary programme (ISCED 5). At the other end of spectrum, in France (since the academic year 2010/11) and Portugal pre-primary school teachers are required to have a master's degree or equivalent (ISCED 7). In Poland, the master's or equivalent degree is not a prerequisite, but most ECEC teachers enter the profession with this level (Table B2.3).

However, no matter how high the quality of pre-service training, it cannot be expected to prepare teachers for all the challenges they will face throughout their careers. Given the changes in student demographics, the length of most teachers'

careers, and the need to update knowledge and competencies, initial teacher education must be viewed as only the starting point for teachers' ongoing development. Recent research also shows that in pre-primary education, the effects of specialised in-service training on process quality are greater than those of pre-service training, particularly when it comes to collaborative work, support for play and support for early literacy, mathematics and science (Assel et al., 2006^[12]; de Haan et al., 2013^[13]).

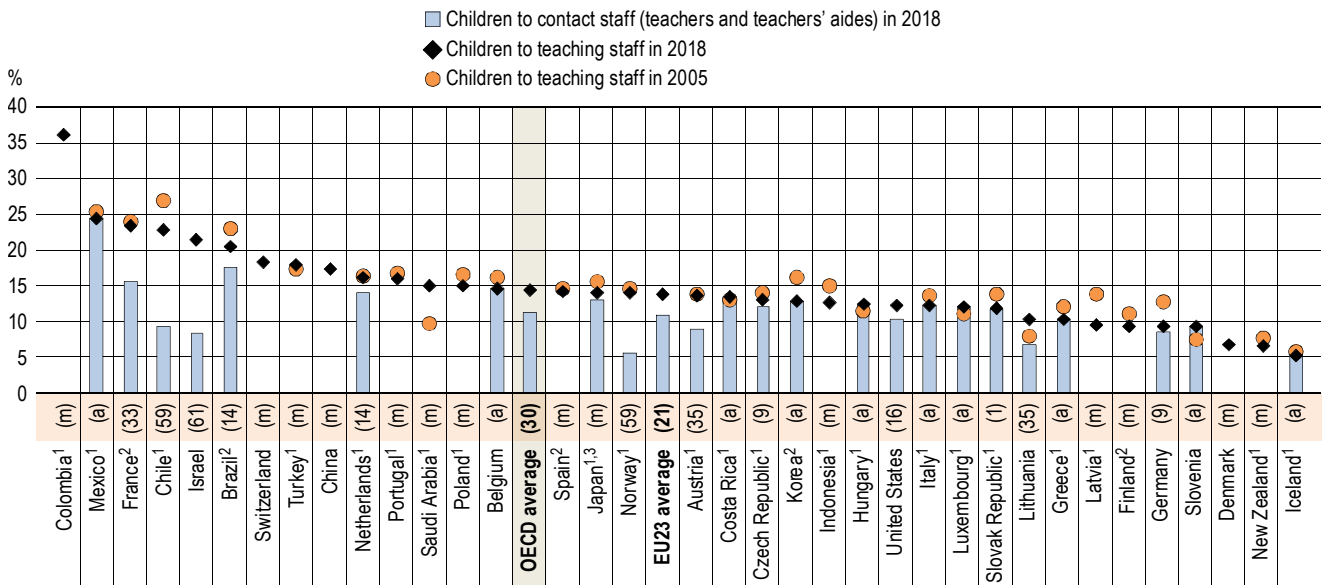
Child-staff ratios

Research demonstrates that enriched, stimulating environments and high-quality pedagogy are fostered by better-qualified practitioners, and that better-quality staff-child interactions facilitate better learning outcomes. In that context, lower child-staff ratios are found to be consistently supportive of staff-child relationships across different types of ECEC settings. Smaller ratios are often seen as beneficial, because they allow staff to focus more on the needs of individual children and reduce the amount of class time needed to deal with disruptions (OECD, 2020^[14]).

The ratio of children to teaching staff is an important indicator of the resources devoted to education. Child-staff ratios and group sizes are part of the regulations used to improve ECEC quality. On average across OECD countries, there are 14 children for every teacher working in pre-primary education but wide variations are observed across countries. The ratio of children to teaching staff, excluding teachers' aides, ranges from fewer than 10 children per teacher in Denmark, Finland, Germany, Iceland, Latvia, New Zealand and Slovenia, to 20 or more in Brazil, Chile, Colombia, France, Israel and Mexico. In some countries, this ratio has decreased significantly over the last years. Over the last years, it fell by 3-4 students per teacher in Chile (2013-18), in Germany (2005-13), in Korea (2010-2018) and Latvia (2010-18). In Saudi Arabia, the child-teaching staff ratio increased by 5 children between 2013 and 2018 but the ratio in 2018 remains comparable to the OECD average (Figure B2.3).

Figure B2.3. Ratio of children to staff in pre-primary (ISCED 02) education (2005 and 2018)

Public and private institutions, calculation based on full-time equivalents



Note: Figures in parentheses show the percentages of teachers' aides among ECEC contact staff (teachers and teachers' aides).

1. Year of reference 2013 instead of 2005.

2. Year of reference 2010 instead of 2005.

3. Data does not cover day care centres and integrated centres for early childhood education and care.

Countries are ranked in descending order of the ratio of children to teaching staff in pre-primary education in 2018.

Source: OECD (2020), Table B2.3 and Education at a Glance database. See Source section for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

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Some countries – Austria, Chile, France, Israel, Lithuania and Norway – also make extensive use of teachers' aides, which can be seen from the smaller ratios of children to contact staff compared to children to teaching staff. Teachers' aides assist

teachers in their daily tasks and deal with children with special needs. In most countries, they have an upper secondary qualification, often vocationally oriented (Figure B2.3).

Child-to-staff ratios matter more for interactions with children under the age of 3 than for 3-5 year-olds (OECD, 2018^[8]). On average across OECD countries, there are 7 children for every teacher working in early childhood educational development services (ISCED 01) and this ratio reaches more than 20 to 1 in Indonesia. As with pre-primary education, the ratio decreases when teachers' aides are taken into account. In most countries, the ratios of children to contact staff (teachers and teachers' aides) are smaller in early childhood development programmes than in pre-primary education (Table B2.3).

Financing early childhood education and care

Sustained public financial support is critical for the growth and quality of ECEC programmes. Appropriate funding helps to recruit trained staff who are qualified to support children's cognitive, social and emotional development. Investment in early childhood facilities and materials also helps support the development of child-centred environments for well-being and learning. In countries that do not channel sufficient public funding towards achieving both broad access and high-quality programmes, some parents may be more inclined to send their children to private ECEC services. Moreover, if the cost of ECEC is not sufficiently subsidised, the ability of parents to pay will greatly influence the participation in ECEC among children from disadvantaged socio-economic backgrounds (OECD, 2017^[11]).

Expenditure per child

In pre-primary education, annual expenditure for both public and private settings averages about USD 9 000 per child in OECD countries in 2017, ranging from less than USD 1 600 in Colombia to more than USD 15 000 in Denmark, Iceland, Luxembourg and Norway. Annual expenditure per child enrolled in early childhood educational development services (ISCED 01) is significantly higher than for pre-primary education (ISCED 02), averaging about USD 12 800 for ISCED 01. The smaller child-to-staff ratio in early childhood development services is one of the main drivers of this difference (Tables B2.3 and B2.4). The average number of hours children spend in ECEC settings per year also influences different countries' spending (see Box B2.2 in (OECD, 2018^[15])).

Expenditure as a percentage of gross domestic product

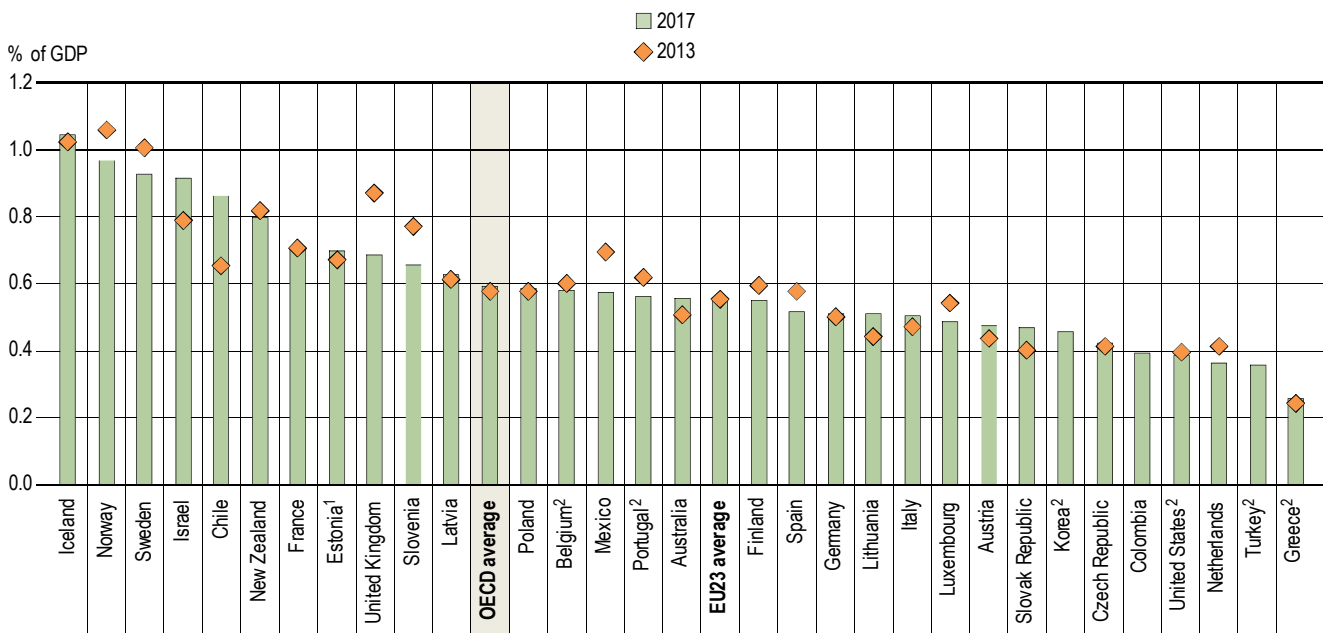
Spending on ECEC can also be analysed relative to a nation's wealth. Expenditure on all ECEC settings accounts in 2017 for an average of 0.9% of gross domestic product (GDP) across OECD countries, of which more than two-thirds is allocated to pre-primary education. While 0.3% or less of GDP is spent on pre-primary education (ISCED 02) in Australia, Colombia, Greece, Japan and Turkey, countries such as Denmark, Iceland, Israel, Norway and Sweden spend at least 1% of GDP (Table B2.4).

The differences on expenditure are largely explained by enrolment rates, legal entitlements and the intensity of participation, as well as the different starting ages for primary education. On the latter point, the shorter duration of pre-primary education, as a result of children's earlier transition from pre-primary to primary education in Australia, Ireland and the United Kingdom, partly explains why the expenditure on ECEC as a percentage of GDP is below the OECD average in these three countries. Similarly, late entry into primary education, as in Estonia, Finland, Latvia and Sweden, means a longer duration of ECEC than in other countries and may explain why they spend more as a percentage of GDP than the OECD average (see the information on starting ages for primary education in Table B2.2).

To avoid this distortion, the indicator on the financing of ECEC has been presented by age as well as by ISCED level since the 2019 edition of *Education at a Glance*. This methodology avoids the distortion arising from the differences in age groups attending ECEC, and compares expenditure on children of the same ages, giving a more accurate picture of countries' investment in young children. As this indicator is presenting estimates then the data should be interpreted with caution. Across OECD countries, the share of national resources devoted to 3-5 year-olds enrolled in ECEC and primary education is 0.6% of GDP. It ranges from 0.3% of GDP in Greece, to 1% or more in Iceland and Norway. While the share remained constant on average among OECD countries with available data, there are marked differences in trends across countries. About half of countries experienced a decrease between 2013 and 2017, while in contrast Chile displayed the most notable increase, from 0.7% of GDP to 0.9% (Figure B2.4).

Figure B2.4. Expenditure on all children aged 3 to 5 enrolled in early childhood education and care (ISCED 0) and primary education as a percentage of GDP (2013 and 2017)

Public and private institutions



1. Year of reference 2014 instead of 2013.

2. Excludes ISCED 01 programmes.

Countries are ranked in descending order of expenditure as a percentage of GDP in 2017.

Source: OECD (2020), Table B2.4. See Source section for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

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Box B2.1. Legal entitlements and free access to early childhood education and care

Early childhood education and care (ECEC) remains high on the policy agenda in many OECD countries. Enrolment rates increase for children aged 3 and over, as well as for children under the age of 3, thanks to the extension of legal entitlements to a place in ECEC and to the efforts to ensure free access for older children (e.g. 3-5 year-olds). The rising enrolment rates are also likely due to the increased free access for selected population groups such as children under the age of 2 or disadvantaged children.

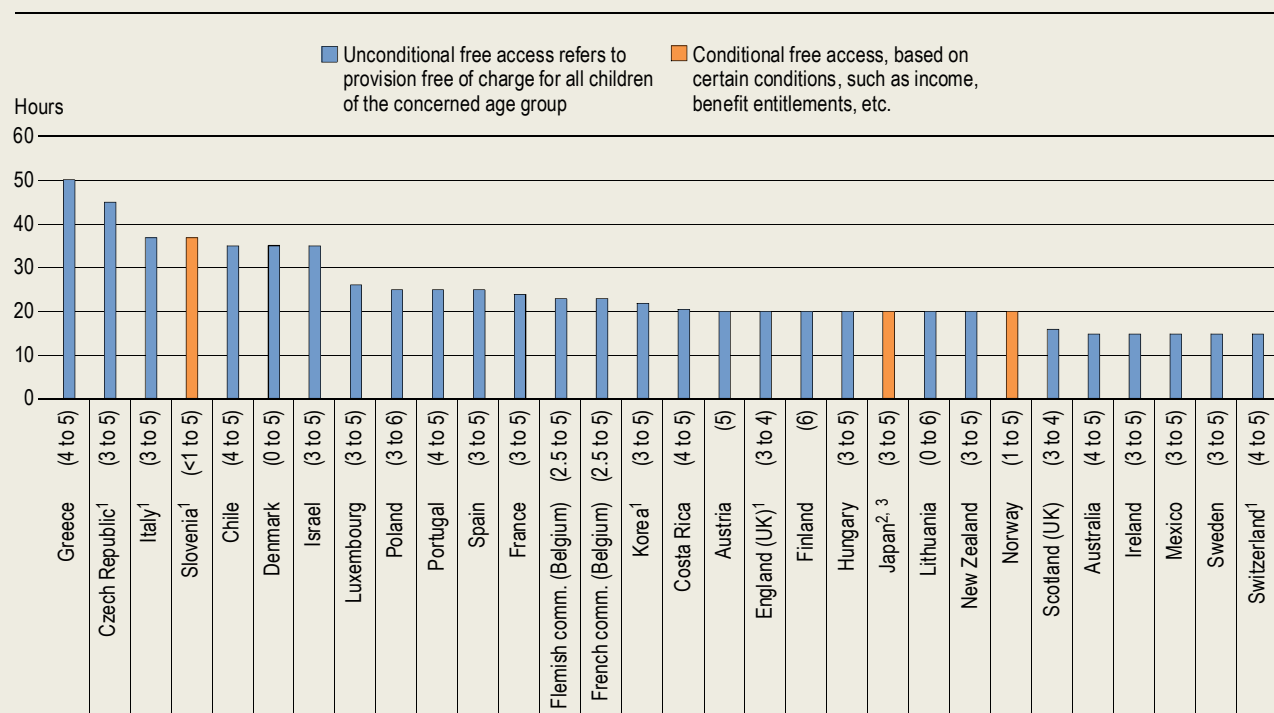
Countries guarantee an ECEC place for all children either by establishing a legal entitlement to participate in ECEC, or by making participation compulsory. A legal entitlement is a right for a child and his/her family. In countries with a legal entitlement, children may attend ECEC, but families may choose other options. In contrast, in countries with compulsory ECEC, children have to attend ECEC for a defined number of hours and parents may be asked to justify absences or face disciplinary measures. Often, a certificate of completion of a compulsory ECEC programme is required to enter primary education (European Commission/EACEA/Eurydice, 2019^[16]).

There are significant differences in the age at which countries guarantee children a place in an ECEC institution. While most countries ensure a place in publicly subsidised ECEC from the age of 3 or a little earlier, seven countries (Denmark, Estonia, Finland, Germany, Latvia, Norway and Slovenia) guarantee a place in ECEC for all children soon after birth, often immediately after the end of parental leave. In Australia, Austria, Brazil, Chile, Costa Rica, Greece, Lithuania, the Netherlands, Portugal and Switzerland, the education systems only provide guaranteed places from higher ages: at 4, 5 or 6 years old, or for the last one or two years of ECEC. Often, this provision is explicitly directed at preparation for school with a specific programme to smooth the transition to primary education. However, a guaranteed ECEC place at a

given age does not mean that attendance is compulsory at this age. Indeed, Australia, Chile and Portugal provide a legal entitlement from the last one or two years of ECEC without making attendance compulsory. Despite a legal framework that guarantees a place in ECEC for all children, in reality some municipalities in some countries may still struggle to balance supply with demand. Moreover, many countries have introduced targeted measures to ensure the availability of ECEC for certain groups of children or families (European Commission/EACEA/Eurydice, 2019^[16]).

The type of ECEC guarantee – a legal right to a place or compulsory attendance – influences the way in which the number of guaranteed hours is prescribed. Legal entitlements define the number of guaranteed publicly subsidised (or free-of-charge) ECEC hours that every family can claim. A child may use fewer hours than the guarantee entitles them to. In contrast, compulsory ECEC specifies the minimum number of ECEC hours that a child is required to attend. In both cases, the child may still benefit from additional (top-up) hours of ECEC that are not guaranteed for everyone (European Commission/EACEA/Eurydice, 2019^[16]). The time per week covered by the legal entitlements to a free place in ECEC differs greatly across countries. Most countries guarantee 20-29 hours of ECEC per week, i.e. school-time hours, but the number increases to over 30 hours per week in Chile, the Czech Republic, Denmark, Israel, Italy, Slovenia and to 50 hours in Greece. In Australia, Ireland, Mexico, Scotland, Sweden and Switzerland, the number of hours covered is less than 20 hours per week (Figure B2.5).

Figure B2.5. Number of hours per week and ages at which children have free access entitlement to ECEC (2018)



Note: The age groups covered by the free access are added into brackets next to the country names.

1. The Czech Republic (32.5-60 hours), England (15-32 hours), Italy (25-50 hours), Korea (20-25 hours), Slovenia (30-45 hours), Switzerland (10-20 hours)

2. From 1 October 2019, free early childhood education and care is a universal legal entitlement for children age 3-5 years.

3. Data does not cover day care centres and integrated centres for early childhood education and care.

Countries and economies are ranked in descending order of the number of hours per week children have free access entitlement to ECEC (ISCED 02).

Source: OECD (2020), 2018 ECEC survey; TALIS Starting Strong; European Commission/EACEA/Eurydice. See *Source* section for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

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Affordability is a very important factor in ensuring that the largest number of children possible have access to ECEC, and legal entitlement to a place in ECEC is not a guarantee of free access. Countries may provide conditional or unconditional free access for a set number of hours. Generally, unconditional free access to ECEC is less common for younger children than for older ones across countries (Figure B2.5). Although most countries provide free access to pre-primary education to all children for at least the year before entering primary school, the number of years covered and hours per week offered

differ substantially. Chile (for all 4-5 year-olds), the Czech Republic (for the year before starting primary school only), Greece, Italy, Israel and Luxembourg (for all 3-5 year-olds) offer more than 25 hours of free ECEC for all children enrolled in pre-primary education. In contrast, Australia, Ireland, Mexico, Scotland, Sweden and Switzerland offer less than 20 hours of free ECEC per week. From 1 October 2019, free early childhood education and care is a universal legal entitlement for children age 3-5 years in Japan. From September 2019, instruction has been compulsory from the age of 3 in France. Pre-primary education then became a universal legal entitlement and an obligation for 3-5 year-olds.

In contrast, a few countries regulate the provision of free access to ECEC based on a set of conditions, such as income level or the entitlement to certain benefits. This is the case in Norway and Slovenia, where free access to the last year of ECEC is provided on a needs basis only.

Public and private funding of ECEC

The source of funding for ECEC settings varies across countries. In many countries, the public sector provides universal access from a certain age. Governments may also delegate responsibility for the public funding of ECEC to local authorities. In general, public funding of ECEC is more decentralised than at any other level of education (OECD, 2018^[15]). Generally, there has been a substantial and increasing public investment in ECEC, although there are differences between pre-primary (ISCED 02) and early childhood educational development (ISCED 01). On average, public sources account for 70% of total expenditure on early childhood educational development, while for pre-primary education, the share of public expenditure is 83%. Japan and the United Kingdom are the only countries where private funds account for more than 40% of total expenditure on pre-primary education. In the United Kingdom, most of the private funding comes from households. In Japan, the high cost is shared between households, foundations and the business sector (Table B2.4).

Box B2.2. The Starting Strong Teaching and Learning International Survey

In October 2019, the OECD launched the first international survey of the early childhood education and care (ECEC) workforce. The Starting Strong Teaching and Learning International Survey (TALIS Starting Strong) aims to generate robust international information relevant to developing and implementing policies focused on ECEC staff and leaders and their pedagogical and professional practices, with an emphasis on those aspects that promote the right condition for children's learning, development and well-being. Staff are defined as those working regularly in a pedagogical way with children, including both teachers and assistants in countries where the distinction can be made. The survey collects data on learning and well-being environments, the work that staff and centre leaders carry out with children in ECEC settings, how staff are prepared for and trained within the profession, and what motivates staff to join the ECEC profession.

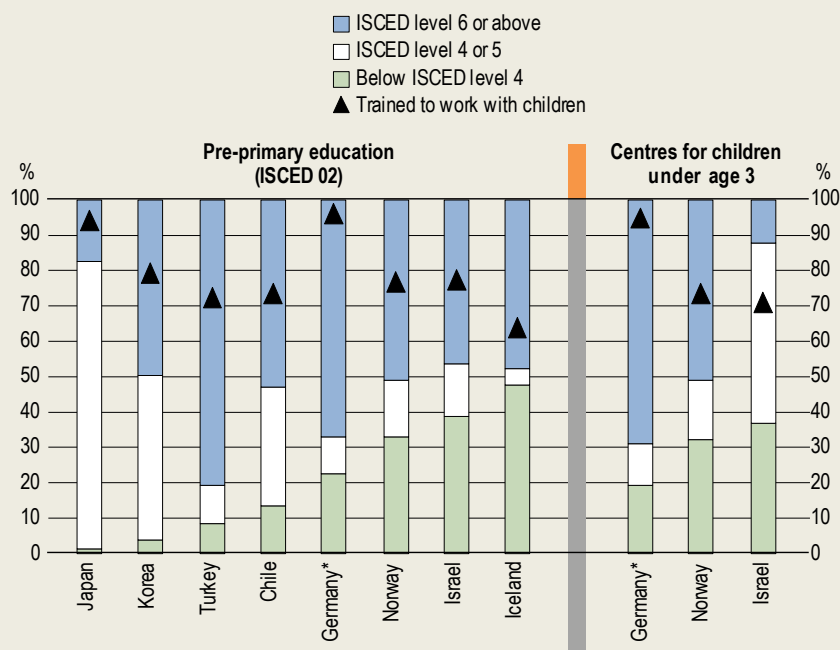
TALIS Starting Strong 2018 covers nine countries: Chile, Denmark, Germany, Iceland, Israel, Japan, Korea, Norway and Turkey. These countries collected data from staff and leaders in pre-primary education (ISCED level 02) settings. In addition, four of the countries (Denmark, Germany, Israel and Norway) collected data from staff and leaders in settings serving children under the age of 3. A more detailed description of the survey design and its implementation can be found in the *TALIS Starting Strong 2018 Technical Report* (OECD, 2019^[17]).

This first volume of findings from TALIS Starting Strong examined multiple factors that can affect the quality of ECEC and could thereby influence children's learning, development and well-being. The main findings of this publication are:

First, staff with more education and training and more responsibility are more likely to report that they adapt their practices in the classroom or playroom to individual children's development and interests. The majority of the workforce has post-secondary education, but training specifically to work with children is not universal, and participation in professional development, while common, is not equal among early childhood staff. Whether staff are trained specifically to work with children, which is also important for ECEC quality, is a somewhat separate issue from their level of educational attainment (Figure B2.6). For example, in Japan, where the most common qualifications for ECEC staff were short-cycle tertiary education, nearly all staff are trained specifically to work with children. In Turkey, where the most typical attainment was a bachelor's degree or higher for ECEC staff, more than one-quarter of staff had no specific training on working with children. In Iceland, where almost half the workforce are highly educated and the other half at most secondary education, one-third of staff lack specific training to work with children (OECD, 2019^[17]).

Figure B2.6. Educational attainment of staff and content of pre-service training

Staff reports of their highest level of education and whether they received training specifically to work with children



Note: Respondents in the "Below ISCED level 4" group are those whose highest education is at a secondary level or below. Respondents in the "ISCED level 4 or 5" group are those whose highest education is beyond secondary schooling but less than a bachelor's degree (or equivalent), including post-secondary non-tertiary education (generally vocationally oriented) and short-cycle tertiary education. Respondents in the "ISCED level 6 or above" group are those whose highest education is at the level of a bachelor's degree or higher.

* Estimates for subgroups and estimated differences between subgroups need to be interpreted with care. See Annex B in (OECD, 2019_[17]) for more information.

Countries are ranked in ascending order of the percentage of staff (both teachers and assistants) below ISCED level 4.

Source: (OECD, 2019_[17]), Tables D.3.1, D.3.2 and D.3.3.

StatLink  <https://doi.org/10.1787/888934010736>

Second, staff who feel more valued by society report more use of practices in the classroom or playroom adapted to individual children's development and interests. With regard to job satisfaction, a majority of staff in all countries report feeling valued by the children and parents or guardians they serve. However, in all countries, staff were less likely to report feeling valued by society (Figure B2.7). Staff generally like their jobs, but fewer than 40% are satisfied with their salaries and little more than half think their job is valued in society (OECD, 2019_[17]).

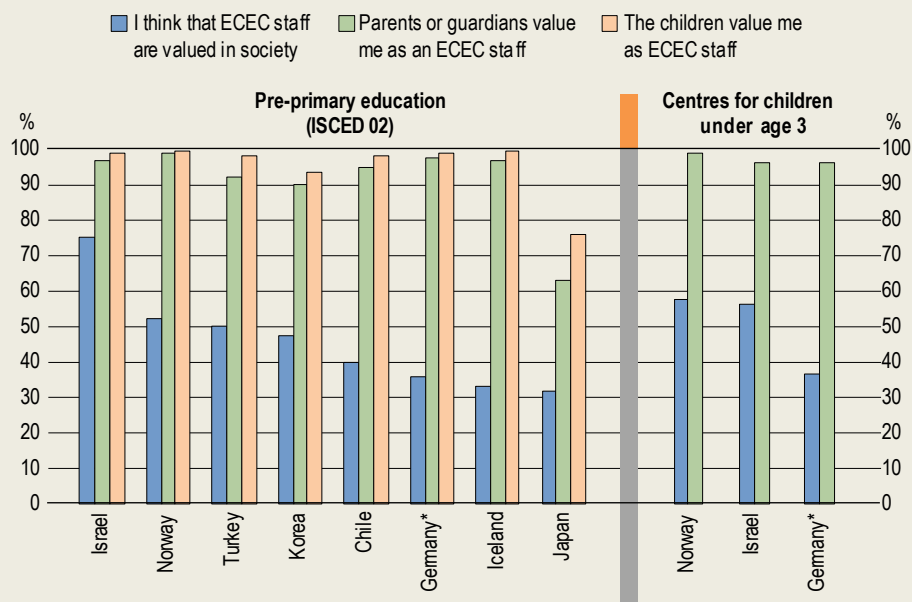
Third, reducing group sizes, improving staff salaries and receiving support for children with special needs were the top spending priorities identified by early childhood education and care staff if the sector's budget was increased. For staff in centres for children under age 3, high-quality professional development also appears in the top three priorities (OECD, 2019_[17]).

Fourth, pre-school staff are much more likely to report using practices to facilitate children's socio-emotional development or oral language development than those geared towards literacy and numeracy skills. Related to this, being able to cooperate easily with others is at the top of the list of skills and abilities that ECEC staff regard as important for young children to develop (OECD, 2019_[17]).

The findings presented in this report suggest several major objectives for policies to ensure high-quality ECEC. These include promoting practices that foster children's learning, development and well-being, attracting and retaining a high-quality workforce, and ensuring smart spending in view of complex governance and service provision. Policies to raise the quality of ECEC face a number of trade-offs in terms of the areas to invest in and the areas to spend less on. TALIS Starting Strong sheds light on what the priorities could be for each country (OECD, 2019_[17]).

Figure B2.7. Staff feelings of being valued by children, families and society

Average percentage of staff who "agree" or "strongly agree" with each of the following statements



Note: Staff in centres serving children under the age of 3 were not asked the extent to which they feel valued by the children they serve.

* Estimates for subgroups and estimated differences between subgroups need to be interpreted with care. See Annex B in (OECD, 2019_[17]) for more information.

Countries are ranked in descending order of the percentage of staff agreeing that ECEC staff are valued in society.

Source: (OECD, 2019_[17]), Table D.3.18.

StatLink  <https://doi.org/10.1787/888934011002>

Definitions

ECEC services: The types of ECEC services available to children and parents differ greatly. Despite those differences, most ECEC settings typically fall into one of the following categories ((OECD, 2017_[11]) and Table B2.5):

- **Regular centre-based ECEC:** More formalised ECEC centres typically belong to one of these three subcategories:
 - *Centre-based ECEC for children under the age of 3:* Often called "crèches", these settings may have an educational function, but they are typically attached to the social or welfare sector and associated with an emphasis on care. Many of them are part time and provided in schools, but they can also be provided in designated ECEC centres.
 - *Centre-based ECEC for children from the age of 3:* Often called kindergarten or pre-school, these settings tend to be more formalised and are often linked to the education system.
 - *Age-integrated centre-based ECEC for children from birth or age 1 up to the beginning of primary school:* These settings offer a holistic pedagogical provision of education and care (often full-day).
- **Family childcare ECEC:** Licensed home-based ECEC, which is most prevalent for children under age 3. These settings may or may not have an educational function and be part of the regular ECEC system.
- **Licensed or formalised drop-in ECEC centres:** Often receiving children across the entire ECEC age bracket and even beyond, these drop-in centres allow parents to complement home-based care by family members or family childcare with more institutionalised services on an ad-hoc basis (without having to apply for a place).

Some of these ECEC services are in adherence with the criteria defined in the ISCED 2011 classification (see ISCED 0 definition). Others are considered an integral part of countries' ECEC provision but are not in adherence with all the ISCED criteria. Table B2.5, available on line, makes the distinction between these two categories explicit.

Informal care services: Generally unregulated care arranged by the child's parent either in the child's home or elsewhere, provided by relatives, friends, neighbours, babysitters or nannies, these services are not covered in this indicator.

ISCED 01 refers to early childhood educational development services, typically aimed at children under the age of 3. The learning environment is visually stimulating, and the language is rich and fosters self-expression, with an emphasis on language acquisition and the use of language for meaningful communication. There are opportunities for active play so that children can exercise their co-ordination and motor skills under supervision and in interaction with staff.

ISCED 02 refers to pre-primary education, aimed at children in the years immediately prior to starting compulsory schooling, typically aged between the ages of 3 and 5. Through interaction with peers and educators, children improve their use of language and their social skills, start to develop logical and reasoning skills, and talk through their thought processes. They are also introduced to alphabetical and mathematical concepts, understanding and use of language, and are encouraged to explore their surrounding world and environment. Supervised gross motor activities (i.e. physical exercise through games and other activities) and play-based activities can be used as learning opportunities to promote social interactions with peers and to develop skills, autonomy and school readiness.

For data-reporting purposes, data from age-integrated programmes designed to include children younger and older than 3 are allocated to levels 01 and 02 according to the age of the children. This may involve the estimation of expenditure and personnel at levels 01 and 02.

Most prevalent level of qualification: Higher than minimum qualification (if most prevalent) to enter the teaching profession in the reference year refers to the level of qualification higher than the minimum that is held by the largest proportion of teachers (among all teachers at a given level of education, and not only among starting teachers) and recognised through a specific salary range (see Indicator D3).

Teachers and comparable practitioners: Teachers have the most responsibility for a group of children at the class or playroom level. They may also be called pedagogue, educator, childcare practitioner or pedagogical staff in education, while the term teacher is almost universally used at the primary level.

Teachers' aides: Aides support the teacher in a group of children or class. They usually have lower qualification requirements than teachers, which may range from no formal requirements to, for instance, vocational education and training. This category is only included in the *Education at a Glance* indicator on children-to-staff ratio.

Please see Indicators C1 and C2 for definitions of **expenditure per student on educational institutions** and **expenditure on educational institutions relative to GDP**, and Indicator D2 for the definition of **child-to-staff ratios**.

Methodology

Enrolment rates

Net enrolment rates are calculated by dividing the number of students of a particular age group enrolled in ECEC by the size of the population of that age group. While enrolment and population figures refer to the same period in most cases, mismatches may occur due to data availability and different sources used in some countries resulting in enrolment rates exceeding 100%.

Full-time and part-time children

The concepts used to define full-time and part-time participation at other ISCED levels, such as study load, child participation, and the academic value or progress that the study represents, are not easily applicable to ISCED level 0. In addition, the number of daily or weekly hours that represent typical full-time enrolment in an education programme at ISCED level 0 varies widely between countries. Because of this, full-time equivalents cannot be calculated for ISCED level 0 programmes in the same way as for other ISCED levels. For data-reporting purposes, countries separate ISCED level 0 data into ISCED 01 and ISCED 02 by age only, as follows: data from age-integrated programmes designed to include children younger and older than 3 are allocated to levels 01 and 02 according to the age of the children. This may involve the estimation of expenditure and

personnel at levels 01 and 02. For more information please see the *OECD Handbook for Internationally Comparative Education Statistics* (OECD, 2018_[10]) and Annex 3 for country-specific notes (<https://doi.org/10.1787/69096873-en>).

Estimated expenditure for all children aged 3 to 5 enrolled in ECEC and primary education as a percentage of GDP

The calculation of this new measure is based on the distribution of children aged 3 to 5 enrolled in ISCED 01, ISCED 02 and primary education (ISCED 1). For each country, the calculation was based on what proportion of all children enrolled at each of these three ISCED levels were aged 3 to 5. For instance, in Australia, children aged 3 to 5 accounted for 5% of all children enrolled in ISCED 01, 99% of all children enrolled in ISCED 02 and 12% of all children enrolled in ISCED 1. These percentages were used to estimate total expenditure for all children aged 3 to 5 enrolled in ECEC and primary education. Total expenditure for all children aged 3 to 5 are calculated by: 5% of all expenditure in ISCED 01 and 99% of all expenditure in ISCED 02 and 12% of all expenditure in ISCED 1. A similar calculation was made for all countries.

Source

Data refer to the reference year 2018 (school year 2017/18) and financial year 2017.

Data from Argentina, the People's Republic of China, India, Indonesia, Saudi Arabia and South Africa are from the UNESCO Institute of Statistics (UIS).

Data are based on the UNESCO-UIS/OECD/EUROSTAT data collection on education statistics administered by the OECD in 2019 (for details, see Annex 3 at <https://doi.org/10.1787/69096873-en>) and on a special survey administered by the OECD in 2019.

Data on subnational regions for selected indicators are available in the OECD Regional database (OECD, 2020_[18]).

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Indicator B2 Tables

- Table B2.1** Enrolment rates of children under the age of 3 in early childhood education and care, by type of service and age (2005, 2010 and 2018)
- Table B2.2** Enrolment rates in early childhood education and care and primary education, by age (2005, 2010 and 2018)
- Table B2.3** Enrolment of children in early childhood education and care (ISCED 0) in private institutions, ratio of children to teaching staff and most prevalent qualification of ECEC staff (2018)

Table B2.4 Financing of early childhood education and care (ISCED 0) and expenditure on all children aged 3 to 5 (2017)

WEB Table B2.5 *Coverage of early childhood education and care in OECD and partner countries (2019)*

Cut-off date for the data: 19 July 2020. Any updates on data can be found on line at <http://dx.doi.org/10.1787/eag-data-en>. More breakdowns can also be found at <http://stats.oecd.org/>, Education at a Glance Database.

StatLink: <https://doi.org/10.1787/888934163268>

Table B2.1. Enrolment rates of children under the age of 3 in early childhood education and care, by type of service and age (2005, 2010 and 2018)

Public and private institutions

	Age when ECEC services (ISCED 0) start offering intentional education objectives	Under the age of 1		Age 1		Under the age of 2		Age 2		Under the age of 3						
		ECEC (ISCED 0)	Other registered ECEC services	ECEC (ISCED 0)	Other registered ECEC services	ECEC (ISCED 0)	Other registered ECEC services	ECEC (ISCED 0)	Other registered ECEC services	ECEC (ISCED 0)	Other registered ECEC services	ECEC (ISCED 0)	Other registered ECEC services	ECEC (ISCED 0)	Other registered ECEC services	
		2018	2018	2018	2018	2018	2018	2018	2018	2005	2010	2018		2018	2018	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD	Countries															
	Australia	0 years	16	0	45	0	30	0	58	0	m	m	m	1	40	0
	Austria	0 years	0	x(15)	15	x(15)	8	x(15)	42	x(15)	6	m	10	3	19	3
	Belgium ¹	(see note 1)	14	m	37	m	26	m	84	m	m	m	m	m	46	m
	Canada	3-4 years	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Chile	3 months	8	0	23	0	15	1	35	1	m	m	15	0	22	0
	Colombia	0 years	x(6)	m	x(6)	m	27	m	37	m	m	m	m	m	31	m
	Costa Rica	0 years	x(6)	m	x(6)	m	1	m	3	m	m	m	m	m	2	m
	Czech Republic	2-3 years	a	m	a	m	a	m	18	m	m	m	m	m	6	m
	Denmark	26 weeks	x(6)	m	x(6)	m	40	m	89	m	m	m	58	m	56	m
	Estonia	0 years	0	x(7)	15	x(7)	7	2	68	7	m	m	23	m	28	3
	Finland	9 months	1	m	34	m	18	m	63	m	25	m	27	m	33	m
	France	2-3 years	a	m	a	m	a	m	12	m	9	m	5	m	4	m
	Germany	0 years	5	a	41	a	23	a	67	a	17	a	27	a	38	a
	Greece	2 months	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Hungary	20 weeks	m	m	m	m	1	m	14	m	0	7	0	9	5	m
	Iceland	0 years	1	4	47	28	24	16	95	0	39	13	43	12	48	11
	Ireland	3 years	12	m	25	m	18	m	43	m	m	m	m	m	27	m
	Israel	0 years	34	a	88	a	50	a	74	a	m	a	m	a	58	a
	Italy	2-3 years	a	m	a	m	a	m	15	m	4	m	5	m	5	m
	Japan	3 years	a	8	a	33	a	21	7	50	m	16	m	19	2	30
	Korea	0 years	17	a	71	a	45	a	92	a	m	a	38	a	63	a
	Latvia	1.5 years	0	a	16	a	8	a	71	a	m	a	18	a	30	a
	Lithuania	0 years	0	a	16	a	8	a	67	a	13	a	16	a	28	a
	Luxembourg	0 years	0	m	0	m	0	m	4	m	m	m	m	m	1	m
	Mexico	1.5 months	x(6)	a	x(6)	a	1	a	9	a	2	a	2	a	4	a
	Netherlands	3 years	0	m	0	m	0	m	0	m	0	m	0	m	0	m
	New Zealand	0 years	x(6)	x(7)	x(6)	x(7)	29	5	66	7	34	m	36	m	42	6
	Norway	0 years	4	0	72	0	39	0	93	0	33	0	53	0	57	0
	Poland	3 years	0	m	0	m	0	m	7	m	1	2	1	2	2	m
	Portugal	0 years	21	1	42	1	32	1	56	1	19	1	26	2	40	1
	Slovak Republic	2-3 years	a	0	a	m	a	m	15	m	7	m	3	m	5	0
	Slovenia	11 months	0	m	50	m	25	m	77	m	25	m	34	m	43	m
	Spain	0 years	12	m	40	m	27	m	60	m	15	m	26	m	38	m
	Sweden	1 year	0	0	48	1	25	1	89	2	m	m	m	2	46	1
	Switzerland	m	a	m	a	m	a	m	0	m	2	m	0	m	0	m
	Turkey	m	x(8)	a	x(8)	a	x(8)	a	1 ^d	a	m	a	m	a	0 ^d	a
	United Kingdom	0 years	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	OECD average		7	m	34	m	20	m	46	m	m	m	20	m	26	m
	EU23 average		4	m	25	m	16	m	47	m	m	m	m	m	24	m
Partners	Argentina²	m	x(6)	m	x(6)	m	2	m	11	m	m	m	m	m	5	m
	Brazil	0 years	6	a	21	a	14	a	43	a	m	a	m	a	24	a
	China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Indonesia	m	x(6)	m	x(6)	m	3	m	13	m	m	m	m	m	7	m
	Russian Federation	0 years	x(6)	m	x(6)	m	4	m	49	m	18	m	17	m	20	m
	Saudi Arabia	m	a	m	a	m	a	m	m	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	G20 average		m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: Early childhood education = ISCED 0, other registered ECEC services = ECEC services outside the scope of ISCED 0, because they are not in adherence with all ISCED criteria. To be classified in ISCED 0, ECEC services should: 1) have an adequate intentional educational properties; 2) be institutionalised (usually school-based or otherwise institutionalised for a group of children); 3) have an intensity of at least 2 hours per day of educational activities and a duration of at least 100 days a year; 4) have a regulatory framework recognised by the relevant national authorities (e.g. curriculum); and 5) have trained or accredited staff (e.g. requirement of pedagogical qualifications for educators).

1. Age at which ECEC services start offering intentional education objectives: 3-6 months for the Flemish Community and 2 years for the French Community. ISCED 0 enrolment rates are underestimated since only the Flemish Community of Belgium has reported data on ISCED 01.

2. Year of reference 2017 instead of 2018.

Source: INES ad hoc survey and OECD/UIS/Eurostat (2020). See Source section for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.

StatLink  <https://doi.org/10.1787/888934163287>

Table B2.2. Enrolment rates in early childhood education and care and primary education, by age (2005, 2010 and 2018)
Public and private institutions, from age 3 to age 6

	Typical starting age of primary education	Starting age of compulsory education	Age 3		Age 4			Age 5			Age 6			Ages 3 to 5				
			ECEC (ISCED 0)	Other registered ECEC services	ECEC (ISCED 0)	Primary education (ISCED 1)	Total	ECEC (ISCED 0)	Primary education (ISCED 1)	Total	ECEC (ISCED 0)	Primary education (ISCED 1)	Total	ECEC (ISCED 0) and Primary education (ISCED 1)				
			2018		2018		2018			2018			2018			2005	2010	2018
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD	Countries																	
	Australia	5	6	65	0	86	1	87	21	79	100	2	99	100	m	m	84	
	Austria	6	6	77	m	94	0	94	98	0	98	41	58	99	76	84	90	
	Belgium	6	6	98	m	98	0	98	98	1	99	4	95	98	m	m	98	
	Canada	6	6	m	m	m	0	m	m	0	m	m	99	m	m	m	m	
	Chile	6	6	58	1	85	0	85	94	0	94	18	80	98	m	72	79	
	Colombia	6	5	53	m	72	0	72	68	18	87	6	75	82	m	m	70	
	Costa Rica	6	4	6	m	81	0	81	92	0	92	14	83	97	m	m	60	
	Czech Republic	6	6	77	m	89	0	89	94	0	94	52	49	100	85	79	87	
	Denmark	6	6	98	m	100	0	100	99	2	100	6	93	100	m	97	100	
	Estonia	7	7	89	4	92	0	92	93	0	93	92	1	94	84	89	91	
	Finland	7	7	77	m	83	0	83	87	0	87	98	0	98	68	73	82	
	France ¹	6	6	100	m	100	0	100	100	1	100	1	100	100	100	100	100	
	Germany	6	6	91	a	95	0	95	97	0	97	36	63	99	88	94	94	
	Greece	6	5	m	m	m	0	m	m	0	m	m	90	m	45	49	m	
	Hungary	7	3	85	m	95	0	95	96	0	96	63	29	92	87	87	92	
	Iceland	6	6	97	0	97	0	97	97	0	98	0	98	99	95	96	97	
	Ireland	5	6	98	m	79	24	100	5	100	100	4	100	100	m	m	100	
	Israel	6	3	100	a	99	0	99	97	0	97	12	84	96	m	m	100	
	Italy	6	6	91	m	94	0	94	88	7	95	1	96	97	100	98	94	
	Japan	6	6	83	0	96	0	96	97	0	97	0	100	100	88	90	92	
	Korea	6	6	92	a	94	0	94	97	0	97	0	95	95	m	85	94	
	Latvia	7	5	89	a	93	0	93	97	0	97	93	4	98	77	82	93	
	Lithuania	7	7	83	a	86	0	86	90	0	90	94	3	97	59	72	86	
	Luxembourg	6	4	69	m	97	0	97	90	5	96	6	92	99	84	87	87	
	Mexico	6	3	46	a	92	0	92	81	28	100	1	100	100	64	78	82	
	Netherlands	6	5	74	m	95	0	95	99	0	99	0	100	100	m	94	89	
	New Zealand	5	5	88	5	93	0	93	4	94	97	0	100	100	96	98	93	
	Norway	6	6	96	0	97	0	97	98	0	98	1	99	100	88	96	97	
	Poland	7	6	74	m	87	0	87	93	0	93	93	6	99	38	60	85	
	Portugal	6	6	85	0	93	0	93	94	0	94	10	87	97	78	87	91	
	Slovak Republic	6	6	68	m	79	0	79	85	0	85	39	47	86	73	71	78	
	Slovenia	6	6	87	m	92	0	92	94	0	94	9	89	98	75	86	91	
	Spain	6	6	97	m	98	0	98	98	0	98	1	96	97	98	97	98	
	Sweden	7	7	92	2	94	0	94	95	0	95	98	1	99	m	m	94	
	Switzerland	6	4-5	2	m	49	0	49	98	1	98	53	47	100	47	47	50	
	Turkey	6	5-6	10	a	39	0	39	67	13	80	0	97	97	13	27	43	
	United Kingdom	5	4-5	100	a	100	3	100	0	97	97	0	97	97	m	m	100	
	United States ²	6	4-6	40	m	68	0	68	86	4	90	22	74	96	66	66	66	
	OECD average			78	m	89	1	88	83	12	95	27	71	97	75	81	88	
	EU23 average			85	m	92	1	91	85	10	94	36	62	96	77	84	91	
Partners	Argentina³	m	4	44	m	88	0	88	97	1	98	0	100	100	m	m	77	
	Brazil	6	4	65	a	89	0	90	93	7	100	11	93	100	m	m	85	
	China	6	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
	India	6	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
	Indonesia	m	7	35	m	73	0	73	98	3	100	60	64	100	m	m	69	
	Russian Federation	7	7	79	m	85	0	85	86	0	86	80	9	88	37	73	83	
	Saudi Arabia	m	6	4	m	14	0	14	41	5	45	5	77	82	m	m	21	
	South Africa ³	m	7	m	m	m	0	m	m	1	m	m	50	m	m	m	m	
	G20 average			m	m	m	m	m	m	m	m	m	m	m	m	m	m	

Note: Early childhood education = ISCED 0, other registered ECEC services = ECEC services outside the scope of ISCED 0, because they are not in adherence with all ISCED criteria. To be classified in ISCED 0, ECEC services should: 1) have an adequate intentional educational properties; 2) be institutionalised (usually school-based or otherwise institutionalised for a group of children); 3) have an intensity of at least 2 hours per day of educational activities and a duration of at least 100 days a year; 4) have a regulatory framework recognised by the relevant national authorities (e.g. curriculum); and 5) have trained or accredited staff (e.g. requirement of pedagogical qualifications for educators).

1. From September 2019, instruction is compulsory from the age of 3 in France

2. Excludes ISCED 01 programmes.

3. Year of reference 2017 instead of 2018.

Source: INES ad hoc survey and OECD/UIE/Eurostat (2020). See Source section for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.

StatLink  <https://doi.org/10.1787/888934163306>

Table B2.3. Enrolment of children in early childhood education and care (ISCED 0) in private institutions, ratio of children to teaching staff and most prevalent qualification of ECEC staff (2018)

	Percentage of children enrolled in private institutions (government-dependent and independent private institutions)			Ratio of children to staff in full-time equivalents by type of ECEC service (public and private institutions)									Most prevalent ISCED qualification required to enter ECEC profession	
				ISCED 01			ISCED 02			Total (ISCED 0)				
	ISCED 01	ISCED 02	Total (ISCED 0)	Share of teachers' aides among contact staff	Children to contact staff (teachers and teachers' aides)	Children to teaching staff	Share of teachers' aides among contact staff	Children to contact staff (teachers and teachers' aides)	Children to teaching staff	Share of teachers' aides among contact staff	Children to contact staff (teachers and teachers' aides)	Children to teaching staff	Total (ISCED 0)	
													Teachers	Teachers' aides
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
OECD														
Countries														
Australia	m	85	m	m	m	m	m	m	m	m	m	m	m	m
Austria	65	29	36	31	6	9	35	9	14	34	8	13	ISCED 5	ISCED 3
Belgium	m	53	m	m	m	m	a	14	14	m	m	m	ISCED 6	ISCED 3
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile	10	63	51	43	6	10	59	9	23	59	9	22	ISCED 6	ISCED 3, vocational
Colombia	m	21	14	m	m	m	m	m	36	m	m	m	ISCED 6	m
Costa Rica	74	10	14	a	5	5	a	13	13	a	12	12	m	m
Czech Republic	a	4	4	a	a	a	9	12	13	9	12	13	m	m
Denmark	14	23	20	m	m	3	m	m	7	m	m	5	ISCED 6	x(13)
Estonia	x(3)	x(3)	4	m	m	x(12)	m	m	x(12)	m	m	8	ISCED 6	m
Finland	23	13	15	m	m	m	m	m	9	m	m	m	ISCED 6 or 7	m
France	a	13	13	a	a	a	33	16	23	33	16	23	ISCED 7	ISCED 3, vocational
Germany	73	65	67	8	4	5	9	9	9	9	7	7	ISCED 6, professional	ISCED 3, vocational
Greece	m	10	m	m	m	m	a	10	10	m	m	m	m	a
Hungary	16	11	11	a	14	14	a	12	12	a	12	12	m	a
Iceland	21	14	16	a	3	3	a	5	5	a	4	4	m	m
Ireland	100	99	99	x(10)	x(11)	x(12)	x(10)	x(11)	x(12)	7	4	4	m	m
Israel	100	36	59	m	m	m	61	8	21	m	m	m	ISCED 5	ISCED 3
Italy	a	28	28	a	a	a	a	12	12	a	12	12	m	a
Japan ¹	a	76	76	a	a	a	m	13	14	m	13	14	ISCED 5 or 6	m
Korea	89	77	82	a	5	5	a	13	13	a	8	8	ISCED 5	m
Latvia	17	7	9	m	m	7	m	m	9	m	m	9	m	m
Lithuania	11	4	5	36	7	10	35	7	10	35	7	10	ISCED 6	ISCED 3
Luxembourg	a	11	11	a	a	a	a	12	12	a	12	12	m	m
Mexico	68	15	18	60	5	12	a	24	24	11	21	23	ISCED 6	ISCED 2 and training
Netherlands	a	28	28	a	a	a	14	14	16	14	14	16	m	m
New Zealand	99	99	99	m	m	3	m	m	6	m	m	5	ISCED 6	m
Norway	52	48	50	59	3	8	59	6	14	59	4	11	ISCED 6	ISCED 3
Poland ²	a	25	25	a	a	a	m	m	15	m	m	15	ISCED 7	m
Portugal	96	47	62	m	m	m	m	m	16	m	m	m	ISCED 7	m
Slovak Republic	a	7	7	a	a	a	1	12	12	1	12	12	ISCED 3	m
Slovenia	7	5	5	a	6	6	a	9	9	a	8	8	ISCED 6	ISCED 3, vocational
Spain	49	33	37	m	m	9	m	m	14	m	m	13	ISCED 5 for ISCED 01; ISCED 6 for ISCED 02	m
Sweden	20	18	18	m	5	x(5)	m	6	x(8)	m	6	x(11)	ISCED 6	m
Switzerland	a	5	5	a	a	a	m	m	18	m	m	18	ISCED 6	m
Turkey	100	16	16	m	m	m	m	m	18	m	m	m	m	m
United Kingdom	82	53	59	m	m	m	m	m	m	m	m	m	m	m
United States	m	40	m	m	m	m	16	10	12	m	m	m	m	m
OECD average	54	33	32	m	m	7	30	11	14	m	m	12		
EU23 average	44	27	27	m	m	8	21	11	14	m	m	11		
Partners³														
Argentina ³	57	31	33	m	m	m	m	m	m	m	m	m	m	m
Brazil	34	23	28	37	9	14	14	17	20	27	12	17	ISCED 6	ISCED 3
China	a	56	56	a	a	a	m	m	17	m	m	17	m	m
India	a	m	m	a	a	a	m	m	m	m	m	m	m	m
Indonesia	100	95	98	m	m	21	m	m	13	m	m	17	m	m
Russian Federation	2	2	2	m	m	x(12)	m	m	x(12)	m	m	11	m	m
Saudi Arabia	a	47	47	a	a	a	m	m	15	m	m	15	m	m
South Africa ³	m	6	m	m	m	m	m	m	m	m	m	m	m	m
G20 average	m	33	34	m	m	m	m	m	16	m	m	15		

Note: Early childhood educational development programmes = ISCED 01, pre-primary education = ISCED 02; ISCED 5 = short-cycle tertiary; ISCED 6 = bachelor's degree or equivalent; ISCED 7 = master's degree or equivalent.

1. Data does not cover day care centres and integrated centres for early childhood education and care.

2. A master's or equivalent degree is not a prerequisite, but most ECEC teachers enter the profession with this level.

3. Year of reference 2017 instead of 2018.

Source: INES ad hoc survey and OECD/UIS/Eurostat (2020). See Source section for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).

Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.

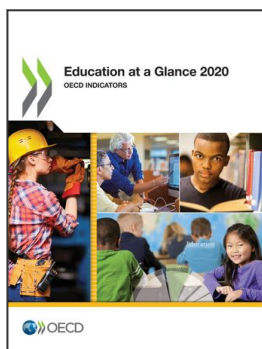
StatLink  <https://doi.org/10.1787/888934163325>

Table B2.4. Financing of early childhood education and care (ISCED 0) and expenditure on all children aged 3 to 5 (2017)
Public and private institutions

	Expenditure on all children aged 3 to 5 enrolled in ECEC and primary education (based on head counts)		Expenditure on ECEC services as a percentage of GDP			Annual expenditure per child in USD, converted using PPPs (based on head counts)			Relative proportions of private expenditure on early childhood education and care (after transfers from public sources)		
	As a % of GDP	Per child	Early childhood educational development (ISCED 01)	Pre-primary (ISCED 02)	Total (ISCED 0)	Early childhood educational development (ISCED 01)	Pre-primary (ISCED 02)	Total (ISCED 0)	Early childhood educational development (ISCED 01)	Pre-primary (ISCED 02)	Total (ISCED 0)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
OECD Countries											
Australia	0.6	8 697	0.2	0.3	0.6	7 685	7 994	7 863	41	34	37
Austria	0.5	10 766	0.1	0.5	0.7	12 493	10 686	11 009	24	13	15
Belgium ¹	0.6	8 918	m	0.7	m	m	8 912	m	m	3	m
Canada	m	m	m	m	m	m	m	m	m	m	m
Chile	0.9	6 489	0.3	0.9	1.2	7 730	6 449	6 727	17	18	18
Colombia	0.4	1 725	0.1	0.3	0.5	m	1 556	m	89	28	45
Costa Rica	m	m	m	m	m	m	m	m	m	m	m
Czech Republic	0.4	6 109	a	0.5	0.5	a	6 109	6 109	a	10	10
Denmark	m	m	0.6	1.0	1.6	18 850	18 304	18 502	19	19	19
Estonia	0.7	8 137	x(5)	x(5)	1.2	x(8)	x(8)	8 137	x(11)	x(11)	16
Finland	0.6	11 283	0.4	0.8	1.2	21 436	11 283	13 186	8	11	10
France	0.7	8 892	a	0.8	0.8	a	8 894	8 894	a	7	7
Germany	0.5	11 074	0.3	0.6	0.9	17 490	11 075	12 817	16	16	16
Greece ¹	0.3	5 657	m	0.3	m	m	5 657	m	m	8	m
Hungary	m	m	0.0	0.8	0.8	7 253	7 409	7 401	11	11	11
Iceland	1.1	15 368	0.7	1.1	1.7	21 524	15 368	17 310	10	14	13
Ireland	m	m	x(5)	x(5)	0.2	x(8)	x(8)	4 568	x(11)	x(11)	16
Israel	0.9	6 055	0.3	1.0	1.3	3 282	6 052	5 049	84	9	27
Italy	0.5	8 785	a	0.5	0.5	a	8 780	8 780	a	12	12
Japan ²	m	m	a	0.2	0.2	a	7 609	7 609	a	49	49
Korea ¹	0.5	7 555	m	0.5	m	m	7 547	m	m	18	m
Latvia	0.6	6 222	a	0.9	0.9	a	6 222	6 222	a	4	4
Lithuania	0.5	6 610	0.2	0.7	0.9	6 972	6 610	6 677	17	13	14
Luxembourg	0.5	19 334	a	0.5	0.5	a	19 326	19 326	a	2	2
Mexico	0.6	2 594	x(5)	x(5)	0.5	x(8)	x(8)	2 570	x(11)	x(11)	10
Netherlands	0.4	6 959	a	0.4	0.4	a	6 959	6 959	a	11	11
New Zealand	0.8	8 985	0.4	0.5	0.9	10 133	9 217	9 599	28	14	20
Norway	1.0	15 270	1.0	1.0	2.0	27 487	15 270	19 663	14	14	14
Poland	0.6	7 164	a	0.8	0.8	a	7 164	7 164	a	18	18
Portugal ¹	0.6	8 147	m	0.6	m	m	8 146	m	m	33	m
Slovak Republic	0.5	6 123	a	0.6	0.6	a	6 123	6 123	a	12	12
Slovenia	0.7	8 528	0.4	0.7	1.1	11 222	8 528	9 329	23	23	23
Spain	0.5	7 415	0.2	0.5	0.7	8 735	7 413	7 759	40	17	24
Sweden	0.9	14 703	0.5	1.3	1.8	17 520	14 703	15 442	6	6	6
Switzerland ³	m	m	a	0.4	0.4	a	13 412	13 412	a	m	m
Turkey ¹	0.4	5 101	m	0.3	m	m	5 250	m	m	29	m
United Kingdom	0.7	7 893	0.1	0.4	0.4	5 296	6 133	5 971	58	41	44
United States ¹	0.4	9 509	m	0.4	m	m	9 435	m	m	25	m
OECD average	0.6	8 583	0.3	0.6	0.9	12 819	9 079	9 661	30	17	18
EU23 average	0.6	8 717	0.3	0.7	0.8	12 727	9 042	9 698	28	15	16
Partners											
Argentina	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m
Russian Federation ³	m	m	m	m	m	x(8)	x(8)	6 186	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	a	m	m	a	m	m	a	m	m
G20 average	m	m	m	m	m	m	m	m	m	m	m

1. Expenditure on all children aged 3 to 5 excludes expenditure and enrolment in ISCED 01 programmes.
 2. Data does not cover day care centres and integrated centres for early childhood education and care.
 3. Public sources only.

Source: INES ad hoc survey and OECD/UIS/Eurostat (2020). See Source section for more information and Annex 3 for notes (<https://doi.org/10.1787/69096873-en>).
 Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.



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