

PF3.2: Enrolment in childcare and pre-school

Definitions and methodology

This indicator presents information on the use of early childhood education and care (ECEC) services across OECD countries. Separate measures are used to capture participation by very young children (aged 0 to 2) and by slightly older children (aged 3 to 5), with the child's third birthday used as the breakpoint because it is at this age that children are often able to move into pre-primary education in most OECD countries (see indicator [PF4.1](#)). Four measures are used to capture the use of early childhood education and care:

1. *Enrolment rates in early childhood education and care services for 0- to 2-year-olds*, that is, the percentage of children aged 0-2 enrolled in or using early childhood education and care services. For most countries, data come from *OECD Education at a Glance 2018* and cover all children aged 0-2 enrolled in registered ECEC services. This generally includes children in ECEC services recognised under ISCED 2011 level 0 (ECEC services that take place in an institutionalised setting and that contain an intentional education component, among other criteria) and children in other *registered* ECEC services outside the scope of ISCED 2011 level 0 (i.e. registered services that do not meet the criteria for classification under ISCED 2011 level 0, such as having an intentional educational component). However, exact sources, coverage and definitions differ across countries. See the notes to Chart PF3.2.A and the *comparability and data issues* section later in this document for more details.
2. *Participation rates in early childhood education and care for 0- to 2-year-olds, by disposable income tertile and by mother's level of education*. For this indicator, data for all countries are OECD estimates based on information EU-SILC and cover children using centre-based services (e.g. nurseries or day care centres and pre-schools, both public and private), organised family day care, and care services provided by (paid) professional childminders. This is a broader definition than that used above, and includes children in all kinds of paid-for services regardless of whether or not they are registered or ISCED-recognised.
 - *Disposable income tertiles* are calculated using the post-tax and transfer income of the child's household in which the child lives, equivalised using the square root scale to account for the effect of family size on the household's standard of living. The tertiles are based on the distribution of equivalised disposable incomes of children aged less than or equal to 12.
 - *Mother's level of education* is measured using a two-part variable reflecting whether the reported mother of the child has attained tertiary education (highest level of education attained at ISCED 2011 levels 5-8).
3. *Average usual weekly hours in early childhood education and care services for 0- to 2-year-olds*. Again, data for all countries are OECD estimates based on information EU-SILC and cover children using centre-based services (e.g. nurseries or day care centres and pre-schools, both public and private), organised family day care, and care services provided by (paid) professional childminders, regardless of whether or not the service is registered or ISCED-recognised. 'Average usual weekly hours' refers to the average number of hours 0- to 2-year-old children spend in early childhood education and care during a "usual" or typical week, among those who spend at least one hour in early childhood education and care during a usual week.

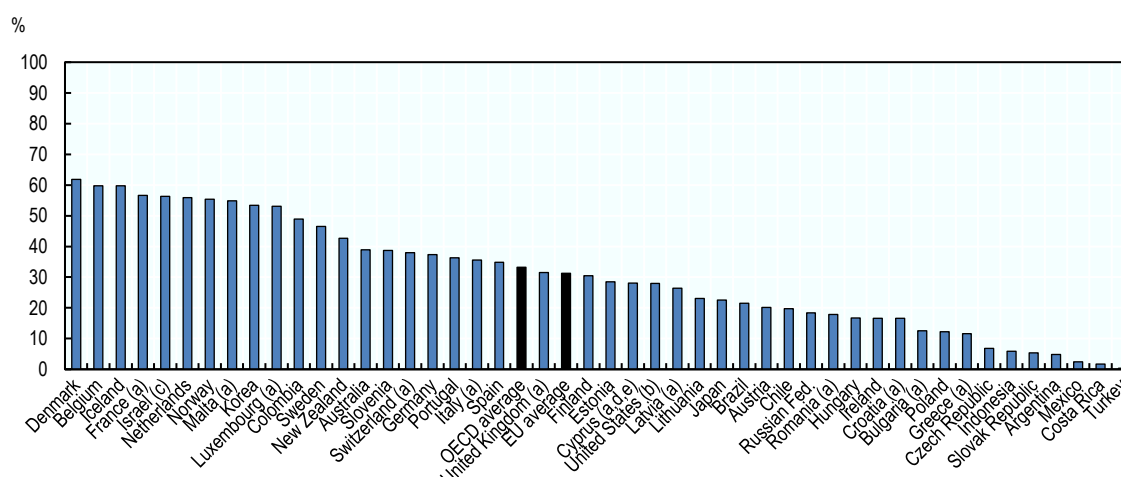
Other relevant indicators: PF3.1: Public spending on childcare and early education; PF3.4: Childcare support; PF4.1: Typology of childcare and early education services; PF4.2: Quality of childcare and early education services; and, PF4.3: Out-of-school-hours care.
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4. *Enrolment rates in early childhood education and care and primary education for 3- to 5-year-olds.* Data for most countries come from *OECD Education at a Glance 2018* and cover all children aged 3-5 enrolled in early childhood education services (ISCED 2011 level 0) or primary education (ISCED 2011 level 1). Data are presented both for the 3- to 5-year-old age group as a whole, and by individual year of age (i.e. for 3-, 4- and 5-year-olds, separately).

Key findings

Enrolment rates in early childhood education and care for 0- to 2-year-olds differ considerably across the OECD (Chart PF3.2.A). On average across OECD countries around 33% of children aged 0-2 are enrolled in early childhood education and care, but this ranges from lower than 1% in Turkey to as high as roughly 60% in Belgium and Denmark. Participation rates tend to be highest at around 50% or more in many of the Nordic (Denmark, Iceland, Norway and Sweden, but not Finland) and ‘Benelux’ OECD countries (Belgium, Luxembourg and the Netherlands), plus also France, Israel and Korea. Rates tend to be lowest in Eastern European OECD countries (especially the Czech and Slovak Republics) and Central American countries like Mexico and Costa Rica.

Chart PF3.2.A. **Enrolment rates in early childhood education and care services, 0- to 2-year-olds**
 Percent of children enrolled in early childhood education and care services (ISCED 0 and other registered ECEC services), 0- to 2-year-olds, 2016 or latest available



Note: Data for the United States refer to 2011, for Switzerland and Malta to 2014, and for Japan and Argentina to 2015. Data generally include children enrolled in early childhood education services (ISCED 2011 level 0) and other registered ECEC services (ECEC services outside the scope of ISCED 0, because they are not in adherence with all ISCED-2011 criteria). Data for Denmark, Finland, New Zealand, the Slovak Republic, Slovenia, Spain, Brazil, Colombia, Costa Rica, and the Russian Federation cover early childhood education and care (ISCED 0) only. Potential mismatches between the enrolment data and the coverage of the population data (in terms of geographic coverage and/or the reference dates used) may affect enrolment rates. For details on the ISCED 2011 level 0 criteria and how services are mapped and classified, see OECD Education at a Glance 2018 Indicator B2 (<http://www.oecd.org/education/education-at-a-glance-19991487.htm>).

a. Data for France, Greece, Italy, Latvia, Luxembourg, Switzerland, the United Kingdom, Bulgaria, Croatia, Cyprus, Malta and Romania are OECD estimates based on information from EU-SILC. Data refer to children using centre-based services (e.g. nurseries or day care centres and pre-schools, both public and private), organised family day care, and care services provided by (paid) professional childminders, regardless of whether or not the service is registered or ISCED-recognised.

b. For the United States, data cover children who are living with their mother only. Data include children regularly using organised care (e.g. day care centres, nursery school and Head Start), family day care, and services provided by non-relatives (in or outside the child's home) regardless of whether they are paid or unpaid. The data allow for the reporting of multiple regular arrangements, and the figures shown may overestimate the number of children using services if children use more than one type of service on a regular basis.

c. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

d. Footnote by Turkey: The information in this document with reference to « Cyprus » relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus issue";

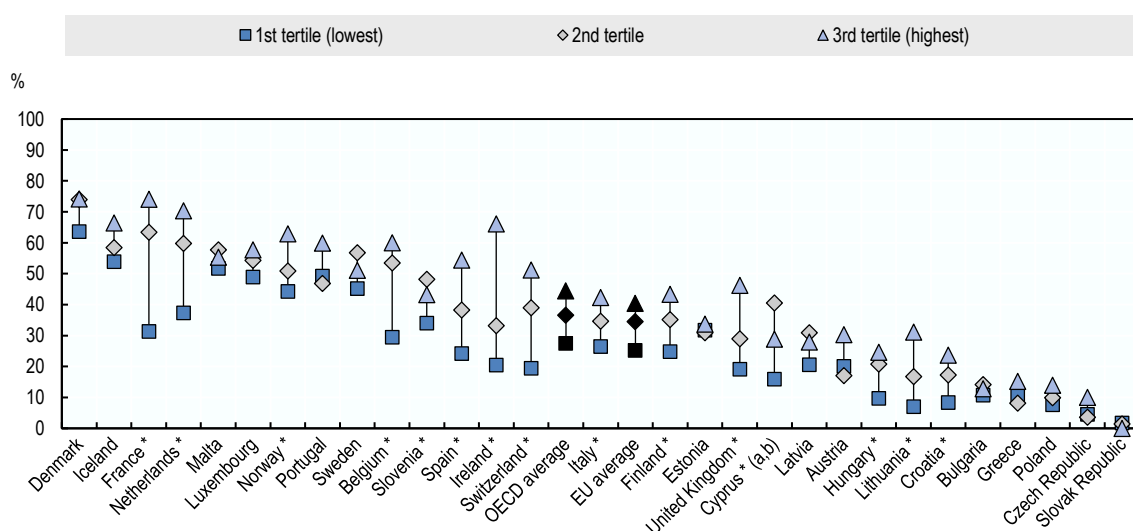
e. Footnote by all the European Union Member States of the OECD and the European Commission: The Republic of Cyprus is recognized by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Sources: [For France, Greece, Italy, Luxembourg, Switzerland, the United Kingdom, Bulgaria, Croatia, Cyprus, Malta and Romania, OECD estimates based on EU-SILC](#); [For the United States, US Census Bureau](#); [For all other countries, OECD Education at a Glance 2018: OECD Indicators](#).

In most OECD countries, very young children are more likely to use early childhood education and care services when they come from relatively advantaged socio-economic backgrounds. For example, in many OECD countries participation rates for children aged 0-2 increase with household income (Chart PF3.2.B). In Ireland, the participation rate for children in low-income families is, at about 20%, less than one-third of that for children from high-income families (66%). In Belgium, France and the Netherlands, participation rates for children from low-income backgrounds are generally a little higher (around 30-40%), but are still only about half those for children from the richest families (roughly 60-75%). Similarly, in a number of OECD countries children are also more likely to use early childhood education and care when their mother is educated to degree-level (Chart PF3.2.C). In the United Kingdom, the participation rate for children with a mother that has attained tertiary education is, at 41%, 17 percentage points higher than the rate for children with mothers that have not attained tertiary education (24%). In Switzerland, the gap is as large as 30 percentage points.

Average hours in early childhood education and care also differs across countries (Chart PF3.2.D). In most OECD countries, children (0- to 2-year-olds) in early childhood education and care use it for an average of somewhere between 25 and 35 hours during a usual week, with the OECD average just under 30 hours per week. However, in some countries (e.g. Iceland, Latvia and Portugal) average hours approach 40 hours during a usual week. In others, such as the Netherlands and the United Kingdom, 0- to 2-year-olds in ECEC are there for an average of less than 20 hours during a usual week.

Chart PF3.2.B. **Participation rates in early childhood education and care by income, 0- to 2-year-olds**
 Participation rates in early childhood education and care, 0- to 2-year-olds, by equivalised disposable income tertile, 2016 or latest available



Note: Data for Switzerland and Malta refer to 2014, and for Iceland to 2015. Data are OECD estimates based on information from EU-SILC. Data refer to children using centre-based services (e.g. nurseries or day care centres and pre-schools, both public and private), organised family day care, and care services provided by (paid) professional childminders, regardless of whether or not the service is registered or ISCED-recognised. Please note that, for many countries, this is a different source and definition to that used in Chart PF3.2.A, and while in most cases the two sources produce comparable results, for some countries estimates of overall enrolment can differ. This is particularly the case for Ireland, where the estimates based on EU-SILC produce a far higher overall enrolment rate than those shown in Chart PF3.2.A. This is likely due to the inclusion of children using non-registered childminders in the EU-SILC-based estimates. Equivalised disposable income tertiles are calculated using the disposable (post tax and transfer) income of the household in which the child lives – equivalised using the square root scale, to account for the effect of family size on the household's standard of living – and are based on the equivalised disposable incomes of children aged less than or equal to 12. In countries marked with an *, differences across groups are statistically significant at $p < 0.05$.

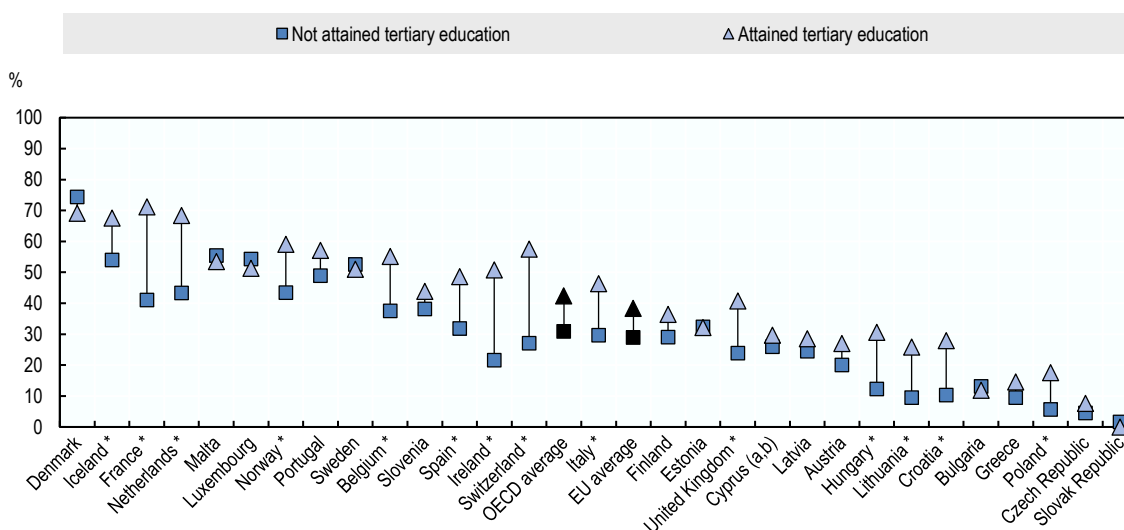
a. See note c. to Chart PF3.2.A

b. See note d. to Chart PF3.2.A

Sources: [OECD estimates based on EU-SILC](#)

Chart PF3.2.B. Participation rates in early childhood education and care by mother's education, 0- to 2-year-olds

Participation rates in early childhood education and care, 0- to 2-year-olds, by mother's education level, 2016 or latest available



Note: Data for Switzerland and Malta refer to 2014, and for Iceland to 2015. Data are OECD estimates based on information from EU-SILC. Data refer to children using centre-based services (e.g. nurseries or day care centres and pre-schools, both public and private), organised family day care, and care services provided by (paid) professional childminders, regardless of whether or not the service is registered or ISCED-recognised. Please note that, for many countries, this is a different source and definition to that used in Chart PF3.2.A, and while in most cases the two sources produce comparable results, for some countries estimates of overall enrolment can differ. This is particularly the case for Ireland, where the estimates based on EU-SILC produce a far higher overall enrolment rate than those shown in Chart PF3.2.A. This is likely due to the inclusion of children using non-registered childminders in the EU-SILC-based estimates. Mother's education level based on whether or not the reported mother of the child has attained tertiary education (highest level of education attained at ISCED 2011 levels 5-8). The education level of the female household head is used if there is no mother in the household, and then of the father (or male household head) if there is no mother or female head in the household. In countries marked with an *, differences across groups are statistically significant at $p < 0.05$.

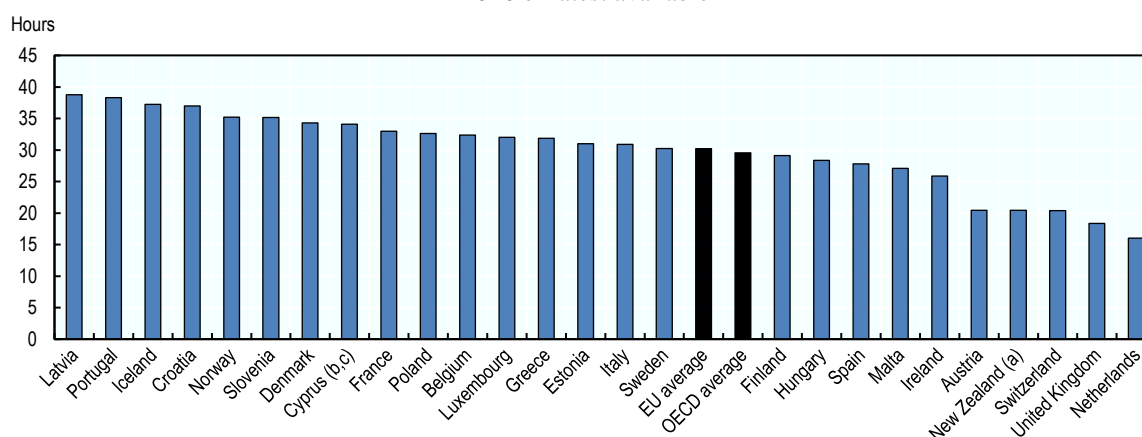
a. See note c. to Chart PF3.2.A

b. See note d. to Chart PF3.2.A

Sources: [OECD estimates based on EU-SILC](#)

Chart PF3.2.D. Average usual weekly hours in early childhood education and care services, 0- to 2-year-olds

Average usual weekly hours for children using early childhood education and care services, 0- to 2-year-olds, 2016 or latest available



Note: Data for Switzerland and Malta refer to 2014, and for Iceland to 2015. Data are OECD estimates based on information from EU-SILC. Data refer to children using centre-based services (e.g. nurseries or day care centres and pre-schools, both public and private), organised family day care, and care services provided by (paid) professional childminders, regardless of whether or not the service is registered or ISCED-recognised. Please note that, for many countries, this is a different source and definition to that used in Chart PF3.2.A. For some countries and in some years, sample sizes can be small. Estimates based on fewer than 50 cases have been removed.

a. For New Zealand, data cover children using licensed centre-based (e.g. 'Education and Care' services, Playcentres, Kōhanga Reo, Kindergartens) and home-based services, only. All non-licensed care is excluded regardless of whether it is paid or unpaid. Data on average hours of attendance refer to a mix

of the actual hours attended by enrolled children scheduled to attend during a specific reference week and the actual hours of attendance by children who actually attended during a specific reference week.

b. See note c. to Chart PF3.2.A

c. See note d. to Chart PF3.2.A

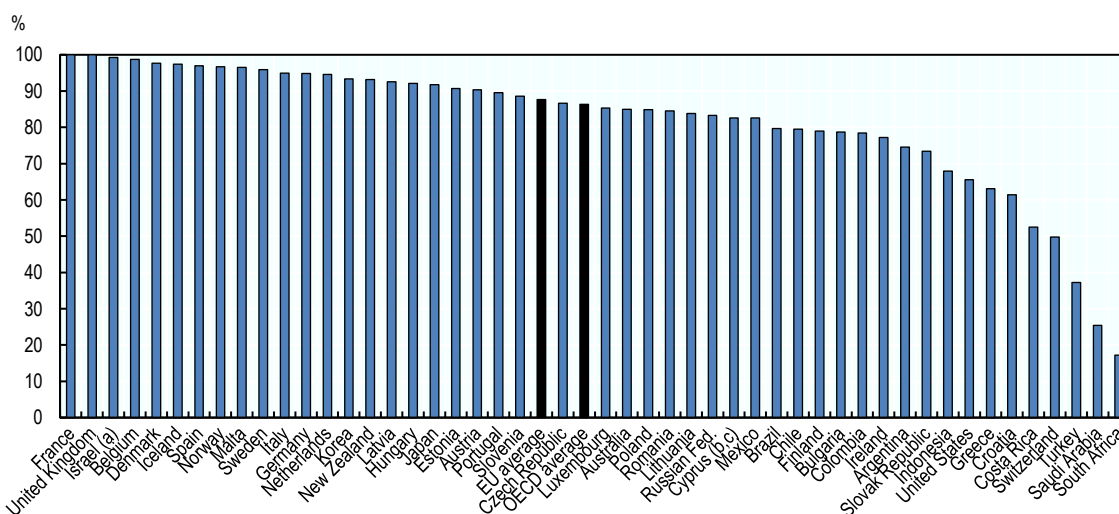
Sources: For New Zealand, OECD questionnaire; [For all other countries, OECD estimates based on EU-SILC](#)

Enrolment rates for 3- to 5-year-olds are generally higher than those for younger children (Chart PF3.2.E). In the majority of OECD countries over 80% of children aged 3-5 are enrolled in early childhood education and care or primary school, with the OECD average enrolment rate 86.3%. Again, though, there is variation across countries. In Belgium, France, Israel and the United Kingdom, enrolment in ECEC (or primary education) is effectively universal among 3- to 5-year-olds – in all four countries, enrolment rates are above 98%. In contrast, in Switzerland and Turkey less than half of all 3- to 5-year-olds are enrolled in early childhood education and care or primary school services.

Participation in early childhood education and care or primary school often differ across individual years of age (Chart PF3.2.F). Enrolment rates for 5-year-olds are generally very high – in all but three OECD countries (Finland, the Slovak Republic and Turkey), at least 90% of 5-year-olds are enrolled in ECEC or primary school. However, enrolment rates for 4- and particularly 3-year-olds vary more. In some OECD countries participation rates remain high across all ages. For example, in 14 OECD countries (Belgium, Denmark, Estonia, France, Germany, Hungary, Iceland, Israel, Italy, Korea, Norway, Spain, Sweden and the United Kingdom) more than 90% are enrolled in ECEC or primary education across 3-, 4- and 5-year-olds. In others, however, rates for 3-year-olds in particular are much lower. In the United States, less than 40% of 3-year-olds are enrolled in early childhood education and care, compared to over 90% of 5-year-olds. In Switzerland, the rate for 3-year-olds is just 2%, compared to 99% for 5-year-olds.

Chart PF3.2.E. Enrolment rates in early childhood education and care services and primary education, 3- to 5-year-olds

Percent of children enrolled in early childhood education and care (ISCED 2011 level 0) or primary education (ISCED 2011 level 1), 3- to 5-year-olds, 2016 or latest available year



Note. Data for South Africa refer to 2015. Data include children enrolled in early childhood education and care (ISCED 2011 level 0) and primary education (ISCED 2011 level 1). For Greece, data include only part of the children enrolled in Early childhood development programmes (ISCED 01). Potential mismatches between the enrolment data and the coverage of the population data (in terms of geographic coverage and/or the reference dates used) may affect enrolment rates See OECD Education at a Glance 2018 Indicator B2 (<http://www.oecd.org/education/education-at-a-glance-19991487.htm>) for more details.

a. See note b. to Chart PF3.2.A

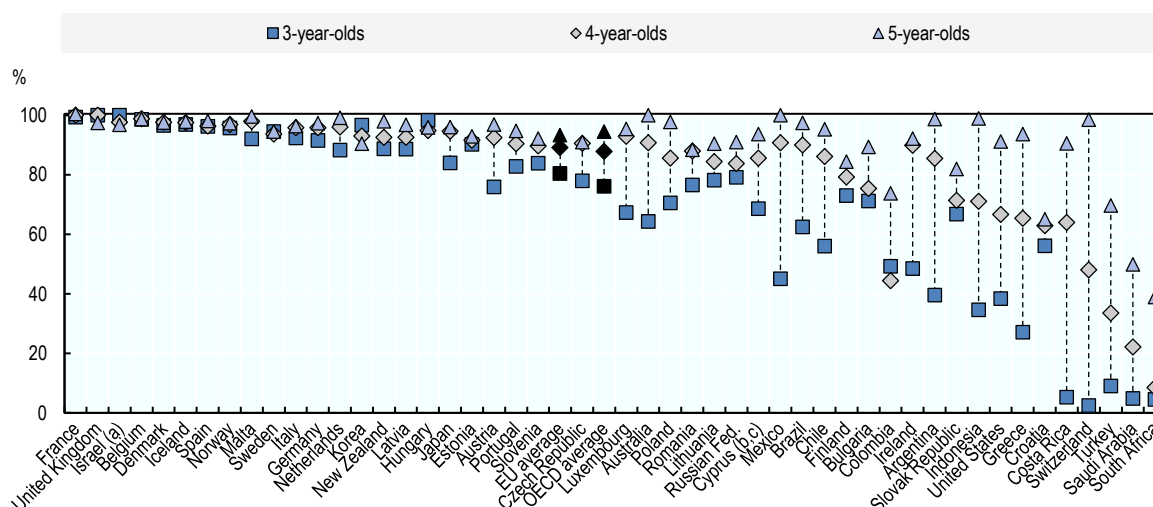
b. See note c. to Chart PF3.2.A

c. See note d. to Chart PF3.2.A

Sources: [For Bulgaria, Croatia, Cyprus, Malta and Romania, Eurostat Education Statistics; For all other countries, OECD Education at a Glance 2018: OECD Indicators](#)

Chart PF3.2.F. Enrolment rates in early childhood education and care services and primary education by year of age, 3- to 5-year-olds

Percent of children enrolled in early childhood education and care (ISCED 2011 level 0) or primary education (ISCED 2011 level 1), 3-, 4- and 5-year-olds, 2016 or latest available year



Note. Data for South Africa refer to 2015. Data include children enrolled in early childhood education and care (ISCED 2011 level 0) and primary education (ISCED 2011 level 1). For Greece, data include only part of the children enrolled in Early childhood development programmes (ISCED 01). Potential mismatches between the enrolment data and the coverage of the population data (in terms of geographic coverage and/or the reference dates used) may affect enrolment rates. See OECD Education at a Glance 2018 Indicator B2 (<http://www.oecd.org/education/education-at-a-glance-19991487.htm>) for more details.

a. See note b. to Chart PF3.2.A

b. See note c. to Chart PF3.2.A

c. See note d. to Chart PF3.2.A

Sources: For Bulgaria, Croatia, Cyprus, Malta and Romania, Eurostat Education Statistics; For all other countries, OECD Education at a Glance 2018: OECD Indicators

Comparability and data issues

Data on the use of early childhood education and care services for very young children (0- to 2-year-olds) come from several sources. For most countries, the data on enrolment shown in Chart PF3.2.A come from *OECD Education at a Glance 2018*, which itself collects data from national authorities through the OECD INES Ad-hoc Survey on Early Childhood Education and Care. The data collected are based on administrative records or national surveys and cover children using registered ECEC services, including both services classified under ISCED 2011 level 0 and other registered services that are considered an integral part of countries' ECEC provision but do not comply with all the ISCED 0 criteria to be considered educational programmes (e.g. *crèches* in France or *Amas* in Portugal). To be classified in ISCED 0, ECEC services should:

- 1) Have adequate intentional educational properties;
- 2) Be institutionalised (usually centre-based or otherwise institutionalised for a group of children, including institutionalised community-based or home-based services but excluding informal family-based arrangements)
- 3) Have an intensity of at least two 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)
- 5) Have trained or accredited staff (e.g. requirement of pedagogical qualifications for educators)

(see OECD Education at a Glance 2018 (<http://www.oecd.org/education/education-at-a-glance-19991487.htm>) Indicator B2 and Annex 3 for more details)

However, exact sources, coverage and definitions differ across countries. The exceptions are as follows:

- Data for Denmark, Finland, New Zealand, the Slovak Republic, Slovenia, Spain, Brazil, Colombia, Costa Rica, and the Russian Federation come from *OECD Education at a Glance 2018* but, for data availability reasons, include 0- to 2-year-olds enrolled in early childhood education services classified under ISCED 2011 level 0, only. Any 0- to 2-year-old children enrolled in services outside of ISCED 2011 level 0 are not included, regardless of whether the service is registered or not.
- Data France, Greece, Italy, Latvia, Luxembourg, Switzerland, the United Kingdom, Bulgaria, Croatia, Cyprus, Malta and Romania are OECD estimates based on information European Union's Statistics on Income and Living Conditions (EU-SILC) survey. For France, EU-SILC is used in place of data from *OECD Education at a Glance 2018* because the data supplied by the French authorities cover the child's "primary care arrangement" only and therefore lead to a large under-estimation of enrolment. For all other countries, EU-SILC is used because the relevant information is missing in *OECD Education at a Glance 2018*. The estimates draw from EU-SILC cover all children using centre-based services (e.g. nurseries or day care centres and pre-schools, both public and private), organised family day care, and care services provided by (paid) professional childminders. This is a broader definition than that used in *OECD Education at a Glance 2018*, and includes children in all kinds of paid-for services regardless of whether or not the services are registered or ISCED-recognised.
- Data for the United States come from the U.S. Census Bureau and are based on information from the U.S. Survey of Income and Program Participation (SIPP). SIPP is used as the source for the United States because the relevant information is missing in *OECD Education at a Glance 2018*. Data cover children regularly using organised care (e.g. day care centres, nursery school and Head Start), family day care, and services provided by non-relatives (in or outside the child's home). Again, this is a broader definition than that used in *OECD Education at a Glance 2018* and covers children enrolled in services regardless of whether they are paid, registered or ISCED-recognised.

The use of different sources and definitions may affect cross-national comparisons. In particular, the broader definitions used in the data come from EU-SILC and the U.S. Census Bureau may lead to higher estimations of enrolment vis-à-vis the data from *OECD Education at a Glance 2018*. This is especially likely to be the case in countries with large numbers of children using non-registered services. Where data are available from both sources, comparisons suggest rates are broadly comparable with differences usually ranging around ± 5 percentage points.

Data on the use of early childhood education and care and primary education for 3- to 5-year-olds come in all cases from the joint UNESCO-OECD-EUROSTAT (UOE) data collection programme, either via *OECD Education at a Glance 2018* or the Eurostat database. Data are based on administrative data and head counts of the actual number of students participating in educational programmes. The UOE data collection manual gives detailed instructions to national correspondents on the mapping of educational programmes, although on occasion differences in classifications may still exist. However, potential mismatches between the data on enrolments and the underlying population data can lead to overestimated or underestimated figures (for instance, enrolment rates exceeding 100%). For more details and notes for specific countries, see the notes for Indicator B.2 provided in *OECD Education at a Glance 2018* Annex 3 (https://www.oecd-ilibrary.org/education/education-at-a-glance-2018/sources-methods-and-technical-notes_eag-2018-36-en).

Sources and further reading:

OECD (2011), *Doing Better for Families*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264098732-en>.

OECD (2018), *Education at a Glance 2018: OECD Indicators*, OECD Publishing, Paris, <https://doi.org/10.1787/eag-2018-en>.

OECD (2017), *Starting Strong 2017: Key OECD Indicators on Early Childhood Education and Care*, Starting Strong, OECD Publishing, Paris, <https://doi.org/10.1787/9789264276116-en>.