



Starting Strong IV

Early Childhood Education and Care Data Country Note

CHILE

This Data Spotlight note on Early Childhood Education and Care (ECEC) provides a summary of ECEC policy inputs, outputs and outcomes in Chile. It uses data available within the OECD Secretariat — *Education at a Glance*, the Programme for International Student Assessment (PISA) and the OECD Family Database — to make comparisons between Chile’s ECEC system and the systems in other OECD countries (see Box 1 for definition and comparability issues). This note complements the 2015 OECD publication, *Starting Strong IV: Monitoring Quality in Early Childhood Education and Care*.

Key characteristics of ECEC in Chile:

Resources that are put in the ECEC system

- The share of gross domestic product (GDP) devoted to ECEC (ISCED 0) is above the OECD average (1.3% and 0.8% of GDP respectively). However, as enrolment rates at this level of education have more than doubled in the last ten years, expenditure per student remains comparatively low (USD 6 408 and USD 8 070 across OECD countries).
- The share of private funding in ECEC (ISCED 0) is slightly below the OECD average (15% and 19% respectively).
- The number of children per teacher in pre-primary education (ISCED 02) is one of the highest in the OECD (26 children per teaching-staff compared with 14 across the OECD). However, at this level, auxiliary staff (support staff for teachers and educators) also works directly with children.

Access and participation

- Access to ECEC services is supported by targeted legal entitlements.
- Participation of 0-2 year-olds in formal care is almost half the OECD average (18% and 33% respectively).
- Participation of 3-5 year-olds in pre-primary education (ISCED 02) has increased substantially in the last decade. However, given initial low levels, participation rates remain below the OECD average (e.g. for 3-year-olds rates were 54% in Chile compared with 71% across the OECD).

Teacher’s academic qualification and working conditions

- Pre-primary teachers (ISCED 02) have a Bachelor’s degree, as in most other OECD countries.
- Pre-primary teachers in Chile face comparatively low salaries (in absolute and relative terms) and high workloads: the annual number of hours of teaching is higher than the OECD average (1 146 hours and 1 005 hours respectively). A pre-primary education teacher in Chile can expect to earn as a starting salary around USD 17 250, almost half the average starting salary of their colleagues across the OECD (around USD 29 494).

Monitoring Quality

- In Chile, a national curriculum for early childhood education is in place for children aged 0 to 6 years.
- Monitoring of ECEC settings is a common practice, but implementation and child development and outcomes are not monitored in Chile. Other challenges include: defining a national, uniform definition of quality in ECEC; ensuring monitoring informs policies and practices; and lacking a coherent monitoring system (see [Monitoring Quality in Early Childhood Education and Care Country Note: Chile](#)).

Student performance at age 15 by participation in pre-primary education

- The percentage of 15-year-olds in Chile who reported not attending pre-primary education in PISA 2012 was slightly above the OECD average (9.2% compared with 7.1% across the OECD). Notably, children from a lower socio-economic background and in socio-economically disadvantaged schools were less likely to have participated in pre-primary education. Nevertheless, after accounting for socio-economic background, the relationship between attending pre-primary education and mathematics performance of 15-year-olds is significant but below the OECD average (14 scores points compared with 31 across the OECD).

Introduction

Participation in ECEC can have a positive effect on children's early learning and development, as well as on subsequent outcomes, such as academic success, labour market performance and socioeconomic mobility. The benefits of ECEC on child outcomes, however, depend on high quality. Settings and programmes that have a high level of quality are positively associated with children's cognitive, social and behavioural development, with disadvantaged children benefitting significantly from high-quality settings (OECD, 2011; Gambaro et al., 2014). Policy outcomes are associated with both policy inputs and policy outputs.

For simplicity purposes, this note uses the term early childhood education and care (ECEC) to refer to arrangements providing care and education for children under compulsory school age. This term differs from those used by other sources in this note, including the ISCED 2011 classification (see Box 1 for the ISCED 2011 methodological distinction between childcare and pre-primary education). Because of these differences in definitions, caution is needed when comparing data presented here.

The note is structured in three sections:

- **Policy inputs:** This section presents indicators of the resources that are put into a system, such as the level and type of sources that finance ECEC, and the regulations of staff-child ratios to achieve outputs or a result.
- **Policy outputs:** This section covers indicators that are the result of policy inputs put in place, such as enrolment rates by age. Trend data is presented to examine the changes in early childhood education in recent years.
- **Policy outcomes:** This section covers indicators on the outcomes of children that are associated with both policy inputs and policy outputs. For example, indicators on student performance at age 15 by participation in pre-primary education (drawn from PISA 2012 data).

Section 1. Policy inputs

Access to early childhood education and care services

The organisation of ECEC services varies greatly from country to country in terms of structure, but also regarding the age of children attending different types of settings or the intensity of child participation in different settings (see Box 1). Chile offers formal centre-based education services that are oriented to the integral development of children and that cover areas such as emotional, cognitive, social, linguistic and motor development. This means that although formal programmes are education centred, childcare is a key aspect of the early childhood institutions objectives. The levels of formal early childhood education and care (*Educación Parvularia o Preescolar* in Chile) are structured as follows (OECD, 2016a, Tables C2.4 and C2.5):

Early Childhood educational development programmes (ISCED 01):

- *Salas Cuna* (nurseries): ages 0 to 1
- *Jardines Infantiles o nivel medio menor* (day care and lower middle level): age 2

Pre-primary education programmes (ISCED 02):

- *Educación parvularia nivel medio mayor, nivel de transición 1 (Pre-kinder) y nivel de transición 2 (Kinder)* (pre-school upper middle level, 1st transition level and 2nd transition level: ages 3 to 5).

Primary school: ages 6 onward (ISCED 1)

Participation in early childhood education and care services (ISCED 0) is supported by extended legal entitlements to a place in ECEC and efforts to ensure free access for selected population groups. Chile has both targeted¹ and universal² entitlements in place. Children aged 0 to 3 with a low-income family background have priority to a place in nurseries and childcare centres. All children aged 4 and 5 have a legal right to a place in a pre-primary education setting for 22 hours per week (OECD, 2015a Table 1.1).

Box 1. Distinction between early childhood educational development and pre-primary education: The revised ISCED 2011 classification

There are many different ECEC systems and structures within OECD countries. Consequently, there is also a range of different approaches to identifying the boundary between early childhood education and childcare.

The International Standard Classification of Education (ISCED) defines internationally comparable levels of education. In ISCED 2011, level 0 covers early childhood education for all ages, including very young children. As the educational properties of ISCED 0 programmes can be difficult to assess directly, several criteria are used to come up with a technical definition. For a programme to be reported as ISCED level 0 it must have: adequate intentional educational properties; be delivered by qualified staff members; take place in an institutionalised setting; meet a minimum intensity/duration; and be targeted at children from age 0 until entry into ISCED level 1 (OECD, 2016a).

Programmes classified at ISCED level 0 may be referred to in many ways nationally, for example: early childhood education and development, play school, reception, pre-primary, pre-school, *Kindergarten*, *Kita*, *Krippe* or *educación inicial*. For programmes provided in *crèches*, daycare centres, private homes, nurseries, *Tagespflege* or *guarderías*, it is important to ensure that they meet the ISCED level 0 classification criteria specified in ISCED 2011.

In ISCED 2011, programmes are sub-classified into two categories depending on age and the level of complexity of the educational content: early childhood educational development (ISCED 01) and pre-primary education (ISCED 02). ISCED 01 programmes are generally designed for children younger than 3 (OECD, 2016). This is a new category not covered by ISCED 1997. ISCED 02 is designed for children from age 3 years to the start of primary education. It corresponds exactly to level 0 in ISCED 1997.

The comparability of programmes at ISCED level 0 depends on each country's ability to report data according to the standard international definition. Early childhood programmes that are offered in some countries do not necessarily meet the criteria or definition of ISCED 01. This is the case of Belgium (except in the Flemish Community), the Czech Republic, France, Ireland, Italy, Japan, Luxembourg, the Netherlands, Poland, Portugal, the Slovak Republic, Switzerland and the United States. On the other hand, the coverage of ISCED 02 (pre-primary education) is larger, with 32 countries reporting data on enrolment rates at ages 3 and 4. Because of these differences, caution is needed when comparing available data on ISCED 01 drawn from *Education at a Glance*.

The definition of ECEC in the OECD's *Starting Strong* series differs from the ISCED 2011 definition. The OECD definition states that "the term early childhood education and care (ECEC) includes all arrangements providing care and education for children under compulsory school age, regardless of setting, funding, opening hours or programme content" (OECD, 2001). This means that settings considered an integral part of countries' ECEC systems, but not covered by the ISCED classification, still fall under the terminology of ECEC.

Data reported in *Education at a Glance 2016*, and presented here as ISCED level 0, use the ISCED 2011 classification (Figures 1, 2, 3, 4 and 6). PISA 2012 uses the ISCED 1997 classification (Figure 7). The OECD Family Database definition of "formal" childcare among children aged 0-2 years includes centre-based services, organised day care, pre-school and professional child-minders (Figure 5).

Because of these differences in definitions, caution is needed when comparing available data.

Sources: OECD (2016), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2016-en>; OECD (2001), *Starting Strong I: Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264192829-en>.

Box 2. Early childhood educational reform in Chile

In Chile there is a long-term commitment to ECE, which has been strengthened by the central focus of ECE as part of the current education reform. In this context, Chile is developing a comprehensive policy for enhancing early childhood education institutionalisation, which will result in the implementation of effective structures and regulatory frameworks that aim to guarantee the quality of early childhood education in nurseries, childcare, pre-k, and kindergarten.

Educational reform is structured around three key issues: institutionalisation, quality, and coverage of the early childhood education system. It is intended to positively benefit children under 6 years old, parents and family members, early childhood educators and teaching assistants, among others. The commitment and contributions of these stakeholders are key to this endeavour.

In May 2015, Chile enacted two laws to provide a higher level of organisation of ECE and set higher standards for its provision: Law no. 20 835 establishes the Under-Secretariat of Early Childhood Education and the Intendancy of Early Childhood Education; and Law no. 20 832 creates the Operation Licensing Framework of Early Childhood Education establishments.

Law no. 20835 gives the Ministry of Education, through the Under-Secretariat of Early Childhood Education, responsibility for the political and technical co-ordination of ECE. This new institutional structure allows the Ministry to organise the functions of policy design, control, evaluation, and provision of services under specialised agencies. The Under-Secretariat of Early Childhood Education is in charge of designing, co-ordinating, and managing public policies and educational programmes for the entire level (0 to 6 years).

Regarding the quality of ECE, the Under-Secretariat has developed a plan that includes the design and implementation of four central components: 1) updated National ECE Curriculum Guidelines (*Bases Curriculares de Educación Parvularia*); 2) National Framework for Good Teaching in Early Childhood Education (*Marco para la Buena Enseñanza*); 3) National Framework of Good Leadership in Early Childhood Education (*Marco para la Buena Dirección*); and 4) Standards to promote Learning Opportunities (*Estándares Indicativos de Desempeño*).

Early childhood educators who work in publicly funded ECE centres are part of the National System of Professional Development (*Sistema de Desarrollo Profesional Docente*), which came into being in early 2016. This system strengthens the role of educators through improvements in: 1) teacher preparation; 2) in-service training; 3) support and mentoring; and 4) formative assessments.

There has been a significant increase in the number of ECE centres that are designed and built with high quality standards. In 2015, a total of 412 new ECE centres began providing services to children. This translates into the operation of 500 new nurseries and 182 childcare classrooms, which constitutes 14 223 new vacancies throughout the country. The strategy of increasing coverage aims to create 35 000 new vacancies in nurseries and childcare centres (0-4) during 2016-2017.

The main goal of these efforts is to achieve educational standards similar to OECD countries and support increased access to quality learning for millions of children in Chile. María Isabel Díaz Pérez, the first authority appointed as Under-Secretary of Early Childhood Education in Chile, said, “the value and advocacy of public education, and quality education, are part of a tradition in ECE in Chile.” Today, ECE gains prominence under the national education reform undertaken by the Government of President Michelle Bachelet. This educational reform involves a profound transformation by establishing public education not just as a social right, but as a guarantee of access to the highest quality teaching.

Funding of early childhood education and care services

The level of governance responsible for early childhood education and care services differs according to the area concerned, such as funding of settings, and also across countries. In Chile all responsibilities, including standard setting, curriculum development, monitoring and notably funding of the early childhood and care system, are at the national level. The Ministry of Public Education, through the Under-Secretariat of Early Childhood Education, is the highest level of authority in charge of ECEC. In line with Chile, more and more countries have moved towards an integrated ECEC system where one Ministry is in charge of ECEC (OECD, 2015a, Table 1.2).

Above-average expenditure on early childhood education as a percentage of GDP

The financial investment in ECEC settings and equipment is a key requirement for the development of good and high quality learning environments, and indicates that political priority is being given to the care and education of young children. Sustainable public funding is essential to recruit competent and qualified staff, ensure the quality of educational programmes, and promote early development.

In Chile, public and private expenditure on ECEC institutions (ISCED 0) represented 1.3% of GDP in 2013, significantly higher than the OECD average of 0.8% (OECD, 2016a, Table C2.3). There has been a marked increase in ECEC expenditure placing Chile among the high OECD spenders together with Denmark, Iceland, Israel, Norway, Slovenia and Sweden — countries that spend 1.0% or more of their GDP on ECEC (ISCED 0) (OECD, 2016a, Table C2.3). Of the 1.3% of GDP spent in Chile, 0.3% is spent on early childhood educational development (ISCED 01) and 1.0% on pre-primary education (ISCED 02) (OECD, 2016a).

Expenditure per student in early childhood education is below the average of OECD countries

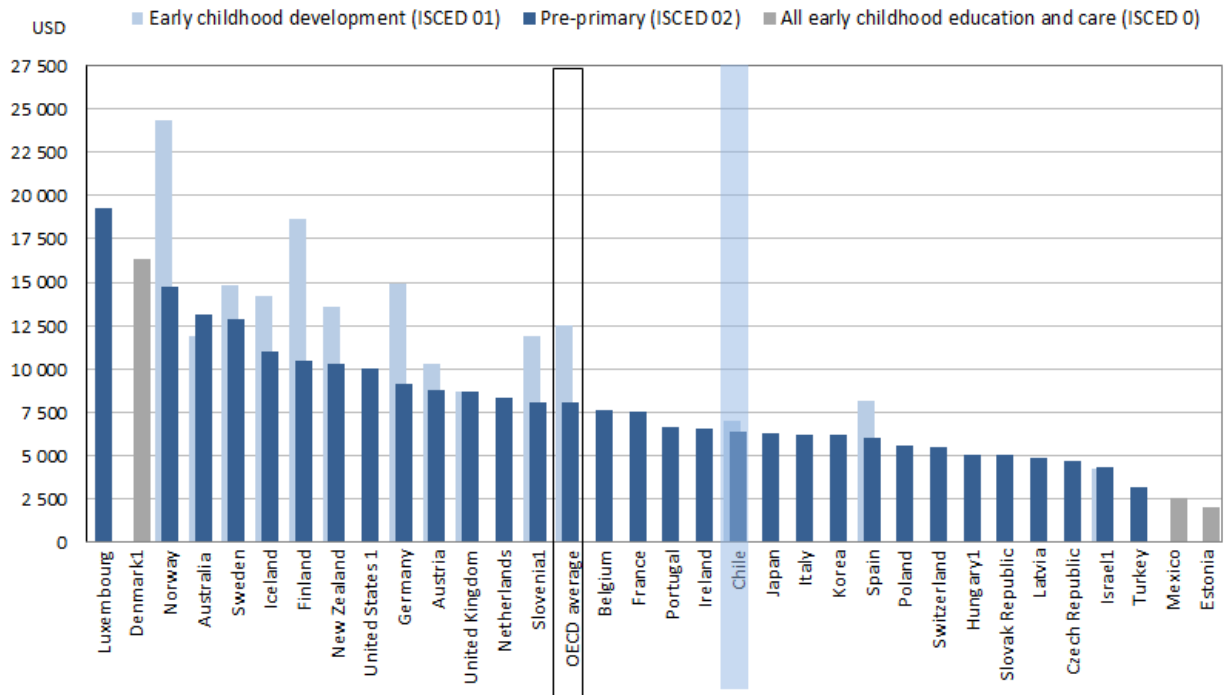
Expenditure per student in early childhood educational development (ISCED 01) in Chile was USD 7 032, markedly lower than the OECD average of USD 12 501 in 2013. Similarly, expenditure per student in pre-primary education (ISCED 02) in Chile was USD 6 408, which was also lower than the average of USD 8 070 across OECD countries with available data (see Figure 1).

Cross-country differences in the share of spending on early childhood education and care (ISCED 0) in GDP and in expenditure per student explain, at least partly, the differences in enrolment rates and in children-to-teacher ratios between countries. For instance, countries with higher expenditure per student tend to have higher enrolment rates or/and lower children to teaching staff ratio compared to the OECD average. The level of expenditure per student also varies between countries depending on services' fees, the cost of education, the level of wealth of the country, and the coverage by private pre-primary structures.

The share of private funding in ECEC is slightly below the OECD average

Early childhood education and care services (like all other levels of education) are also funded by private sources³, mainly through fees paid by parents. Limited comparable data regarding the services for young children in childcare mean that the extent of total private funding in childcare cannot be analysed. In Chile, private funding of ECEC (ISCED 0) was 15% of the share spent on ECEC in 2013, which was slightly below the share of private funding spent in a typical OECD country (19%). Similarly, the share of private funding in pre-primary education (ISCED 02) represented 0.15% of GDP in 2013 in Chile (the OECD average was 0.11% of GDP), and 15% of the total funding of pre-primary education (ISCED 02), which was slightly below the average proportion of private funding among OECD countries (17%) (Figure 2) (OECD 2016, Table C2.3).

Figure 1. Annual expenditure per student by educational institutions for all services (2013)

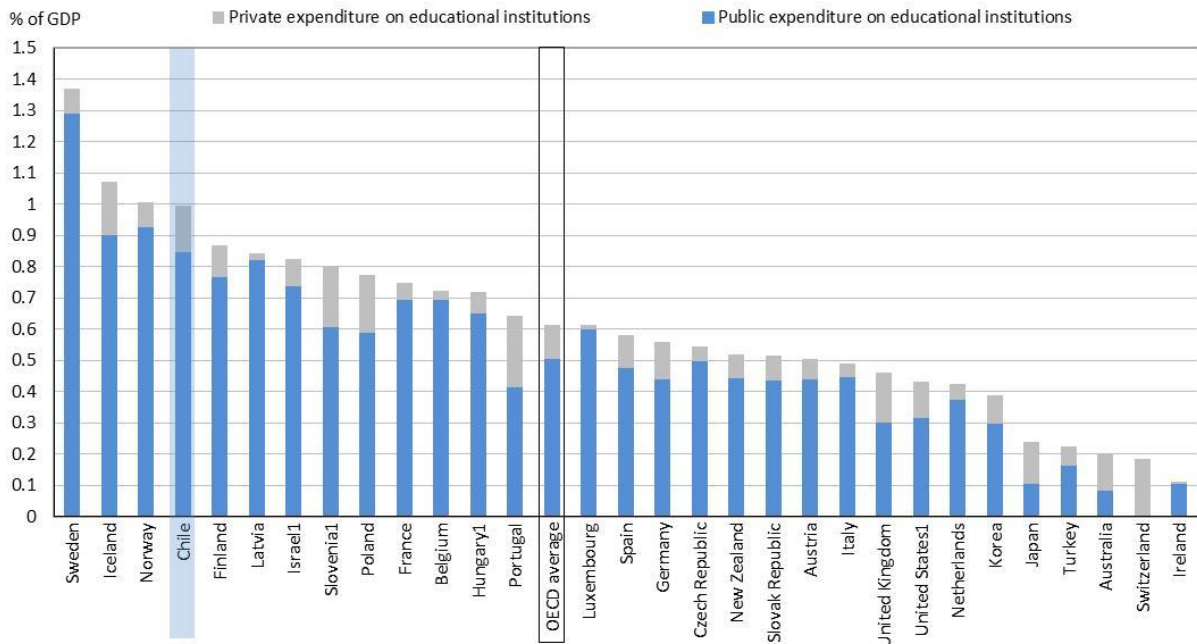


Notes: Countries are ranked in descending order of annual expenditure per student by educational institutions for pre-primary education.

1. Includes some expenditure on childcare.

Source: OECD (2016), *Education at a Glance 2016: OECD Indicators*, Table C2.3, <http://dx.doi.org/10.1787/888933398316>.

Figure 2. Distribution of public and private expenditure on pre-primary educational institutions (2013)



Notes: Countries are ranked in descending order of public and private expenditure on educational institutions (2012).

1. Includes some expenditure on childcare.

Source: OECD (2016), *Education at a Glance 2016: OECD Indicators*, Table C2.3, <http://dx.doi.org/10.1787/888933398316>.

Quality of early childhood education and care services

Curriculum frameworks can play a pivotal role in ensuring the quality of ECEC services. In Chile, a national curriculum for early childhood education is in place for children aged 0 to 6 years. Some countries (e.g. Finland, many German *Länder* [federal state], Mexico, Sweden, England and Scotland) have integrated curriculum frameworks that cover both ECEC and primary school aged children, which may foster quality of ECEC services across age groups (OECD, 2015a, Table 1.3).

The number of pupils per teacher in pre-primary education is comparatively high

The pupil-to-staff ratio is an important indicator of the resources invested in early education and childcare, and also of the quality of these services. A low pupil-to-staff ratio impacts staff working conditions, alongside other factors such as reasonable hours or workload and salary levels. These affect job satisfaction and staff retention, and through this, contribute to the quality of early childhood education and care services.

Regulations of pupils-to-teaching staff in Chile require that in pre-kindergarten (programme classified as ISCED 02) there is 1 early childhood educator and 1 pre-school technician for every 35 children. However, if there are fewer than 11 pupils the pre-school technician is not required. For kindergarten (programme also classified as ISCED 02), regulations state that there should be 1 early childhood educator and 1 pre-school technician for every 45 children. If there are fewer than 16 pupils the pre-school technician is not required (Education Decree n° 315).

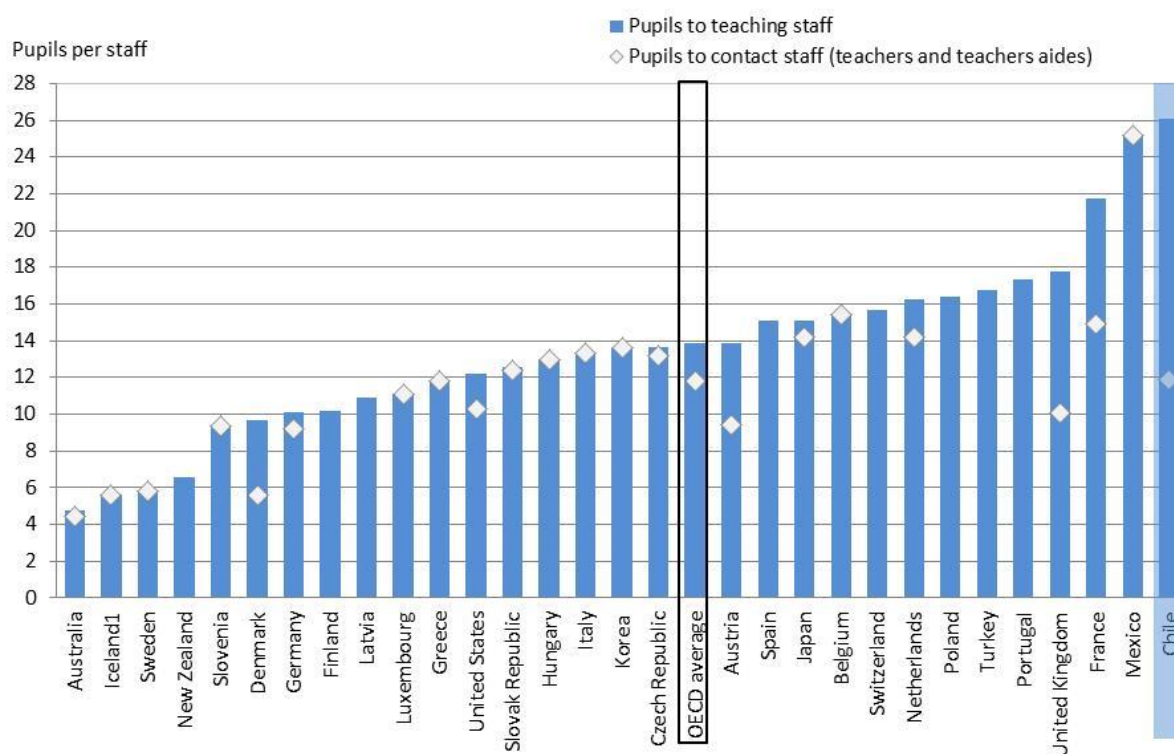
In pre-primary education (ISCED 02), there were about 26 children per teacher in 2014 in Chile, which was almost twice as many children per teaching staff as the OECD average of 14 children per teacher (see Figure 3). However, at the pre-primary level (ISCED 02), some auxiliary staff (support staff for teachers and educators) also work directly with children. Across the OECD countries that have available data, eight countries, including Chile, reported better ratios for pupils-to-contact staff (teaching and auxiliary staff) than for teaching staff only: an average of 12 pupils per contact staff compared to 14 per teaching staff. In Chile, the number of pupils per contact staff was 12 in 2014, which was significantly lower than the 26 children per teaching staff (see Figure 2). In early childhood educational development programmes (ISCED 01) there were 13 Chilean children per teaching staff, and 5 children per contact staff in 2014 (OECD, 2016a, Table C2.2).

Pre-primary teachers have a high level of educational degree and a higher than average annual number of teaching hours

In OECD countries, the duration of initial teacher training varies more in pre-primary education (ISCED 02) than at any other level of education: from two years for basic certification in Korea and Japan to five years in Austria, France, Iceland, Italy and Chile. A formal induction programme for new teachers is offered in *Salas Cuna* and *Jardines Infantiles* in Chile. Also, the National System of Professional Development which came into being on early 2016, established mandatory mentoring period during the first year of service for pre-k and kinder teachers (ISCED 02).

The annual number of teaching hours in Chile is above the average among OECD countries: pre-primary teachers (ISCED 02) annually spent 1 146 hours on teaching in 2014, which was over 140 hours more than the OECD average of 1 005 hours (OECD, 2016a, Table D4.1). However, with 38 weeks of teaching, pre-primary teachers teach, on average, two weeks less than the average across OECD countries (40 weeks). Pre-primary teachers in Chile can spend more than one third of their total annual statutory working time on tasks other than teaching at school, for example, on the preparation of lessons, teamwork and dialogue with colleagues or participation in school management (OECD, 2014, Table D4.4).

Figure 3. Ratio of children-to-teaching staff in pre-primary education (2014)



Notes: Countries are ranked in descending order of the pupil-to-teaching-staff in pre-primary education. Data on "pupils for contact staff" is missing for Finland, Latvia, New Zealand, Spain, Switzerland, Poland, Portugal and Turkey. 1. Year of reference is 2013 instead of 2014.

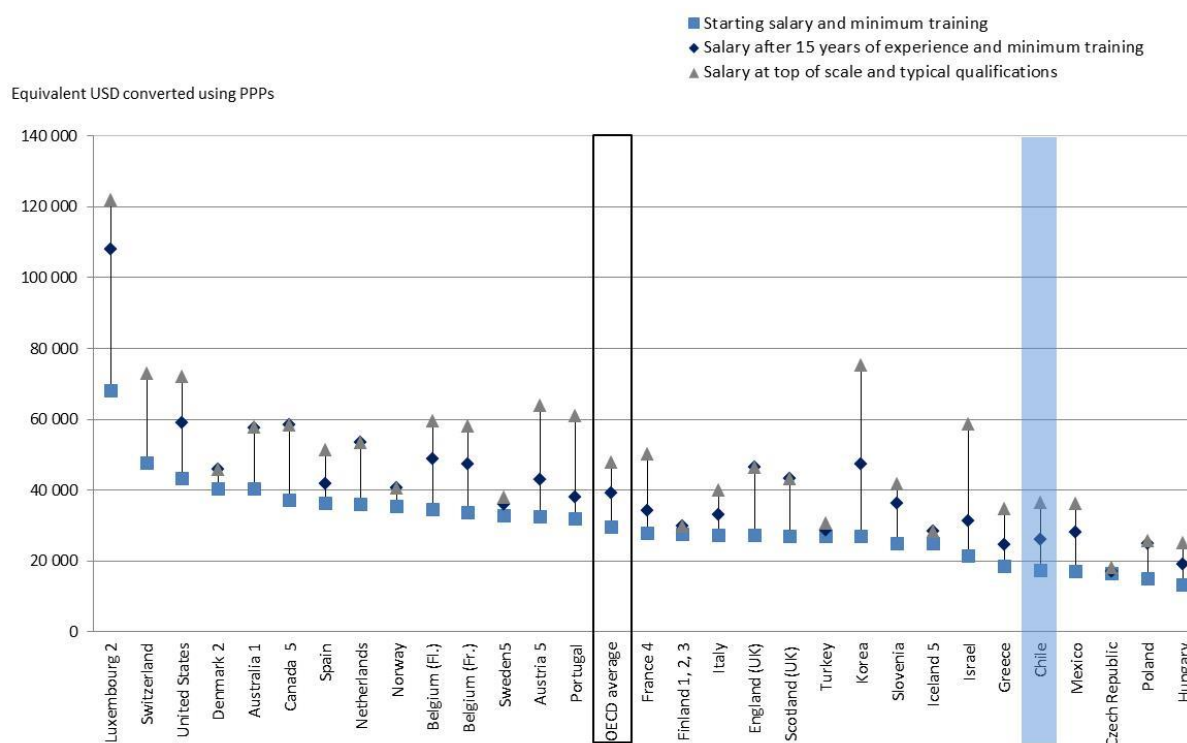
Source: OECD (2016), *Education at a Glance 2016: OECD Indicators*, Table C2.2, <http://dx.doi.org/10.1787/888933398305>.

Salaries of pre-primary teachers are below the OECD average, both in absolute and relative terms

In 2014, the statutory salary of pre-primary teachers (ISCED 02) in Chile was USD 17 250 for beginning teachers, significantly lower than the OECD average of USD 29 494. Those with 10 years of experience earned USD 23 199 in Chile compared to an OECD average of USD 36 491, and those with 15 years of experience earned USD 26 048 compared to an OECD average of USD 39 245. The statutory salary at the top of the scale is about 20% lower than the average top salary in OECD countries: USD 36 457 in Chile compared to USD 47 826 on average across the OECD (see Figure 4). The average salary of pre-primary teachers, including bonuses and allowances paid to teachers, was around 30% below the OECD average: USD 26 316 in Chile compared to an OECD average of USD 37 274 in 2014 (OECD, 2016a, Table D3.4).

Figure 4. Pre-primary teacher salaries at different points in their careers (2014)

Annual statutory teachers' salaries, based on typical qualifications, in public institutions, in equivalent USD converted using PPPs



Notes: The definition of teachers' typical qualification is based on a broad concept, including the typical ISCED level of attainment and other criteria. PPP refers to the parity purchasing power.

Countries are ranked in descending order of starting salaries for pre-primary teachers with minimum training.

1. Statutory salaries do not include the part of social security contributions and pension-scheme contributions paid by the employees.

2. Statutory salaries include the part of social security contributions and pension-scheme contributions paid by the employers.

3. Includes data on the majority, i.e. kindergarten teachers only for pre-primary education.

4. Includes average bonuses for overtime hours for lower and upper secondary teachers.

5. Actual base salaries for 2013.

Source: OECD (2016), *Education at a Glance 2016: OECD Indicators*, Table D 3.1a, <http://dx.doi.org/10.1787/888933399015>.

To compare the salary levels and the labour market situation between countries, teacher pay is compared to earnings for similarly-educated workers based on teachers' attainment level (25-64 year-olds who work full time, full year). The salary for teachers in pre-primary education (ISCED 02) in Chile is 70% that of workers with tertiary education, which is slightly below the OECD average of 74% (OECD, 2016a, Table D3.2).

Monitoring of early childhood education and care settings is a common practice

All 24 countries and jurisdictions surveyed for *Starting Strong IV: Monitoring Quality in Early Childhood Education and Care* monitor service and staff quality, but only 21 monitor child development and outcomes. Chile monitors the service quality of all publicly funded early childhood settings, including nurseries, childcare centres, pre-k and kindergartens. Staff quality is also monitored in pre-primary institutions for 4-5 year-olds. The National Board of Kindergartens, the *Junta Nacional de Jardines Infantiles* (JUNJI), assesses the service quality of all public and private kindergartens through annual inspection. This role was recently conferred to the Educational Quality Agency, which is in charge of monitoring all ECEC institutions. Teachers working at municipal schools (pre-kinder and kindergarten [ISCED 02]) are evaluated every four years through the National Evaluating System, which uses a number of different monitoring instruments. In addition, parental surveys, external peer reviews

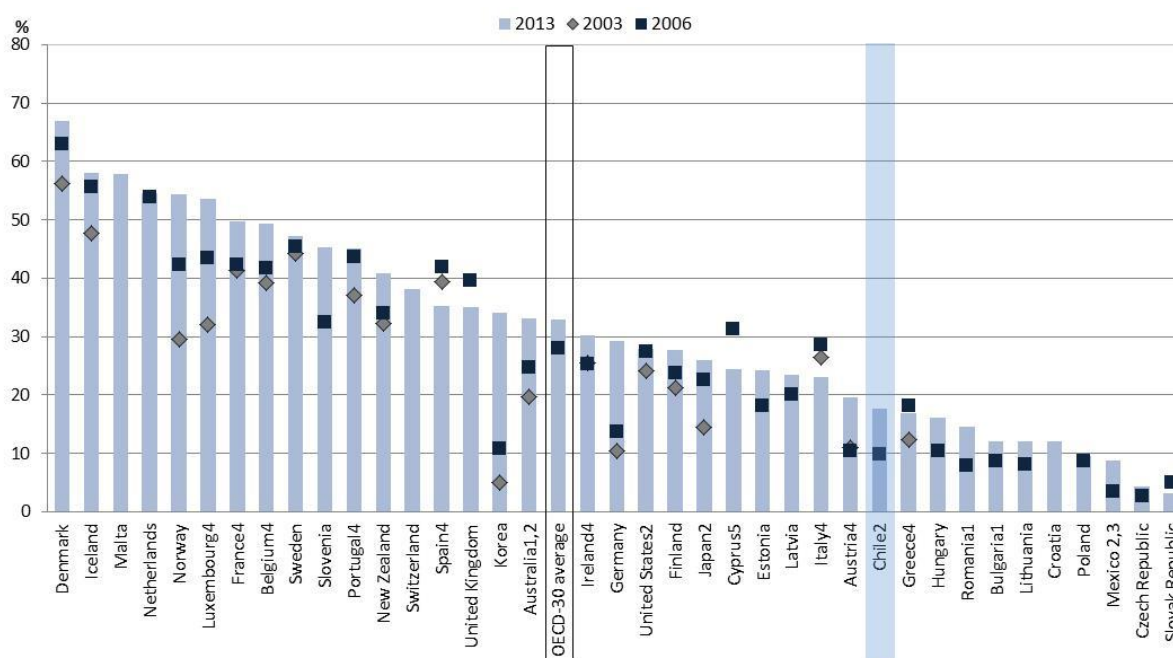
and internal self-assessments are used in some ECEC settings (OECD, 2015a). This is discussed in further detail in Chile's country note on Monitoring Quality in ECEC (OECD, 2016b).

Section 2. Policy outputs

Low participation of 0-2 year olds in formal childcare

In Chile, participation rates of children under the age of 3 in formal childcare arrangements⁴ (ISCED 0 and other registered ECEC services) are lower than in most OECD countries. On average across OECD countries, 33% of 0-2 year-olds attend some form of formal ECEC, while in Chile this figure is only 18%. Participation, however, has increased in Chile in recent years (by 8 percentage points between 2006 and 2011). Denmark, Iceland, Luxembourg, Norway and the Netherlands stand out with participation rates above 50% (see Figure 5).

Figure 5. Participation rates in formal childcare (ISCED 0 and other registered ECEC services) among 0-2 year-olds (2003, 2006, 2013)



Notes: Data reflect children in day-care centres and pre-school (both public and private) and those who are cared for by licensed childminders. It excludes informal services provided by relatives, friends or neighbours regardless of whether or not the service is paid for.

Countries are ranked in descending order of the percentage of children under 3 years of age in formal childcare.

1. 2006 data for Australia refer to 2005, and for Bulgaria and Romania to 2007.

2. 2013 data for Japan refer to 2010, and for Australia, Chile, Mexico, and the United States to 2011.

3. Data do not include services provided by the private sector.

4. 2003 data for Austria, Belgium, Luxembourg, France, Greece, Ireland, Italy, and Spain refers to 2004, and for Australia and the United States to 2002.

5. Note 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 recognises 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".

Note by all the European Union Member States of the OECD and the European Commission: The Republic of Cyprus is recognised 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.

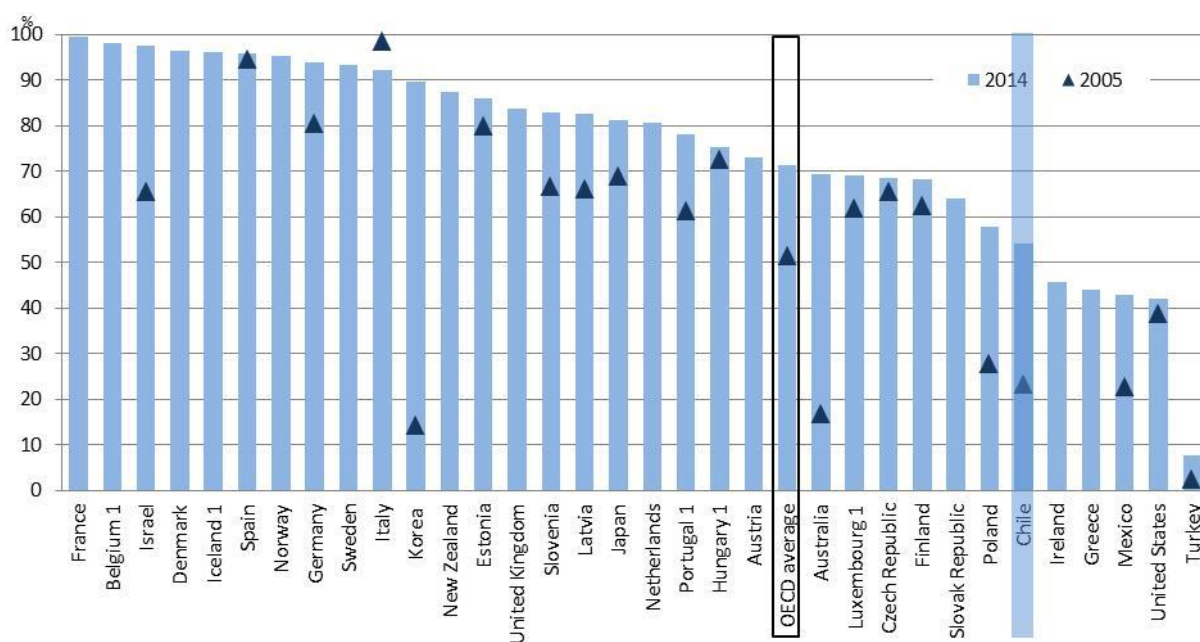
Source: OECD (2015b), *OECD Family Database*, Table PF3.2.A. OECD, Paris, www.oecd.org/social/family/database.

Lower than average participation in early childhood education and care, particularly among younger children

Early childhood education and care (ISCED 0)⁵ is the first stage of organised instruction for many children and can, as such, play an important role in their development. While enrolment in these programmes is usually not mandatory and children can enter these programmes at different ages, the majority of 3-4 year-olds in OECD countries is enrolled in early childhood education (mostly pre-primary education). On average across OECD countries, 7% of 3-year-olds and 86% of 4-year-olds attended ECEC programmes (ISCED 0) in 2014, although this varies widely across countries.

In Chile, about half of all 3-year-olds participated in early childhood educational development programmes (ISCED 01) or pre-primary education (ISCED 02) in 2014 (54%) (see Figure 6). The participation rate of 4-year-olds is higher at 84%. In 11 OECD countries (Belgium, Denmark, France, Germany, Iceland, Israel, Italy, Korea, Norway, Spain and Sweden), at least 90% of 3 and 4-year-olds were enrolled in early childhood education (ISCED 0) in 2014. Most OECD countries achieve full enrolment in ECEC for 5-year-olds. In Chile, 94% of 5-year-olds participate in pre-primary education (OECD, 2016a, Table C2.1).

Figure 6. Enrolment rates at age 3 in early childhood education and care (2005 and 2014)



Notes: Countries are ranked in descending order of the enrolment rates of 3-year-olds in 2013.

2005 data is missing for Austria, Belgium, Denmark, France, Greece, Iceland, Ireland, Latvia, Netherlands, New Zealand, Norway, Slovak Republic, Sweden and United Kingdom.

1. Year of reference 2013 instead of 2014.

Source: OECD (2016), *Education at a Glance 2016: OECD Indicators*, Table C2.1, <http://dx.doi.org/10.1787888933398347>.

Section 3. Policy outcomes

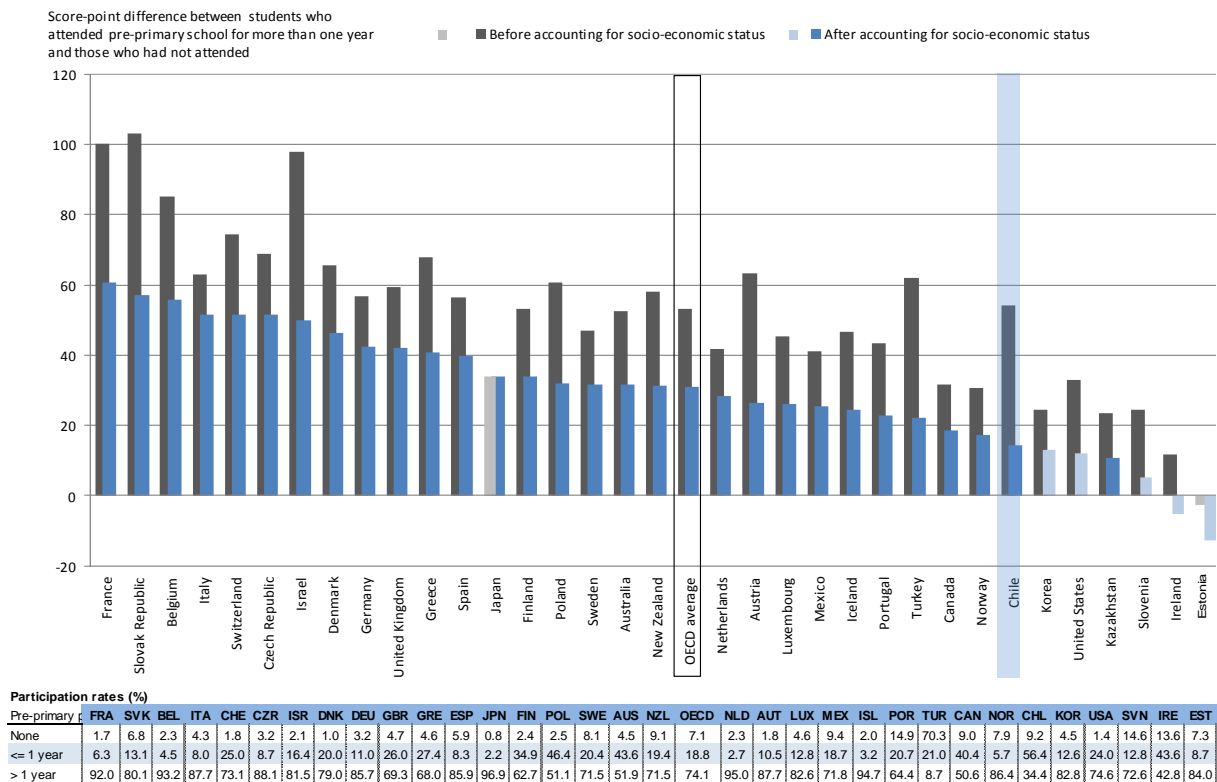
The relationship between attending pre-primary education and mathematics performance of 15-year-olds is positive but below the OECD average

Research in neurosciences has shown that the brain sensitivity of highly important developmental areas, such as emotional control, social skills, language and numeracy, peak in the first three years of a child's life (Gambaro et al., 2014). These findings indicate that the first years of children's life are

crucial for their later development and learning. High quality ECEC can stimulate the development of these skills, which highlights the importance of early development programmes and their level of quality (OECD, 2006, 2011).

A strong start in education through ECEC is associated with higher performance in adolescence. PISA results show that 15-year-olds who attended a pre-primary education programme (ISCED 02) tended to perform better in mathematics than students who did not attend pre-primary education. The percentage of 15-year-olds in Chile who reported not attending pre-primary education in PISA 2012 was slightly above the OECD average (9.2% compared with 7.1% across the OECD, see Figure 7). Notably, children from a lower socio-economic background and in socio-economically disadvantaged schools were less likely to have participated in pre-primary education. Nevertheless, the benefits associated with pre-primary education remain statistically significant even after accounting for students’ socio-economic background. In Chile, the difference in PISA mathematics scores between 15-year-old students who had attended more than one year of pre-primary education and those who had not was 14 score points after accounting for socio-economic background – the equivalent of one-third of a year of formal schooling⁶ (well below the OECD average difference of 31 score points). Although this difference in mathematics performance is relatively small, it is statistically significant (see Figure 7).

Figure 7. Difference in mathematics performance of 15-year-olds, by attendance in a pre-primary education programme (2012)



Notes: Score-point differences that are statistically significant are marked in a darker tone. Countries and economies are ranked in descending order of the score-point difference in mathematics performance between students who reported that they had attended pre-primary education (ISCED 0) for more than one year and those who had not attended pre-primary education, after accounting for socio-economic status.

Source: OECD (2013a), *PISA 2012 Results: Excellence through Equity (Volume II): Giving Every Student the Chance to Succeed*. Figure II.4.11, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264201132-en>.

PISA data also shows that the correlation between enrolment in pre-primary education and performance at the age of 15 is generally stronger in education systems where participation in pre-primary education lasts more than one year, and the link is more pronounced in settings where the student-to-teaching-staff ratio and public expenditure per child are higher (OECD, 2013a). In other words: input policies, such as the student-to-teaching-staff ratio, may be associated with learning outcomes. Despite increased participation and public investment in early childhood education and care services in OECD countries, little comparative data exists to determine under what conditions ECEC services are most beneficial for children, and what aspects are the most beneficial to the child. The OECD is developing a study that will provide information on the factors that support quality and equity in the early years (see Box 3).

Box 3: The development of international data on quality in early education and care

The OECD programme of work on ECEC includes a series of projects to develop the extent of available data on ECEC. These include:

The TALIS Starting Strong Survey: is an international survey of ECEC staff and the quality of the learning and well-being environment in different ECEC settings across OECD member and non-member economies. The objective is to collect data on staff characteristics, pre-service and in-service education, pedagogical practices and beliefs, organisation and management, and working conditions to give countries an internationally framed assessment of what actually happens in their ECEC settings, i.e. the quality of the learning and well-being environment children experience (instrument development and pilot study in 2016, field trial in 2017, main study in 2018 and reporting in 2019).

The International Early Learning (for Child Well-being) Study seeks to provide reliable, comparative information on the social, emotional and cognitive development of children to assist countries to improve children's outcomes. It will measure children's early learning outcomes, at approximately five years of age, in the context of their ECEC experiences and home environments. The study will include a child assessment component as well as a parent questionnaire to gather information about the home learning environment. The study will be conducted in 3-6 countries from 2016 to 2019. Results on the study will be released in 2020.

A thematic study on transitions from ECEC to primary school will analyse country policies and practices in stimulating quality transitions from ECEC to primary education. This study will be based on existing literature and country background notes, which will form the basis of a comparative analytical report in 2017.

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<p>Questions can be directed to:</p> <p>Miho Taguma, Directorate for Education and Skills Email: Miho.Taguma@oecd.org</p>	<p>Country note author: Simone Bloem, independent consultant</p> <p>Country note collaborators OECD: Maria Huerta, Eric Charbonnier, Etienne Albiser, Mernie Graziotin, Sophie Limoges, Camilla Lorentzen, Rachel Linden and Victoria Liberatore.</p> <p>Country note collaborators Chile: María Isabel Díaz, Victoria Parra, Ignacio Fernández, Felipe Godoy, Rodrigo Castillo, Carla Guazzini and David Contreras</p>
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NOTES:

1. Targeted legal entitlement refers to a statutory duty for ECEC providers to secure (publicly subsidised) ECEC provision for all children living in a catchment area who fall under certain categories. These categories can be based on various aspects, including employment and the socio-economic or family status of their parents. In Chile, the legal entitlement to a place for young children is based on low income.
2. Universal legal entitlement refers to a statutory duty for ECEC providers to secure (publicly subsidised) ECEC provision for all children living in a catchment area whose parents, regardless of their employment, socio-economic or family status, require an ECEC place.
3. Private sources include households and other private entities, such as private businesses and non-profit organisations (e.g., religious organisations, charitable organisations, and business and labour associations).
4. The OECD Family Database definition of “formal” childcare among children aged 0-2 years includes centre-based services, organised day care, pre-school and professional child-minders (OECD, 2015b).
5. Early childhood education refers to programmes classified as ISCED 01 (early childhood educational development) and ISCED 02 (pre-primary education) depending on the age of the child (see Box 2). In Chile, 5% of 3-year-olds were registered as attending an ISCED 01 programme and 46% an ISCED 02 programme. On the other hand, 4-year-olds and 5-year-olds were all attending an ISCED 02 (pre-primary) programme.
6. 39 score points in mathematics correspond to the equivalent of one year of formal schooling (OECD, 2013a).

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Table 1. Summary of ECEC indicators, Chile and OECD average

Indicator	Chile	OECD average	Ref. year	Table	Source
Policy inputs					
Expenditure					
Total expenditure on early childhood educational development (ISCED 01) as a percentage of GDP (%)	0.3	0.2	2013	Table C2.3	OECD (2016)
Total expenditure on pre-primary education (ISCED 02) as a percentage of GDP (%)	1.0	0.6	2013	Table C2.3	OECD (2016)
Total expenditure on all early childhood education (ISCED 0) as a percentage of GDP (%)	1.3	0.8	2013	Table C2.3	OECD (2016)
Proportion of total expenditure on early childhood educational development (ISCED 01) from public sources (%)	86.5	68.6	2013	Table C2.3	OECD (2016)
Proportion of total expenditure on pre-primary education (ISCED 02) from public sources (%)	85.1	82.9	2013	Table C2.3	OECD (2016)
Proportion of total expenditure on early childhood education (ISCED 01 & ISCED 02) from public sources (%)	85.4	81.2	2013	Table C2.3	OECD (2016)
Annual expenditure per student in pre-primary education (in USD)	6 408	8 070	2013	Table C2.3	OECD (2016)
Quality of early childhood education and care services					
Ratio of pupils to teaching staff (in full-time equivalents) (ISCED 02)	26	14	2014	Table C2.2	OECD (2016)
Ratio of pupils to contact staff (teachers and teachers' aides) (in full-time equivalents) (ISCED 02)	12	12	2014	Table C2.2	OECD (2016)
Teachers' salaries					
Annual starting salary, typical training of pre-primary teachers in public institutions (in USD)	17 250	29 494	2014	Table D3.1a	OECD (2016)
Annual salary after 10 years of experience, typical training of pre-primary teachers in public institutions (in USD)	23 199	36 491	2014	Table D3.1a	OECD (2016)
Annual salary after 15 years of experience, typical training of pre-primary teachers in public institutions (in USD)	26 048	39 245	2014	Table D3.1a	OECD (2016)
Annual salary at top of scale, typical training of pre-primary teachers in public institutions (in USD)	36 457	47 826	2014	Table D3.1a	OECD (2016)
Pre-primary teachers' salaries relative to earnings for full-time, full-year with tertiary-education workers based on teachers' attainment level (25-64 years-old) (ratio)	0.70	0.74	2014	Table D3.2a	OECD (2016)
Teachers' characteristics					
Total duration of initial pre-primary teacher education (in years)	5	m	2013	Table D6.1a	OECD (2014)
Annual net teaching time of pre-primary teachers (in hours)	1146	1005	2014	Table D4.1	OECD (2016)
Number of annual days of teaching (in days)	183	190	2014	Table D4.1	OECD (2016)

Table 1. Summary of ECEC indicators, Chile and OECD average (continued)

Indicator	Chile	OECD average	Ref. year	Table	Source
Policy outputs					
Participation in early childhood education and care services					
Participation rate in formal care and pre-school services for children under 3 years (%)	18	33	2013	Chart PF3.2.A	OECD (2015b)
Participation rate in formal care and pre-school services for children under 3 years, full-time equivalent (%)	m	35	2013	Chart PF3.2.B	OECD (2015b)
Average weekly hours in childcare among children under 3 years of age (in hours per week)	m	30	2013	Chart PF3.2.B	OECD (2015b)
Participation rates for 3-year-olds in early childhood education (ISCED 0) (%)	54	71	2014	Table C2.1	OECD (2016)
Participation rates for 4-year-olds in pre-primary education (ISCED 02) (%)	84	85	2014	Table C2.1	OECD (2016)
Participation rates for 5-year olds in pre-primary and primary education (ISCED 02 and ISCED 1) (%)	94	95	2014	Table C2.1	OECD (2016)
Policy outcomes					
Average mathematics performance of students with					
No pre-primary education attendance (score points)	382	451	2012	Table II.4.12	OECD (2013)
Pre-primary education attendance for one year or less (score points)	423	475	2012	Table II.4.12	OECD (2013)
Pre-primary education attendance for more than one year (score points)	436	504	2012	Table II.4.12	OECD (2013)
Difference in mathematics performance between students (after accounting for students' economic, social and cultural status)					
Difference between those who reported having attended pre-primary school for one year or less and those who had not attended pre-primary education (score points)	19	15	2012	Table II.4.12	OECD (2013)
Difference between those who reported having attended pre-primary school for more than one year and those who had not attended pre-primary education (score points)	14	31	2012	Table II.4.12	OECD (2013)

Notes: a - data are not applicable because the category does not apply; m – data are not available.