OECD

Starting Strong

Reducing Inequalities by Investing in Early Childhood Education and Care

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OECD

BETTER POLICIES FOR BETTER LIVES

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Preface

Far too often, children miss out on quality Early Childhood Education and Care (ECEC). Cultural barriers and a lack of information limit enrolment, while some families simply cannot afford it. The data show that vulnerable children are most affected, with substantial socio-economic gaps in ECEC participation in most countries, especially for children aged 0 to 2. In eight out of 28 OECD countries, these gaps have widened for children aged 3 to 5. What is more, disadvantaged children often receive lower-quality ECEC services. Evidence suggests that overall quality is only improving in a handful of cases. Many OECD countries can, and should, do better.

The importance of ECEC cannot be overstated. It is a cost-effective way to close achievement gaps before they widen and become entrenched. Unlike interventions aimed at addressing inequalities later in life, high-quality ECEC promotes the development of foundational skills like language, literacy and numeracy, essential for later success. Early years policies, if co-ordinated and evidence-based, can reduce the need for expensive remedial education and social services in the future.

In the past 20 years, countries have increased funding and improved ECEC policies. Enrolment rates are up, and many countries have adopted research-informed curriculums that build on play to foster child development and well-being. Children who attend high-quality ECEC are more likely to succeed in school, graduate and secure good jobs. They are less likely to engage in criminal activities or rely on social welfare. The return on investment is substantial. For every dollar, yen or euro spent on high-quality ECEC, society saves much more in future costs – and supports happy childhoods.

Yet, despite these benefits, many children are left behind. OECD data show large socio-economic gaps in maths scores for 15-year-olds. Only two OECD countries narrowed these gaps between 2015 and 2022. This is, at least partly, a hangover from ECEC as, in some countries, the socio-economic gaps in early years participation are particularly stark. Children from low-income families are less likely to attend ECEC programmes. Even when they do, the quality of services they receive is often inferior. This perpetuates a cycle of disadvantage that is hard and costly to break.

The reasons for these gaps in enrolment and quality are complex. In some countries, ECEC is prohibitively expensive. In others, there are not enough high-quality programmes available. Cultural factors also play a role. In some communities, there is a lack of awareness about the importance of ECEC. In others, the sector is fragmented. Across the OECD, public investment in early years education and care is low compared to other levels of education, and budget constraints are tight. Staff shortages and lack of quality training are often an issue.

The OECD has responded to this situation by creating a policy roadmap, outlined in this report Reducing Inequalities by Investing in Early Childhood Education and Care. There are numerous factors to consider, but two stand out.

First, countries need to combine universal and targeted policy approaches, which reach everyone but are aimed at the most disadvantaged. This includes additional support for children living in poverty, with special

needs, with language barriers or facing other challenges. Policymakers should focus on cost-effective policies like evidence-based curriculums, high-quality staff training and targeted funding allocations. Vulnerable children should also be supported with specialised staff and subsidies for low-income families.

Second, countries must develop a cross-sectoral approach. Fragmented early years services complicate access for families. Governments need integrated early education, health and social services with common goals to ensure investments support vulnerable children and have a lasting impact. The role of parents also cannot be ignored. ECEC programmes must work in partnership with parents, including giving them information and resources to support children's learning at home.

The stakes are high. At the moment, children are born with varying opportunities to develop and learn, leading to lifelong inequalities. As communities become increasingly diverse, new forms of mutual understanding and solidarity must emerge. Ensuring strong education pathways for all is crucial for building cohesive societies and fostering economic growth.

Governments should act now and take a more comprehensive approach to their early years policies to better support children and families, and give a real boost to those who need it the most. Investing in the early years is not just a moral imperative; it is an economic and social one. The cost of inaction is too high.

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Special Advisor on Education Policy to the OECD Secretary-General

Foreword

The OECD Starting Strong series provides an international comparative perspective on Early Childhood Education and Care (ECEC) systems to support countries and jurisdictions in reviewing and designing their policies in this space. As part of the OECD's long-term strategy to develop ECEC, the reviews discuss the strengths and opportunities of different approaches and provide policy orientations to help promote high-quality and equitable ECEC services. The Starting Strong policy reviews are developed in close collaboration with the OECD's Early Childhood Education and Care Network, a unique knowledge-sharing platform for national, regional and local policy makers working on ECEC policies.

This eighth volume of the series, *Reducing Inequalities by Investing in Early Childhood Education and Care*, represents the culmination of the *Translating Research into Policies for Quality and Inclusive Early Childhood Education and Care (ECEC) policy review*, undertaken between 2023 and 2024. Building on a methodology that aims to translate research into policies, the policy review investigated how ECEC policies can be designed to better support equity and inclusion. The policy review benefited from contributions from members of the ECEC Network throughout the duration of the project. A multidisciplinary group of experts were also at the core of the development of the policy review. Annex A lists the members of this group who contributed to project activities.

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Executive summary

Even as a child takes their first breath, the opportunity to develop and learn is profoundly influenced by the context in which they are born. The barriers some children face – socio-economic disadvantage, unstable homes, limited access to education and care – can set the stage for a lifelong journey marked by diminished growth and potential. These issues can lead to gaps in learning that become increasingly difficult to bridge as children grow older.

Part of the problem is that vulnerable children are missing out on vital Early Childhood Education and Care (ECEC). Data show persistent socio-economic gaps in ECEC participation, especially for children aged 0 to 2. In eight out of 28 countries surveyed by the OECD, these gaps have widened for children aged 3 to 5. And despite relatively stable overall ECEC quality in OECD countries, disadvantaged children often receive lower-quality services.

Unlike interventions aimed at addressing inequalities later in life, ECEC is a cost-effective way to close achievement gaps before they widen. Targeted, evidence-based early years policies can reduce the need for expensive remedial education and social services in the future.

This OECD report *Reducing Inequalities by Investing in Early Childhood Education and Care* presents a new policy roadmap to improve equity and inclusion in the sector, and provide lasting benefits for economies and societies. Below are key recommendations that support this roadmap.

Combine universal and targeted approaches

To truly reduce inequalities, governments need a policy mix of universal and targeted approaches. Policies should reach everyone but focus more on the most disadvantaged. This strategy can adapt to different contexts, recognising that most OECD countries face tight public budget constraints:

- **Make ECEC affordable, available and accessible for families facing participation barriers.** This includes providing targeted financial support and improved infrastructure, particularly in areas with many vulnerable children and service shortages. Indirect barriers can be overcome by providing clear and accessible information, simplifying enrolment procedures, and promoting family and community involvement to strengthen trust in ECEC services.

- **Develop curriculum frameworks that value diversity and build foundational skills.** These curricula can address all aspects of child development while including skill-specific components within a play-based approach. They should be adaptable to all ECEC settings. In order to succeed, these frameworks require strong preparation and continuous development for all ECEC staff.

- **Mix universal policies with personalised support for areas with many vulnerable children**. These include improving staff-child ratios, targeted training and having specialised staff to better identify and support children's needs. They can be scaled up according to the level of need. If ECEC is of high quality, intensive participation – such as starting from an earlier age or involving more hours – can be particularly beneficial for vulnerable children. Inclusion can also be supported by attracting a more diverse ECEC workforce.

- **Develop more equitable and efficient funding mechanisms.** A third of children aged 3 to 5, and half of children under 3, are enrolled in private institutions on average across OECD countries. To ensure public funding promotes quality and equitable access, even with private ECEC providers, policies should allocate funding conditionality to some criteria, monitor large for-profit players, and limit family costs. Funding allocation mechanisms should be used to steer recipients towards quality and equity.

Align ECEC with the broader early years policies

ECEC policies are only one aspect to the social inequality puzzle. A cross-sectoral approach, including co-ordination with other social and health services for children and parents, smart funding and governance, is critical to mitigate social inequalities and ensure ECEC benefits last over time.

- **Design flexible ECEC programmes to better support families and foster development.** Child learning can be supported by offering longer operating hours, regular communication and opportunities for parents to connect with staff. Parents of low socio-economic status tend to spend less time on developmental activities with their children, which is a key driver of inequalities. This is due to limited resources and higher exposure to stress rather than different beliefs about child development.

- **Improve co-ordination within different stages of ECEC and schools.** Improved co-ordination would ensure that vulnerable children are exposed to more ambitious and less redundant curricular content. Co-ordination is also critical to support the continuity of pedagogical approaches and ensure they are adapted to a child's age.

- **Develop mechanisms to support co-ordinated services throughout childhood.** This co-ordination should start with prenatal services and continue throughout early childhood and primary school. This would help sustain the benefits from one set of services to another.

- **Consider the development of cross-sector national quality frameworks.** All programme components need to be of high quality to support co-ordinated services while avoiding substitution effects. Integrated service hubs operating under a quality framework can promote awareness and the use of ECEC and other services.

- **Combine investments for a more consistent policy approach.** Total investment in education and families need to remain more stable throughout early childhood. At the moment, many countries see a sharp decline in spending between age 1, coinciding with the end of maternity leave entitlements, and the beginning of pre-primary education (usually around age 3). When possible, public funding for early years policies should be increased to develop a stronger workforce and support the implementation of policies that reduce inequalities.

Infographic 1. The path to ensuring equal opportunities from the early years

A policy roadmap for Early Childhood Education and Care

Many roadblocks need to be tackled

1 All children should have access to early childhood education and care

Gaps in enrolment rates

51% for advantaged children

but only **32%** for disadvantaged children

2 All children should experience meaningful interactions with staff in early childhood settings

Children should develop foundational skills, both cognitive and socio-emotional, and executive functions **but** disadvantaged children often receive services of lower quality

3 Early childhood settings should be inclusive and adapt to the needs and strengths of children

Most OECD countries face significant staff shortages while inclusive and personalised practices require trained staff and extra funding

4 Home and community experiences should also support children's development

However, exposure to early literacy and numeracy activities at home is uneven

54% for advantaged children

34% for disadvantaged children

5 Effective governance, adequate funding and alignment with other early years policies are needed

However, reliance on private expenditure from families is higher in early education than in later stages

Share of private expenditure:

26% in services for children under 3

14% in pre-primary education

5% in primary education

Note: Estimates are averages across OECD countries, and comparisons between groups of children are by socio-economic background

Part I Overview and methodology

1 Early childhood education and care policies to support equity and inclusion: Main findings and policy implications

This chapter presents an overview of the main findings of the Translating Research into Policies for Quality and Inclusive Early Childhood Education and Care project. A policy roadmap for ECEC is proposed to help ensure that public investment in the early years leads to better outcomes for children and has a lasting impact on equity and inclusion. The roadmap has three guiding principles: i) build on research evidence and other countries' experiences to inform the design of ECEC policies; ii) combine universal and targeted approaches strategically; iii) align ECEC with the broader landscape of early years policies. It includes five policy areas critical to promoting equity and inclusion through high-quality ECEC: i) reducing gaps in participation; ii) supporting meaningful interactions between children and ECEC staff; iii) making ECEC inclusive for all children; iv) connecting ECEC services with families, schools and communities; and v) improving governance and funding for early years policies.

Key messages

- Countries should invest more and more strategically in early childhood education and care (ECEC) to improve its overall quality and ensure that the most vulnerable children receive equal access to high-quality ECEC.

- Investing in high-quality ECEC is a cost-effective way to significantly enhance children's cognitive, social and emotional growth, as skills developed early on provide the basis for later development, hence a way to prepare children for their educational journey and maximise the impact of later educational investments. These positive effects are particularly strong for vulnerable children.

- The share of children enrolled in ECEC increased over recent decades. However, socio-economic gaps in participation persist. In 8 of out of 28 countries with available data, the gaps widened as the increase in ECEC enrolment rates was larger among children from advantaged backgrounds than among children from disadvantaged ones.

- Available data, which capture only some features of quality, indicate that the quality of ECEC at the system level has been relatively stable on average across OECD countries. However, children from disadvantaged socio-economic backgrounds are more likely to experience lower levels of quality.

- Gaps in participation and quality in ECEC are a likely factor contributing to growing differences in academic performance between the most socio-economically advantaged and disadvantaged children at ages 10 and 15. Children from disadvantaged backgrounds may start ECEC later or receive ECEC of a lower quality compared to advantaged peers, perpetuating disadvantages that come from the home and neighbourhood environments and can persist throughout their educational journey.

- An OECD policy roadmap, informed by research evidence and other countries' experiences, can help ensure stronger ECEC outcomes and reductions in inequality.

- While most countries face tight budget constraints, a strategic combination of universal and targeted approaches can help level the playing field in ECEC. This combination is compatible with different levels of public investment and can provide high-quality ECEC for all, as well as additional supports for children growing up with more limited resources and opportunities.

- Aligning ECEC with the broader landscape of early years policies can help address the complex interplay between the multiple factors that lead to socio-economic gaps in educational, labour market and social outcomes. This requires that total public investment in education and families remain more stable throughout early childhood (rather than dropping at age 1 and remaining low for children aged 1 to 5).

Introduction

Countries count on their early childhood education and care (ECEC) policies, from birth to primary education, to provide more equal opportunities to children. Over recent decades, ECEC policies have evolved substantially with the expansion of children's enrolment in ECEC, the increased focus put on both care and education, higher public spending and efforts to regulate the sector to strengthen its quality. However, there are still many gaps and immense potential to do more for children at an early age and better compensate for inequalities that families face and that affect children from before birth. With the developments of neurosciences over recent decades, research highlighting the importance of early experiences has proliferated, and the topic has also seen increased interest from economists, sociologists and psychologists. Yet, inequalities persist in the early years and later in life, and ECEC policies often reflect a patchwork of different interests and funding streams.

Building on a methodology that aims to translate research into policies, this report investigates how ECEC policies can be designed to better support equity and inclusion. This chapter summarises the main findings of the Translating Research into Policies for Quality and Inclusive Early Childhood Education and Care project that spanned over 2023-2024 and presents a policy roadmap with country examples that can inform other countries' design of ECEC policies (see Table 1.3 at the end of this Chapter).

Scope and methodology

Inequalities in development and learning opportunities start in the early years

The first years of life are unique, with very rapid development in multiple areas stimulated by multiple factors. Inequalities between children start during the prenatal period and are evident in multiple domains of early development of young children (see Chapter 3). From the early years, some children face higher exposure to family stress, poorer environmental and neighbourhood conditions, and lower access to health services, among others, all of which can limit opportunities for warm and responsive interactions between parents and children. These unfavourable conditions for early development and learning often concentrate and lead to cumulative disadvantage in some families. While poverty is not destiny, research in multiple disciplines consistently shows that children from low socio-economic backgrounds are particularly at risk of facing these conditions. At the other end of the spectrum, high-income and well-educated families are more likely to invest in their children's early development, learning and well-being in multiple ways, accessing a wide range of supports from the prenatal period.

Inequalities of opportunities that start in the early years continue throughout childhood. On average across OECD countries, 12.4% of children lived in relative income poverty in 2021, but rates differ considerably from country to country (Figure 1.1). Between 2011 and 2021, child poverty rates have decreased slightly on average in OECD countries. The cost of childhood disadvantage to the economy in the form of weaker adult outcomes (e.g. labour market) and poor health varies across countries but has been estimated to represent 3.4% of gross domestic product (GDP) annually on average in OECD European countries and 4% in the United States, or 5.4% when other categories such as participation in crime are considered (Clarke et al., 2022[1]). Mitigating childhood disadvantage through a range of policies is therefore a key priority for governments.

Figure 1.1. Relative child poverty rates

Relative income poverty rate for families with children under 18, 2011 (or closest) and 2021 (or latest available)
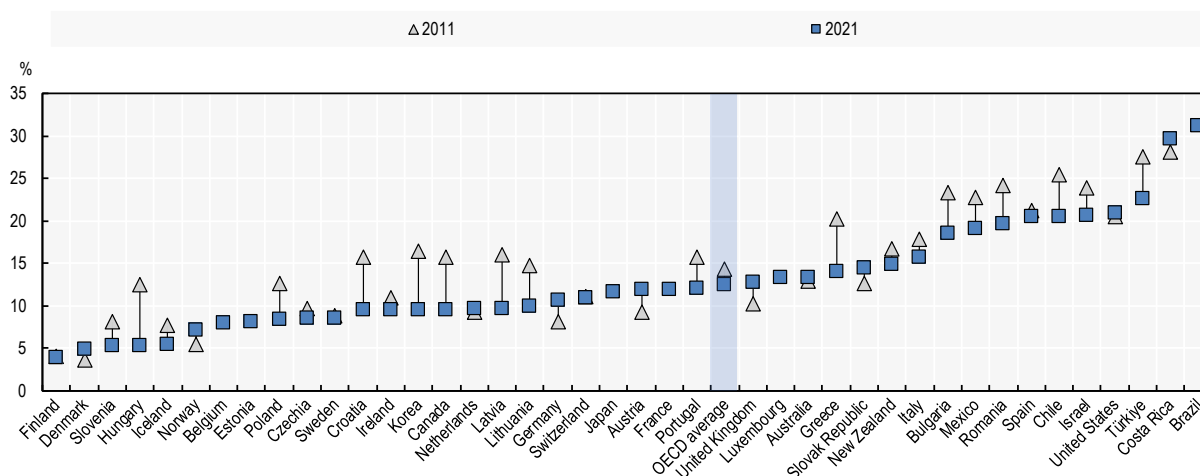
Notes: Data are based on equivalised household disposable income, i.e. income after taxes and transfers adjusted for household size. The poverty threshold is set at 50% of median disposable income in each country. Data refer to 2021 for all countries except Costa Rica (2023); Brazil, Chile, Finland, Korea, Latvia, Mexico, Netherlands, Norway, Sweden, and the United States (2022); Australia, Germany, New Zealand, and Switzerland (2020); Denmark (2019); Iceland (2017). Data refer to 2011 for all countries except Sweden and the United States (2013); Australia and Mexico (2012). Countries are ranked in ascending order by poverty rate in 2021 or latest available year.
Source: OECD (n.d.), *Family Database*, Indicator CO 2.2.B, https://webfs.oecd.org/Els-com/Family_Database/CO_2_2_Child_Poverty.xlsx (accessed on 2 January 2025).

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ECEC policies have the potential to mitigate inequalities

ECEC policies are well positioned to reduce inequalities:

- Participation in high-quality ECEC has been shown to improve children's cognitive and socio-emotional skills in the short- to long-term, while also leading to a range of positive education, labour market and social outcomes later in life, with these effects being stronger for more vulnerable children (see Chapter 8).

- Research indicates that interventions during the first years of life can offset the effects of trauma and deprivation on children's brain development while interventions later in life tend to have a more limited effectiveness (see Chapter 3). This means that the opportunity cost of not investing in ECEC can be large.

- By supporting the development of foundational skills (a combination of cognitive and social-emotional skills, as well as executive function, which support learning across domains) that children need to succeed in subsequent levels of education, ECEC policies set the groundwork for more efficient public investment in education later on and limit the risks for vulnerable children to fall behind in their education pathways (see Chapter 8).

- ECEC policies can support parents' labour market participation and income, and thereby mitigate the risks of poverty, with benefits for children through higher quality of home environments.

- The economic and social returns of investments in ECEC can be reaped over a longer period of time than those of interventions targeting inequalities later in life.

ECEC policies are not only efficient economic and social investments. From an ethical and child's rights perspective, countries also value child well-being in itself and aim to support all young children in enjoying safe, healthy and happy childhoods.

Box 1.1. Definitions of Early Childhood Education and Care used in this report

Early Childhood Education and Care (**ECEC**) refers to education and care for children before the start of primary education. This includes formal regulated settings (e.g. childcare, crèches, kindergarten, nursery or preschool, integrated centre-based ECEC, and regulated home-based care), formal unregulated ones (e.g. nannies) and informal care (e.g. by a relative). Unless specified, the report uses the term "ECEC" for **formal** ECEC only and focuses on **regulated** ECEC, notably in Figures and Tables.

The International Standard Classification of Education (ISCED) is the reference classification for organising education programmes and is also used in this report (see Annex B for more information). **ISCED 0** refers to early childhood programmes that have an intentional education component and aim to develop cognitive, physical and socio-emotional skills necessary for participation in school and society. Programmes at this level target children below the age of entry into primary education and are often differentiated by age, and grouped as follows:

- **ISCED 01** – **Early childhood educational development**: Provides educational content designed for younger children (in the age range of 0 to 2 years).
- **ISCED 02** – **Pre-primary education**: Designed for children from age 3 to the start of primary education.

Designing ECEC policies to support equity and inclusion

While there is evidence that ECEC can mitigate inequalities, positive effects are not found systematically, as they depend on the context and features of ECEC policies (see Chapter 8). The goal of this report is to discuss how countries can design their ECEC policies to better support equity and inclusion. This chapter presents a policy roadmap towards ECEC with a lasting impact on equity and inclusion. This policy roadmap is underpinned by three guiding and transversal principles that can inform the design of ECEC policies, and identifies five key policy areas central to mitigating inequalities in the early years (Figure 1.2). The policy roadmap is discussed throughout this chapter and presented in concise form at its end, together with references to concrete policy examples taken from other sections of the report.

When discussing the potential of ECEC to achieve greater equity and inclusion in society, this report builds on the following key concepts (OECD, 2023[2]):

- **Diversity** refers to children' differences as perceived by themselves and/or by others, which may relate to their socio-economic and immigration status, language, mental and physical ability (the main characteristics specifically considered in this report) as well as race, ethnicity, gender, culture and religion. There is no inferred assumption about whether these different characteristics in themselves represent advantages or disadvantages for children – in some cases they can be associated with a relative lack of resources but in other contexts, they may be seen as an asset that can lead to greater resilience, more knowledge of and openness to other cultures. However, children with these differences or from minority backgrounds are generally **more vulnerable** since they are at risk of disadvantage in education and in life more generally, and hence are the target of equitable and inclusive policies and practices.

Figure 1.2. Guiding principles and policy areas of the policy roadmap
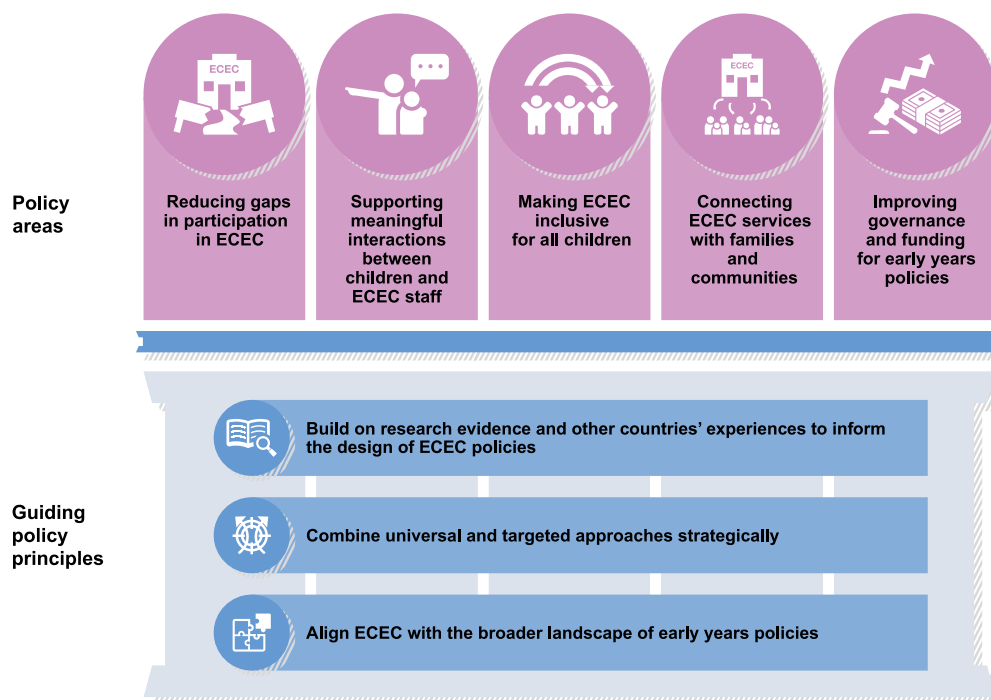
- **Equity** is understood to mean the goal that all children can achieve their potential regardless of their personal or social circumstances. It recognises that all children do not start from the same place and that policies can mitigate these imbalances. The report also refers to **equal opportunity** as everyone having the same chance to thrive, regardless of variations in the circumstances into which they are born. Therefore, an **equitable ECEC system** is one that supports all children to flourish in their learning, development and well-being, including by providing some children with **additional support** to compensate for an uneven distribution of resources and experiences related to their backgrounds.

- **Inclusion** or **inclusive education** encompasses the principles of equity while broadening the focus to recognise and address the different experiences, needs and challenges of diverse and vulnerable groups, and remove barriers to access to quality education for all children. Therefore, an **inclusive ECEC system** is understood as one that offers **quality for all children while respecting their diversity** (which includes their families and communities) and responding to their varying needs and strengths. Inclusion is about adapting the system to fit the child, rather than the other way round. Inclusion is therefore closely associated with individual and collective identities, and with fostering a sense of belonging among children.

Guiding principle 1: Building on research evidence and other countries' experience can inform the design of ECEC policies

Research evidence from many disciplines provides important insights into how policies can tackle inequalities in the early years. For instance, neuroscience and psychology have led to a better understanding of how children develop and learn and the role of their environment, while health and nutrition science have highlighted the connections between children's well-being and their cognitive and socio-emotional development. Sociology and economics have analysed the determinants and costs of intergenerational cycles of poverty. Education sciences are also central to the discussion on supporting equity and inclusion in and through ECEC, placing a particular focus on policy levers such as pedagogy,

curriculum design, and the organisation and leadership of educational settings. This report builds on research from all of these disciplines.

Translating research into policies is a more ambitious task than a literature review. The idea that education policies should build on robust scientific evidence has gained prominence among policymakers, and is already broadly subscribed to in ECEC, building on the widespread attention gained by research on children's early development. However, new evidence often leads to new questions, and the variety of countries' contexts, histories and institutions, as well as their resource constraints, means that translating research into policies involves many context-specific adjustments and trade-offs.

Over two years, from 2023-2024, a group of representatives from OECD member and non-member countries in charge of ECEC policies and a group of experts from multiple disciplines met to discuss how ECEC policies can be updated with recent research evidence to better address the challenges of supporting equity and inclusion through their policies (see Chapter 2 and Infographic 2). This theme emerged after a consultation of OECD member and partner countries in the beginning of 2023 on their ECEC policy priorities. Discussions between the two groups involved presentations of latest findings by experts and of concrete policy initiatives from country representatives. Mirroring this process, this report discusses how some of the most recent research findings from various disciplines can inform ECEC policies, taking into account countries' and ECEC sectors' characteristics. It presents research evidence, statistical indicators and a selection of concrete policy examples.

Supporting quality, equity and inclusion in ECEC

Guiding principle 2: A strategic combination of universal and targeted approaches to ECEC can level the playing field among children

Countries can promote equity and inclusion by adopting a policy mix inspired by the "proportionate universalism" principle, in which actions have a universal reach but are applied with a scale and intensity that is proportionate to the level of disadvantage (Marmot et al., 2010[3]).

This approach aims to combine the benefits of both universal and targeted approaches while limiting their disadvantages and can be adapted to countries' contexts, recognising that currently most OECD countries face tight public budget constraints:

- Programmes targeted to specific groups enable concentrating some resources for vulnerable children, but have limited impact at the aggregate level. In addition, this approach can lead to the risks of stigmatisation and accumulation of disadvantages, for instance if labelling related to programme eligibility leads to children being treated differently in later stages of education, or when recruiting staff becomes more difficult because targeted programmes are perceived as challenging work environments. In contrast, larger shares of children benefit from universal programmes, enhancing the opportunities that these children have to learn from each other and creating positive spill-over effects for vulnerable children. However, universal eligibility means that resources are less concentrated on children who need more support.

- Targeted policies can face challenges in identifying vulnerable children as there is not a one-to-one relationship between the characteristics of children and families that are used for the targeting (e.g. socio-economic status, immigration background) and the risk of vulnerability. These policies might overlook some vulnerable children while possibly profiting children and families who are not their intended beneficiaries. In addition, social policies targeting specific groups can involve non-take-up problems, with individuals not applying for a benefit or service they are eligible for, which limits the reach of welfare and social protection systems. Universal ECEC covering large

percentages of children from a certain age can be combined with specific measures to support the enrolment of vulnerable children.

- A policy mix that provides high-quality ECEC to the benefit of all children, as well as additional support for children growing up with more limited resources and opportunities can support equity while helping to achieve cost-efficiency in a context of limited resources and structural difficulties to expand the sector while maintaining quality, existing in many OECD countries.

Vulnerable children are still less likely to participate in ECEC

In 2022, the enrolment of children in education at age 5 was almost universal in most OECD countries, but enrolment rates were lower at younger ages and varied markedly between countries (Figure 1.3). With evidence showing that the early years play a key role in children's learning and development trajectories, and that learning opportunities in family environments vary widely between children (see Chapter 3), extended participation in ECEC beyond the almost universal year before primary education is a key policy direction to address early inequalities.

Figure 1.3. Enrolment rates in education for 0- 5-year-olds

Including only education programmes meeting ISCED criteria (ISCED 0 and ISCED 1), in percent, by age, 2022
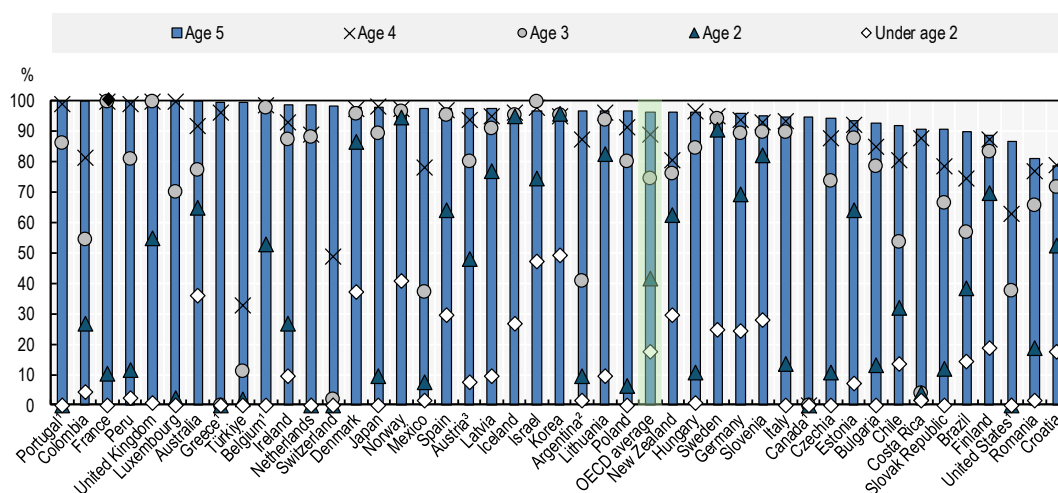
[1]Early childhood education excludes early childhood educational development programmes (ISCED 01).
[2]Year of reference differs from 2022: 2021 for Argentina.
[3]In other registered ECEC services, 2-year-olds includes children under the age of 2, and 3-year-olds includes children aged 3 to 5.
Notes: Enrolment rates include ECEC (ISCED 0) and other registered ECEC services for children aged under 2, aged 2 and aged 3, and primary education (ISCED 1) for children aged 4 and 5. Countries are ranked in descending order of the enrolment rates of children aged 5 in 2022.
Source: OECD (2024), *Education at a Glance 2024*, https://doi.org/10.1787/c00cad36-en, Table B1.1 and database.

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Internationally comparative data on ECEC participation by children's characteristics (e.g. younger ages and socio-economic backgrounds) are limited. Available evidence shows that gaps in ECEC participation persist based on children's socio-economic backgrounds and other characteristics:

- Data from OECD's Programme for International Student Assessment (PISA) 2022, which reflect participation in ECEC about a decade ago but cover all OECD countries, indicate a gap of 12 percentage points in participation in more than two years of ECEC between children from high and low socio-economic backgrounds.

- Recent data for OECD European countries (Eurostat, European Union Statistics on Income and Living Conditions (EU-SILC)) show that, despite common legal entitlements for ECEC access and compulsory pre-primary years, in 2023, on average across countries, 3-5-year-old children from low-income families continued to participate less in regulated ECEC services (86%) than their peers from high-income families (91%) (see Chapter 5). For children aged 0-2, the gap in participation in regulated centre-based and home-based ECEC was even larger at 19 percentage points (51% versus 32%, respectively).

Overall participation rates in ECEC expanded over recent decades in most OECD countries, sometimes helped by the decreasing size of cohorts of children due to demographic decline, but trends in socio-economic gaps in participation have not evolved in the same direction in all countries (Figure 1.4). At around age 4, available international data show that the gap in participation between children from high and low socio-economic backgrounds decreased in 12 countries, remained stable in 8 other countries and increased in 8 other countries. This applies to 2010-23 in European OECD countries, and 2005-15 in non-European OECD countries, leaving aside 11 countries with close to universal enrolment at this age. For children under the age of 2, socio-economic gaps in participation in ECEC increased in more than half of European OECD countries between 2010 and 2023 (see Chapter 5).

In countries with an increasing gap, the growth in enrolment rates was mainly driven by children from high socio-economic backgrounds. This is particularly the case in some countries with large increases in overall ECEC participation rates (e.g. Brazil, Chile and Türkiye) and is in line with evidence that families from high socio-economic status are better equipped to take advantage of opportunities for their children. This is the so-called "Matthew effect" in social policies, according to which some of these policies tend to disproportionally benefit more advantaged social groups. Other countries managed to increase average enrolment and simultaneously reduce participation gaps, whereas in countries with a stable gap, all socio-economic groups increased their participation in ECEC to a proportionate extent. Overall, though, the varied evolution of socio-economic gaps in participation across countries in a shared context of expanding overall enrollment rates indicates that policy design has a major role to play in shaping these gaps. The available evidence suggests that, over the last two decades, countries like Ireland, Korea, Latvia and Poland were successful in increasing total ECEC enrolment rates while also reducing socio-economic differentials in participation.

Policy area 1: Reducing gaps in participation in ECEC

A wide range of factors influence children's participation in ECEC services, shaped by the broader system characteristics and policy environment (see Chapter 5). While some barriers to participation are direct, relating to the availability, accessibility and affordability of ECEC services, others are indirect and reduce the effectiveness of policies aimed at overcoming these direct obstacles. Indirect barriers hinder access to otherwise available services, making them less appealing or harder to navigate for families. These stem from challenges such as limited access to information about available services and provisions, the complexity of administrative requirements, lack of awareness of ECEC benefits or a low level of trust in the quality of services offered. Both types of barriers are multi-faceted and disproportionately affect vulnerable families and children.

Addressing direct and indirect barriers for improving participation rates among vulnerable and hard-to-reach families requires layered policy strategies. Legal entitlements convey strong messages about the importance of child development early in life, and can also be used to drive expansion in supply and demand for ECEC. Universal free access is an important policy objective to work towards, but with limited public funds and strong reliance on private sources, fee structures or subsidies need to be carefully designed to reduce financial barriers to ECEC access for low-income children. Adequate funding together with better co-ordinated ECEC network planning and quality assurance mechanisms is critical for infrastructure expansion and ensuring high-quality ECEC services reach the most vulnerable children.

Flexible or alternative forms of provision can accommodate families with irregular work schedules and ensure some provision in remote areas, and thereby reduce gaps in participation.

Figure 1.4. Trends in overall enrolment in education for 4-year-olds and in socio-economic gaps in participation in ECEC

Percentage of age 4 children enrolled in ECEC (ISCED 0) and primary education (ISCED 1) in 2005 and 2015, by change in participation in ECEC for more than two years between socio-economically advantaged and disadvantaged students between 2010 and 2023 (European countries) or 2015 and 2022 (other countries)
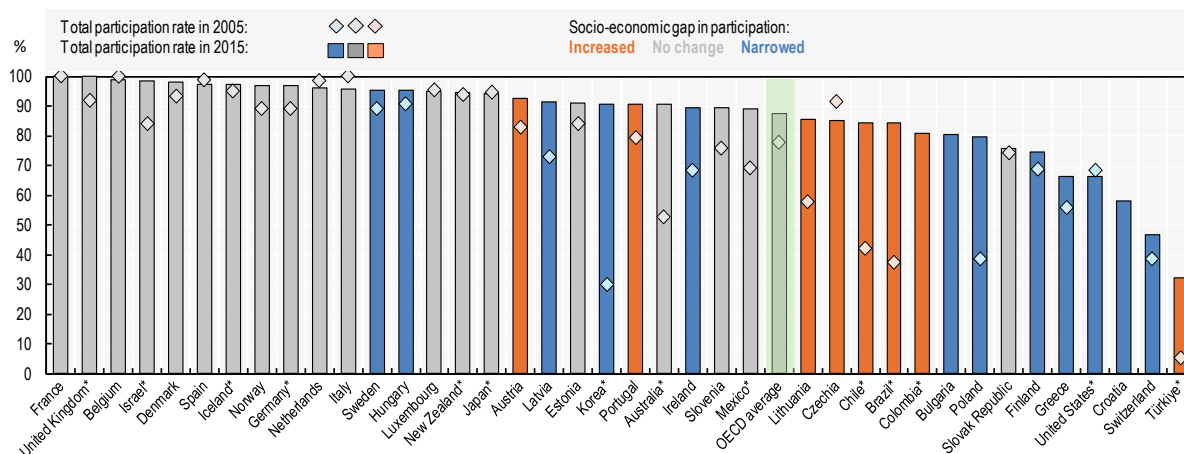
*Data for the gap in participation in ECEC comes from PISA, at age 15 in 2015 and 2022, due to unavailability in EU-SILC. EU-SILC is the default source (see Annex B).

Notes: OECD average: Arithmetic mean across all OECD member countries with available data for each trend, across all available sources.

Socio-economic background is measured by the EU-SILC equivalised disposable household income and the PISA index of economic, social and cultural status (see Annex B). Data using EU-SILC refer to children using regulated centre-based services, organised family day care, and care services provided by (paid) qualified childminders organised and controlled by a structure (see Annex B). Countries are ranked in descending order of enrolment in ECEC (ISCED 0) and primary education (ISCED 1) for children at age 4 in 2015. Participation in ECEC refers to attendance in ECEC for more than two years, according to available data in each survey (see Annex B).

Sources: OECD (2018), *Education at a Glance 2018*, https://doi.org/10.1787/eag-2018-en, Table B2.1b; OECD (2017), *Education at a Glance 2017*, https://doi.org/10.1787/eag-2017-en, Table C2.1; OECD (2014), *Education at a Glance 2014*, https://doi.org/10.1787/eag-2014-en, Table C2.1; OECD (2012), *Education at a Glance 2012*, https://doi.org/10.1787/eag-2012-en, Table C2.1; OECD (2022), *Education at a Glance 2022*, https://doi.org/10.1787/3197152b-en, Table B2.1; Eurostat (2024), *European Union - Statistics on Income and Living Conditions*, https://doi.org/10.2907/EUSILC2004-2023; OECD (n.d.), *PISA 2015 and 2022 databases*, https://www.oecd.org/en/about/programmes/pisa/pisa-data.html (accessed on 6 November 2024).

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Co-ordinated services that effectively convey comprehensive and clear information to families are essential in extending the reach of policies for improving ECEC accessibility, especially for families facing multiple barriers to participation (see Chapters 4 and 5). Policies that focus on raising family awareness of the importance of ECEC for child development can help change attitudes about ECEC services, particularly among immigrant families. Early childhood services that serve as the first point of contact for families (e.g. health, social services) can guide parents through the application and enrolment processes for ECEC, thereby reducing the administrative burden. Evidence suggests that involving local community members in these services can significantly enhance their effectiveness, as they are integral to the information networks that many families rely on for support.

Few OECD countries have reduced socio-economic gaps in participation and strengthened some aspects of the quality of their ECEC systems

In addition to broader participation, the quality of ECEC also matters for levelling the playing field among children. Not enrolling children who would benefit from ECEC is a missed opportunity but evidence also suggests that enrolling children in poor-quality ECEC can be detrimental to their social and emotional development and overall well-being at an age when they are highly vulnerable (Britto, Yoshikawa and Boller, 2011[4]). In contrast, participation in high-quality ECEC yields multiple benefits for children, particularly those from disadvantaged backgrounds (see Chapter 8). Increasing participation while maintaining or raising the quality of ECEC is challenging, as it requires adequate funding as well as features of ECEC (e.g. curriculum and pedagogy, workforce competencies and profiles, monitoring frameworks) that are adapted to a more diverse population of children and families (see Chapter 7). At the same time, raising the quality of ECEC can help convince families of the benefits of ECEC and help address some of the indirect barriers to ECEC participation.

The quality of ECEC is a complex and multi-dimensional concept that is difficult to assess, particularly at the system level. Notwithstanding its limitations, the association between participation in ECEC and children' outcomes in the early years of primary education is a possible way to approximate some aspects of the quality of ECEC systems. This can be estimated using the Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy (PIRLS) surveys, which monitor student achievement in mathematics, science and reading in the fourth grade (corresponding broadly to children aged 9-10 years). Differences in this association can be considered to signal differences in the system-level quality of ECEC between countries, but might also reflect different political goals for ECEC, including the weight put on school preparedness. Further, this particular measure concentrates on only one area of the potential short-term effects of ECEC, neglecting other areas such as socio-emotional development. Nonetheless, changes over time in the association between participation in ECEC and test scores can reflect changes in some of the dimensions of the quality of ECEC.

Table 1.1 combines indicators of the evolution of socio-economic gaps in participation in ECEC (at age 4 and above) and of the change in the association between participation and children's mathematics and reading performance at age 9-10 (interpreted as changes in some dimensions of the system-level quality of ECEC). A combination of narrowing participation gaps or very high (i.e. over 90%) overall participation rates together with increasing levels of ECEC quality can be expected to have the largest influence in mitigating inequalities. On average across OECD countries with available data, the overall picture suggests stable average system-level quality of ECEC over this period (approximately 2005 to 2015) alongside stable gaps in ECEC participation rates: participation rates in ECEC increased over this period while the socio-economic gap in participation and the proxy of system-level quality of ECEC remained stable. According to available data, Ireland and the Netherlands have combined positive trends in both participation gaps and system-level quality of ECEC over this time period while Spain and Sweden have maintained overall high participation rates (above 90%), and therefore contained participation gaps, also combined with increasing system-level quality of ECEC. Denmark, Finland, France, Hungary, Italy and Poland also succeeded in reducing ECEC participation gaps (or maintained them at low levels) while the association between ECEC participation and test scores remained stable. In the Slovak Republic, the association became stronger while participation gaps remained stable. On a positive note, in none of the countries with available data did participation gaps increase while the measure of ECEC quality deteriorated.

Table 1.1. Trends in gaps in participation in early childhood education and care and association with academic outcomes at age 10

Trends in socio-economic gaps in participation in ECEC for more than 2 years and in its association with mathematics performance

▨ Improvement in both trends	▨ Deterioration in one trend	☐ No change
▨ Improvement in one trend	▨ Deterioration in both trends	▨ Trends in opposite directions

Change in the socio-economic gap in participation in ECEC, 2010-2023	Change in the association between participation in ECEC and mathematics performance at age 10, 2011-2019		
	Association increased	**No change**	**Association decreased**
Gap narrowed or overall participation in ECEC over 90%	Ireland **Netherlands[2]** **Spain** Sweden	**Denmark[2]** Finland **France[2]** **Italy** Poland	**Hungary** **New Zealand[1,2]**
No change	Slovak Republic	Germany[1] Norway Slovenia[2] OECD average	
Gap increased	Austria	Czechia Lithuania Portugal	

[1]Data for the gap in participation in ECEC come from PISA, at age 15 in 2015 and 2022, due to unavailability in EU-SILC. EU-SILC is the default source (see Annex B).
[2]PIRLS reading scores replace TIMSS mathematics scores at age 10 for association with ECEC. TIMSS is the default source (see Annex B).
Notes: Only countries with available data for both variables are shown. Countries in bold had participation above 90% in 2005 and 2015 (OECD EAG). They are grouped with countries that narrowed participation gaps (see Annex B). OECD average: Arithmetic mean across all OECD member countries with available data for each trend, across all available sources. Socio-economic background is measured by the EU-SILC equivalised disposable household income, the PIRLS and TIMSS index of Home Resources for Learning, and the PISA index of economic, social and cultural status (see Annex B). The association is measured through a linear regression, controlling for socio-economic background (see Annex B). Participation in ECEC refers to attendance in ECEC for more than two years, according to available data in each survey (see Annex B).
Sources: OECD (2018), *Education at a Glance 2018*, https://doi.org/10.1787/eag-2018-en, Table B2.1b; OECD (2017), *Education at a Glance 2017*, https://doi.org/10.1787/eag-2017-en, Table C2.1; OECD (2014), *Education at a Glance 2014*, https://doi.org/10.1787/eag-2014-en, Table C2.1; OECD (2012), *Education at a Glance 2012*, https://doi.org/10.1787/eag-2012-en, Table C2.1; OECD (2022), *Education at a Glance 2022*, https://doi.org/10.1787/3197152b-en, Table B2.1; Eurostat (2024), *European Union - Statistics on Income and Living Conditions*, https://doi.org/10.2907/EUSILC2004-2023; OECD (n.d.), *PISA 2015 and 2022 databases*, https://www.oecd.org/en/about/programmes/pisa/pisa-data.html (accessed on 6 November 2024); International Association for the Evaluation of Educational Achievement (n.d.), *TIMSS 2011 and 2019 databases, PIRLS 2011 and 2021 databases*, https://timssandpirls.bc.edu/databases-landing.html (accessed on 13 June 2024).

Policy area 2: Supporting meaningful interactions between staff and children in ECEC settings

While there are signals that some dimensions of the quality of ECEC have improved in a number of countries (Table 1.1), a large body of evidence documents variability in the quality of ECEC between and within types of ECEC. Furthermore, some groups of children, particularly those who would benefit the most from ECEC, recurrently experience lower levels of quality than others (see Chapter 6). When vulnerable

children are enrolled in settings that provide lower-quality ECEC, there is a risk of exacerbating inequalities rather than reducing them.

Particularly in systems with a variety of types of provision, participation in more regulated and intense forms of ECEC tends to be lower among children from disadvantaged and minority backgrounds, often making them experience lower levels of process quality (i.e. the quality of their interactions with others within ECEC settings), which matters the most for their development, well-being and learning. Promoting equity through ECEC involves providing high levels of quality across different types of settings and services, so that all children benefit, as well as providing additional support for children growing up with more limited resources and opportunities (see Chapter 6). This policy mix involves establishing consistent quality frameworks that activate multiple policy levers, including curriculum, workforce preparation, standards on ratios, and monitoring, while also implementing targeted measures to identify children with additional needs and provide them with proportionally resourced services.

Child-centred curriculum frameworks informed by child development science should cover all age groups and types of ECEC settings. As children learn through play and develop in multiple areas (including cognitive and socio-emotional ones, see Chapter 3), curriculum models can maintain a holistic and play-based approach to early development while embedding opportunities for more intentional interactions focused on specific skills aligned with children's stages of development.

The workforce is at the core of the interactions that children experience in ECEC settings. Initial preparation programmes providing training specifically to work with children, including practical experience and covering a broad range of areas, should be a standard for all staff roles. Building on pre-service training, staff should also have opportunities to participate in active and centre-embedded continuous professional development (CPD) with a strong individualised feedback component. Targeted supports can be provided for staff working in more challenging settings to receive CPD with strong evidence of enhancing the quality of practices. In the presence of staff shortages, they should not disproportionally affect ECEC settings with large shares of vulnerable children.

Research suggests that only modest benefits would result from improving child-staff ratios and group sizes alone in contexts where they are already adequate. However, these system-wide standards remain important, as they shape the capacity of ECEC staff to establish positive relationships with children. They can therefore be adapted to provide more staff or support multi-professional teams and other forms of targeted staffing in ECEC settings or groups where children's needs call for additional or more specialised resources.

Research also indicates that both the quantity and quality of ECEC matter for achieving long-term effects on inequalities, and are interrelated. Early (i.e. below age 2) and more intensive (i.e. more hours per day) enrolment in ECEC can have positive effects on children from low socio-economic backgrounds, especially for cognitive development, provided that ECEC services are of high quality, and can therefore be targeted to these children. The curriculum framework and preparation of the ECEC staff, as well as their working conditions (e.g. time in contact with children, and time to prepare activities), need to be adapted to the starting age and intensity of programmes.

Policies for ensuring consistently high levels of quality and promoting equity within an ECEC system can be particularly difficult to implement in contexts where the ECEC sector has fragmented governance, involves multiple types of provision or is challenged by financial constraints and staff shortages. System-level monitoring can contribute to high quality across the sector by establishing a shared understanding of quality standards (with the quality of practices with children being at the centre) and clear expectations for all types of providers, by setting incentives that reward high quality, and by integrating guidance and support for providers for improving their services.

Policy area 3: Making ECEC inclusive for all children

Today, growing shares of socio-economically disadvantaged and multilingual children participate in ECEC, and most children with special education needs attend mainstream ECEC settings (see Chapter 7). Increasing social and cultural diversity requires ECEC systems to respond to a broader range of needs from children and families, while also bringing opportunities to build on a wider range of experiences and resources. ECEC can support inclusion by focusing on the strengths that come with diversity, leaving behind deficit views on the capacities and potential of children from disadvantaged or minority backgrounds. Building an inclusive ECEC system means offering quality for all children while valuing their diversity and responding meaningfully to their needs and strengths. These strengths-based approaches align ECEC organisational and pedagogical practices with children's experiences and cultural contexts.

As with equity, universal and targeted approaches can be combined to promote inclusion in ECEC, in line with tiered models of support for young children. Effective inclusive practices build on foundations that benefit all children, regardless of their background or development trajectory. Improving the quality of interactions for all children reduces the need and increases the effectiveness of more targeted supports.

Diversity should be valued and sustained across all settings within an ECEC system, and not only in settings serving large shares of disadvantaged or minority children. An inclusive ECEC curriculum – i.e. culturally and linguistically sustaining, with guidance on supporting children with special education needs, and promoting engagement with families from diverse backgrounds – is a major building block for elevating diversity as a value in all ECEC settings. Flexibility is then required for adapting curriculum delivery to local contexts where diversity takes different forms.

The workforce is at the core of inclusive ECEC policies. CPD is key to support ECEC staff and leaders in developing more inclusive practices. Transversal competencies and attitudes (e.g. addressing biases, valuing diversity) are a foundation for more specific skills (e.g. supporting home languages). CPD models should favour team-level, guided reflection and practical responses to diversity in local contexts. In addition, matching staff with children can also support inclusion. Attracting and retaining a more diverse ECEC workforce can increase awareness of the needs and strengths of diverse children and families and facilitate more responsive approaches within settings.

In turn, system- and setting-level monitoring and assessment can help to better understand and identify variability in children's needs and strengths, and to assess the quality of the targeted supports provided to children, as a complement to the monitoring of more general aspects of quality in ECEC.

Achieving a lasting impact

ECEC can have both short-term and long-term effects on inequalities

Together with other policies, ECEC policies shape opportunities for development, learning and well-being throughout childhood (short-term effects) but also have implications for children's future education and labour market outcomes, as well as on life more generally (long-term effects) (see Chapter 8). ECEC can lead to positive long-term effects by helping children to develop in multiple areas and acquire a broad range of early skills that are foundational for their life-long learning. Through these mechanisms children may be better prepared for the education journey and life more generally, thus investments in ECEC can maximise the effect of additional, later educational investments and lead to dynamic complementarities.

Data from PISA shed light on the association between participation in ECEC and students' outcomes at age 15 and its evolution over time. In most countries, this association is positive, meaning that children who have attended ECEC for more than two years have higher performance scores in mathematics at age 15 (Figure 1.5). On average across OECD countries, this association remained stable between 2015 and

2022, although it increased in some countries including Brazil, Chile, Colombia, Estonia, Norway, Slovenia and the Slovak Republic. The trend is broadly consistent with the findings coming from TIMSS data of a stable link with mathematics at age 9-10. Without indicating a causal effect, these results suggest that ECEC participation is associated with higher test scores in the medium- and longer-term, while this proxy of some aspects of the system-level quality of ECEC has on average remained stable over time, with variations between countries.

Figure 1.5. Association between attendance of early childhood education and care and mathematics scores at age 15

Score-point differences in mathematics at age 15 between students who had attended more than two years of ECEC and students who attended two years or less or did not attend ECEC, after controlling for students' socio-economic status, 2015 and 2022
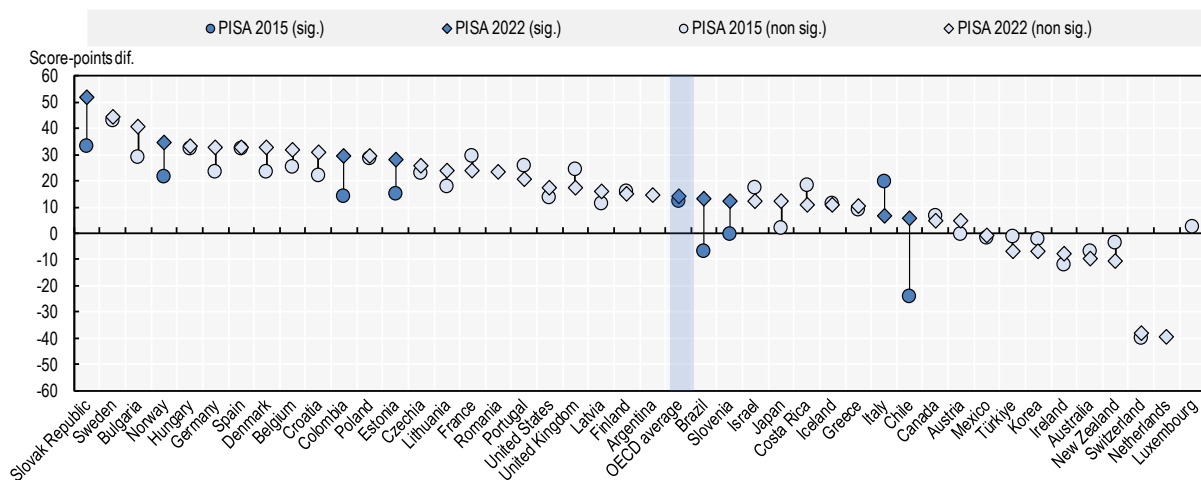
Notes: Only OECD member and accession countries with available data for either PISA 2015 or PISA 2022 are shown. OECD average: Arithmetic mean across all OECD member countries that collected data in either PISA 2015 or PISA 2022. Socio-economic background is measured by the PISA index of economic, social and cultural status (see Annex B). Statistically significant differences between 2015 and 2022 are shown in a darker tone (see Annex B). Countries and economies are ranked in descending order of the score-point differences in 2022.
Sources: OECD (n.d.), *PISA 2015 and 2022 databases*, https://www.oecd.org/en/about/programmes/pisa/pisa-data.html (accessed on 6 November 2024).

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However, for ECEC to mitigate inequalities, the effects of participating in ECEC need to be positive and lasting, but also to be larger for more vulnerable children than for less vulnerable ones (see Chapter 8). While there is evidence that some ECEC programmes have mitigated socio-economic inequalities in education, labour market and social outcomes, these findings have not been consistent nor widely documented. Methodological challenges explain the limitations of available evidence. Data are often lacking to assess the impact on a larger range of outcomes beyond cognitive and academic test scores (e.g. on socio-emotional skills). Furthermore, identifying causal effects is difficult due to the presence of confounding factors and the lack of control groups for universal ECEC programmes. Additionally, variations in the features of ECEC programmes across countries add to inconsistencies in the evidence base.

Evidence from TIMSS and PIRLS (at around age 10) and PISA (at age 15) indicates that in all OECD countries, test scores are higher for children from high socio-economic backgrounds than for their disadvantaged peers (Mullis et al., 2023[5])). In addition, these performance gaps have increased in a majority of countries over the last decade (Table 1.2). These trends can be attributed to a range of factors,

with ECEC being one of them. The analyses in this chapter present simple trends and not causal relationships, and therefore cannot provide conclusive explanations of these findings. However, the combination of i) persistent socio-economic gaps in participation in ECEC (Figure 1.4); ii) signals of stable quality levels of ECEC on average in OECD countries (Table 1.1); and iii) evidence of lower-quality ECEC for children from lower socio-economic backgrounds (see Chapter 6), is consistent with persistent socio-economic gaps in test scores in middle childhood and adolescence. These findings indicate that ECEC policies, together with other early years policies, need to be revised to deliver stronger and lasting positive effects on the reduction of inequalities.

Guiding principle 3: Aligning ECEC with the broader landscape of early years policies

ECEC policies are just one – albeit an important – piece of the social inequality puzzle. The persistence of socio-economic gaps in educational outcomes and subsequent labour market and social outcomes (e.g. health, criminal behaviour, civic engagement) is a consequence of the complex interplay between multiples factors and policies, which include early education policies as well as policies in other sectors. Leaving aside factors and policies outside the scope of this report, a whole-of-government approach for the early years that includes high-quality ECEC, co-ordination with other services related to families and children, and smart funding and governance is critical to mitigate social inequalities.

Policies can rethink the boundaries of ECEC by considering broadly the role ECEC can play for children of a wider age range, families and communities, rather than focusing on ECEC as a single institution (or a multiplicity of uncoordinated programmes) serving only children in their early years. ECEC has the potential to be at the centre of integrated and co-ordinated policy and service efforts, given its close connection to families and its critical role for supporting children's development, learning and well-being in its own right. This role can be further enhanced through intentional connections with complementary policies and services for families (see Chapters 4 and 10).

Policy area 4: Connecting ECEC services with families, schools and communities

The co-ordination and combination of ECEC policies with policies targeting parents and families can launch vulnerable children on more favourable trajectories (see Chapter 8). Intentionally developing ECEC programmes that support parents in fostering children's well-being and early learning, especially programmes that integrate well into parents' habits and do not add to existing stress burden, can amplify children's positive experiences in ECEC and lead to sustained effects over time (see Chapter 10).

National quality frameworks that are shared across sectors serving early childhood can provide mechanisms for prioritising co-ordination as well as a common language for programmes to better communicate with each other. Integrated service hubs operating under the umbrella of a quality framework can be a meaningful strategy to promote awareness and use of ECEC, as well as to connect families who already participate in ECEC with a range of other services. This approach can help ensure families and children receive the support they need in multiple areas, setting the foundations for children's development, learning and well-being.

Table 1.2. Trends in socio-economic gaps in test scores in middle childhood and adolescence

Change in the score-point difference in mathematics test scores between socio-economically advantaged and disadvantaged students at ages 9-10 (TIMSS 2011 and 2019) and 15 (PISA 2015 and 2022)

	At age 10	At age 15
Chile		-27
Brazil*		-14
Ireland	0	-5
Greece		-4
Mexico		0
Portugal	21	1
Spain	7	2
United Kingdom		2
Japan		2
France*	0	2
Korea		3
Denmark*	8	4
Italy	2	4
Sweden	15	5
Czechia	4	5
Bulgaria*	13	5
Croatia	3	5
Hungary	-24	6
Canada		6
Iceland		6
Latvia		7
Colombia		8
OECD average	5	9
Finland	15	9
Belgium		10
Australia		12
New Zealand*	-3	12
Norway	15	13
Estonia		14
Austria	8	14
United States		16
Lithuania	17	16
Poland	-1	17
Germany	9	18
Slovenia*	-10	18
Switzerland		21
Israel		21
Türkiye		21
Netherlands*	6	25
Slovak Republic	10	32
Romania		41
Alberta (Canada)*	-4	
French Community (Belgium)*	-2	
Quebec (Canada)	9	
Northern Ireland (United Kingdom)	12	

*PIRLS reading scores replace TIMSS mathematics scores at age 10 (see Annex B).

Notes: Orange indicates a widening gap, blue a narrowing gap, and dark grey indicates no change, with thresholds set at 5 and -5 score points. Statistically significant differences between years are shown in a darker tone (see Annex B). OECD average: Arithmetic mean across all OECD member countries with available data for each trend. Socio-economic background as measured by PIRLS, TIMSS and PISA indices (see Annex B). Countries are ranked in ascending score by change of the socio-economic gap in mathematics performance at age 15.

Sources: OECD (n.d.), *PISA 2015 and 2022 databases*, https://www.oecd.org/en/about/programmes/pisa/pisa-data.html (accessed on 6 June 2024); International Association for the Evaluation of Educational Achievement (n.d.), TIMSS 2011 and 2019 databases, PIRLS 2011 and 2021 databases, https://timssandpirls.bc.edu/databases-landing.html (accessed on 13 June 2024).

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Throughout education, vulnerable children should be exposed to enlarged and ambitious content. Areas of development targeted by ECEC, and therefore curriculum frameworks, are central to the achievement of long-term effects (see Chapter 8). ECEC curricula that are designed to build broad or "unconstrained" cognitive skills (e.g. vocabulary rather than narrow school-readiness skills such as identifying letters), social-emotional skills, as well as skills that support learning across domains (e.g. executive function) can be expected to produce longer-lasting positive effects for vulnerable children. However, as many skills can be developed later in education or at home, this feature of ECEC alone does not guarantee achieving long-term effects: strong investments in ECEC and positive outcomes from participation are unlikely to be sustained in the face of low-quality primary schools or redundancies in learning content. Co-ordination within ECEC and between ECEC and the next stages of the education sector are therefore critical to avoid curricular redundancy and support the continuity of pedagogical approaches. In particular, since play is essential to children's development, and given that children's play time has decreased in some OECD countries (see Chapter 3), education policies need to foster pedagogical practices that promote the role of play in the first years of primary education.

ECEC settings and their staff are key levers to provide information and support to parents regarding home interactions with their children, to co-ordinate with other professionals working with families, and to engage with schools to facilitate transitions, especially for more vulnerable children. Staff and leaders need to be trained for these roles and supported to co-operate with other professionals, for instance by allocating time for work without children and by recognising their status though salaries aligned with their roles. While not all ECEC staff (and leaders) need to engage in these extended tasks, those who do should have explicit recognition in their role and status.

Policy area 5: Improving governance and funding for early years policies

A policy mix that aims to increase ECEC enrolment, ensure all children benefit from quality services, and provide enhanced support proportionate to children and families' needs requires more substantial, equitable and efficient funding (see Chapter 9). In 2021, on average across OECD countries, total expenditure on ECEC (i.e. early childhood education development and ECEC) amounted to 0.9% of GDP compared to 1.4% for primary education, with large variation between countries (OECD, 2024[6]). Furthermore, private expenditure plays a stronger role in funding education and care for children under age 3 (26% of total expenditure) and pre-primary education (14%), relative to primary (5%) and secondary education (7%). In some countries, public under-investment amplifies reliance on family contributions to cover the costs of ECEC, potentially discouraging enrolment among those who stand the most to gain from participating in it. At the same time, most OECD countries currently operate under strong budgetary pressures that limit their capacity to expand or strengthen the public ECEC sector. More efficient public investment that balances universal and targeted approaches can reduce aggregate spending and allocate resources where they have the largest impact, thus helping to achieve the dual objective of lowering participation gaps in ECEC and raising the quality of the services catering to vulnerable children.

How resources are distributed and to whom is critical for ensuring accessible, affordable and high-quality ECEC for all children. When ECEC responsibilities lie mainly at the local level, as is the case in many OECD countries, equalisation systems between local authorities are needed to ensure that local entities with higher shares of socio-economically disadvantaged populations can provide high-quality ECEC to children. The distribution of capital investments in the system plays a key role in ensuring equitable ECEC access. Adequate capital spending, effective network planning and support measures for ECEC providers to access capital funding can facilitate infrastructure investments that support ECEC sector expansions and benefit children most in need. High-quality data and its effective use is needed to steer the system towards efficient spending and effectively target the most vulnerable children and settings.

Some countries have relied on private provision to expand ECEC services, often partially financed by public spending, thus leading to the development of a mixed economy of ECEC where public, private-for-

profit and private not-for-profit providers operate together. While competition in provision can support quality and faster adaptation to demand, marketised ECEC systems also entail a range of risks. These include higher costs for families and the exclusion of low-income children as well as lower service quality, which is detrimental to children and means that investments (both public and private) are partially lost. Quality monitoring, regulation of private providers (with particular attention to for-profit players), funding conditionality and measures to limit family costs – are several policy levers that can help mitigate the risks that can emerge in mixed ECEC systems and ensure the efficiency of public and private investments.

Quality ECEC provision for all children hinges on a qualified workforce, which is one of the main sources of ECEC expenditure. General funding mechanisms that ensure wages are in line with staff roles and responsibilities need to be complemented by additional funding that recognises the challenging working conditions that staff can experience in disadvantaged settings. In mixed ECEC systems, where central authorities may have more limited leverage over staff compensation, funding conditionality can help ensure that dedicated grants are used by ECEC providers to enhance workforce quality.

Placing ECEC policies as part of a broader and more effective landscape of policies to reduce inequalities requires aligning funding and governance for a more integrated policy approach. In particular, this requires that total investments in education and families remain more stable throughout early childhood, in contrast to the sharp decline observed in many countries between age 1, coinciding with the end of maternity leave entitlements, and the beginning of pre-primary education (typically around age 3) (see Chapter 9).

In addition, a whole-of-government approach calls for high-level policies and national commitments to support co-ordinated services throughout childhood (see Chapter 10). ECEC itself encompasses different types of programmes with different degrees of formality and regulation, as well as with different goals. The different types of provision can meet different family and societal needs, but can also be challenging for families to navigate, contributing to disparities in participation, beyond the risks of variation in the quality of ECEC provision (see Chapter 6). The degree of system fragmentation varies across OECD countries, but generally makes co-ordination of services challenging even within the ECEC sector.

Better horizontal co-ordination of ECEC with other services is also needed. Starting with prenatal services to support healthy pregnancies, this co-ordination and continuity needs to extend through the developmental milestones of early childhood and into primary school, with the aim of sustaining the benefits from one set of services to another and contributing to long-lasting effects of ECEC.

Policy and service co-ordination has several objectives. First, these efforts aim to build on the multiple factors that influence children's development, learning and well-being (see Chapter 3). This approach recognises that there is not a single strategy that, on its own, can eliminate opportunity gaps among young children. Second, co-ordination and integration are promising directions for making ECEC and complementary supports more accessible to all families and children, reducing systemic barriers that hinder access to various services (see Chapter 5). Third, co-ordination can enhance the quality of services. A well-connected service environment fosters ongoing knowledge exchange among providers and stakeholders, facilitating a holistic response to children's needs (see Chapters 6 and 7). Finally, the efficiency of policy investments and design of services can be improved by making the most of available resources, avoiding duplication of efforts and layering interventions (see Chapter 9).

Comprehensive service models are shaped by their guiding principles, governance structures, and the degree of co-ordination and integration across services. These key dimensions influence how services are utilised, managed and delivered to families. Across contexts, enabling conditions that support successful co-ordination tend to include a combination of both top-down supports (e.g. stable funding, legal frameworks for co-operation) and bottom-up, local inputs (e.g. commitment to supporting early childhood initiatives, capacity for implementation), as well as shared values, strong leadership and strong communication channels, including for data sharing (see Chapter 10). In addition, all programme components need to be of high quality in order to support quality at the level of co-ordinated services while avoiding substitution effects between programmes.

Table 1.3. A policy roadmap for Early Childhood Education and Care with a lasting impact on equity and inclusion

Policy areas and related pointers
1. Reducing gaps in participation in ECEC
1.1: Address direct barriers to participation in ECEC
Provide effective support to make ECEC affordable to all families while maintaining labour market participation incentives, and progressively move towards universal free access Enhance ECEC infrastructure planning, combining local and national investments, with a focus on areas with vulnerable children and service shortages Provide flexible or alternative forms of ECEC provision (e.g. operating hours, duration, co-location) to better mitigate the constraints for participation of vulnerable families **Examples of national and local initiatives** Affordability: Canada, New South Wales (Australia), Norway [Box 5.1 and Box 5.2]
1.2: Address indirect barriers to participation in ECEC
Set up accessible information channels and streamline administrative processes for enrolment in ECEC services (e.g. multilingual assistance, simplified eligibility verification) Promote family and community involvement in ECEC to strengthen trust in the quality and inclusiveness of ECEC services **Examples of national and local initiatives** Information and administrative processes: Flanders (Belgium), Germany, Korea [Box 5.3] Community involvement: Canada, Germany, New Zealand [Box 5.4]
2. Supporting meaningful interactions between children and ECEC staff
2.1: Set clear goals for ECEC to support children's well-being, development and learning
Develop a child-centred and comprehensive curriculum framework that captures all aspects of children's development (cognitive, socio-emotional and physical) and includes structured, skill-specific components within a play-based approach, and which guides staff on intentional practices Ensure that initial preparation programmes for ECEC staff include training specifically on working with young

children, cover a broad range of areas around children's development, and include practical components

Examples of national and local initiatives

Curriculum: Boston, United States [Box 6.1]

Workforce development: Australia, Canada, Ireland, Japan [(OECD, 2021[7]): Chapter 2]

2.2: Equitably expand opportunities for children to experience high levels of process quality

Extend coverage of regulations and quality frameworks to traditionally unregulated settings in a proportionate way

Review standards for staff-child ratios and group sizes to enable rich interactions in all settings, and where necessary target improvements in ratios and group sizes in ECEC settings with high shares of vulnerable children

In the presence of staff shortages, ensure that they do not disproportionally affect ECEC settings with large shares of vulnerable children (e.g. through financial incentives)

Target more intensive participation in ECEC (starting from an early age or more hours) to vulnerable children, provided that quality provision can be ensured

Examples of national and local initiatives

Standards: Belgium (Flanders) and Luxembourg [Box 6.2]

Staffing/incentives: France, New Zealand and Virginia (United States) [Box 9.3]

2.3: Set mechanisms for quality improvement

Regularly monitor both structural and process aspects of quality within settings, and provide incentives and support for improvement

Provide opportunities for high-quality continuous professional development for all staff, prioritising centre-based delivery and peer learning and feedback (e.g. mentoring), and target supports for staff working in settings with high shares of vulnerable children

Examples of national and local initiatives

Monitoring: Singapore, United States [Box 9.2]

Workforce development: Israel, Norway [(OECD, 2020[8]): Chapter 2]

3. Making ECEC inclusive for all children

3.1: Embrace a strengths-based approach to diversity

Ensure curriculum frameworks value and affirm all forms of diversity

Provide continuous professional development, primarily at the team level, that helps ECEC staff adopt more inclusive practices by addressing both attitudes (e.g. addressing biases) and specific skills (e.g. adapting

practices)

Attract and retain a more diverse ECEC workforce, with stronger engagement of communities

Examples of national and local initiatives

Curriculum: Australia, Berlin (Germany); New Zealand; Québec (Canada) [Box 7.1]; Flanders (Belgium) Luxembourg, [(OECD, 2020[8]): Box 2.4]

Workforce development: Australia and Ireland [Box 7.2]

3.2: Identify and respond to variability in children's needs and strengths

Build on ECEC together with other sectors to identify developmental difficulties more consistently

Ensure services for children and families provide support in which the intensity and personalisation of measures (e.g. funding, staff training, advice, assistance) increases with the level of need, following a tiered model approach

Support the development of multi-professional teams with complementary areas of expertise, allowing specialised staff to work across multiple ECEC settings

Monitor the inclusiveness of practices within settings and the quality of specific supports provided to children and ensure that staff and leaders receive actionable feedback for improvement

Examples of national and local initiatives

Tiered models of support: Ireland [Boxes 7.2 and 7.3]; Iceland [Ch.10]

Multi-professional teams: Finland, Ireland, Portugal [Box 7.3]

Monitoring: Australia, Korea [Box 7.5]; Monitoring tools: [Box 7.4]

4. Connecting ECEC services with families, schools and communities

4.1: Build on ECEC together with other social services to better support parents

Ensure ECEC programmes engage with parents to help them develop positive experiences for children at home adapted to their cultural background and constraints

Consider the development of national quality frameworks covering an array of services around families and children, applying for instance to service hubs (e.g. raising awareness and use of ECEC; orienting families to specific support services)

Develop training for ECEC staff on working with parents (with particular attention to vulnerable families) and support co-operation with other professionals

Examples of national and local initiatives

Models of co-ordinated services, including hubs: United States [Box 4.3]; Australia [Ch 10]

4.2: Ensure smooth transitions within ECEC and to primary education

Ensure that curriculum frameworks throughout early and primary education do not expose children to unnecessarily redundant content, especially vulnerable children

Support pedagogical practices adapted to children's needs throughout early and middle childhood

Support co-ordination among ECEC and primary education staff, particularly with the goals to ease transitions for vulnerable children

Examples of national and local initiatives

Curriculum: Boston, United States [Box 6.1]

Coordination across levels: Luxembourg, Victoria (Australia) [Ch 10]

5. Improving governance and funding for early years policies

5.1: Set funding mechanisms to steer the system towards quality and equity

Design funding allocation mechanisms between levels of governments (e.g. conditional grants, equalisation systems between local authorities) that provide support and incentives to steer funding recipients towards quality and equity

Design comprehensive policies (regulations and monitoring, funding conditionality, attention to large private/for-profit players and financial measures to limit family costs) to ensure quality and equal access to ECEC in the presence of private provision

Design funding mechanisms that ensure wages are aligned with ECEC staff roles and responsibilities and incentivise workforce quality, particularly in settings with high shares of vulnerable children

Examples of national and local initiatives

Funding allocation mechanisms: Canada [Box 5.1], Singapore, United States [Box 9.2], (OECD, 2022[9]): Chapter 2 and Box 3

Policies in the presence of private provision: Canada [Box 5.1], Ireland [Box 9.1 & Box 5.1]

Workforce funding: France, New Zealand, United States [Box 9.3]

5.2: Better integrate ECEC within the broader landscape of social and education policies

Ensure sufficient and sustained funding over the childhood years (mitigating the drop at ages 2 to 3), with an adequate share of public funding

Improve co-ordination within ECEC and between ECEC, other early years services and the next stages of the education sector through more integrated governance

Build data systems and processes that are meaningful to monitor quality and equity and inform directions for improvements

Examples of national and local initiatives

Sustained funding: France, Luxembourg [Chapter 9]; Norway [Box 5.1]

Integrated governance and co-ordination across government bodies: France, Ireland, Japan [Chapter 10]

Data systems: Australia, Germany [Chapter 10]

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2 Project methodology for translating research into early childhood education and care policies

This chapter outlines the methodology of the "Translating Research into Policies for Quality and Inclusive Early Childhood Education and Care (ECEC)" project. It describes the efforts of the project to translate recent research into policies that promote high-quality, equitable and inclusive ECEC. The project findings bring an international perspective on the strengths of different policy approaches to achieve these goals across a range of cultural and institutional contexts that reflect the diversity of OECD member countries. The chapter examines the project objectives, methodology and milestones of the knowledge mobilisation process.

The project in brief

- Building on recent research advancements in multiple disciplines, the project took the principles underlying child development, learning and well-being as the basis to revisit ECEC policies and identify areas and directions for improvement.
- The project put a strong focus on analysing the conditions for successful implementation, taking into account countries' specific contexts and needs.
- Recurrent and structured exchanges between country delegates at the OECD ECEC Network and a multidisciplinary group of experts were at the core of the approach.

Introduction

This report is the main output of "Translating Research into Policies for Quality and Inclusive Early Childhood Education and Care (ECEC)", a project guided by the OECD Network on ECEC and carried out by the OECD Secretariat throughout the 2023-24 biennium. The report is the eighth instalment of the OECD *Starting Strong* series of policy reviews in the ECEC space.

In line with previous OECD work on ECEC, the project provided research-based policy advice to help countries promote access to high-quality, equitable and inclusive ECEC. The project findings bring an international perspective on the strengths of different policy approaches to achieve these goals across a range of cultural and institutional contexts that reflect the diversity of OECD member countries.

From a methodological standpoint, the project focused on supporting the process of translating research into policies. The notion that policies should build on robust scientific evidence has gained prominence among education policymakers and is already widely subscribed to in ECEC. However, this does not imply that fit-for-purpose evidence is available to address all ECEC policy questions nor that, when available, evidence can be mechanically translated into policies. Research findings can call into question existing policies and practices and lead to new interrogations, but the highly contextual nature of education policies means that outcomes depend strongly on how they are implemented under specific conditions and constraints.

This chapter describes the efforts of the project to translate recent research into policies that promote high-quality, equitable and inclusive ECEC. The chapter is divided into three sections, which examine the project objectives, methodology and milestones of the knowledge mobilisation process.

Objectives of the project

Countries aim for ECEC systems that lead to positive developmental, learning and well-being outcomes for all children, as part of a broader landscape of policies to support young children and their families and reduce inequalities in the early years. Evidence-based policies are crucial to advance in this direction. Over the last two decades, significant scientific progress has been made in understanding the factors that shape early child development, learning and well-being, fuelled primarily by advancements in neuroscience but benefiting also from the growing attention that education and social sciences pay to early childhood. Different disciplines offer complementary knowledge on how children develop and learn, on the interactions and practices that can best support children in their early years, and on the contexts in which these occur. This knowledge holds promise for policies that set strong foundations for life-long learning and socio-emotional well-being and resilience. However, translating research into policies is a complex endeavour.

One reason for this is that research is often focused on determining the success or failure of a policy initiative but less so on identifying the conditions and design features that can explain these results, which is crucial information for deriving policy implications (Gormley, 2011[1]) (Donovan, 2013[2]). Further, the elements and processes required for implementing and scaling-up successful interventions, particularly in different contexts, are rarely well understood (Britto et al., 2018[3]). Without strong connections between researchers and policymakers, the potential for research to be meaningful for policies is reduced.

The main goal of the project was to build on recent research on child development, learning and well-being to identify areas strengthening ECEC policies while considering countries' specific contexts and needs, as well as challenges related to policy implementation. A core element of the approach was to facilitate repeated and structured exchanges between a multidisciplinary group of expert researchers on the principles and contexts influencing child development, learning and well-being and representatives of governments involved in the design of ECEC policies (the OECD ECEC Network), with the two groups engaging in a collaborative review of evidence that could inform directions for improving ECEC policies. From its inception, the goals and methodology of the project were developed in close co-operation with country representatives from the OECD ECEC Network.

The project built on knowledge developed by past reviews of the Starting Strong series. It continued to investigate policies in the five dimensions of the Starting Strong analytical framework: i) curriculum and pedagogy, ii) workforce development, iii) quality standards, governance and financing, iv) family and community engagement, and v) assessment and monitoring. The project provided a meaningful opportunity to explore the topic of family engagement in greater depth than past ECEC policy reviews. Further, the project investigated the alignment of ECEC policies with a broader range of policies and services targeted at families with young children.

Another goal of the project was to identify key policy indicators that could be regularly collected and make first strides towards the design of an international database of ECEC policies that would enable a mapping of ECEC systems in OECD countries on features promoting quality and equity in ECEC. It did so by reviewing available indicators from multiple data collection initiatives co-ordinated by the OECD, including previous instalments of the Starting Strong policy reviews, the international survey of the ECEC workforce survey (Teaching and Learning International Survey (TALIS) Starting Strong), and data collected in the context of the Informal Working Group on ECEC for the Indicators of Education Systems (INES), as well as by reviewing indicators available from sources external to the OECD.

Methodology

The methodology adopted by the project built on established practice for OECD policy reviews on ECEC, which involves a close collaboration between countries and the OECD Secretariat. It combined desk-based analysis, involvement of ECEC experts and peer-learning activities as inputs to strengthen a collective understanding of the features of high-quality, equitable and inclusive ECEC systems. However, the methodology was adapted to specifically address the challenge of translating research into policies through a collaborative process.

Guiding approach

Conceptually, the methodology aligned with a knowledge mobilisation framework. More extensive and effective "knowledge mobilisation" – defined as "intentional efforts to increase the use of research evidence […] in policy and practice at multiple levels of the education sector" (Cooper, 2014, p. 29[4]) – and "knowledge mediation" – understood as "connections between evidence production and use with the overt purpose of bringing together producers and users of evidence" (Gough et al., 2011, p. 23[5]) – have been

on the agenda of many governments and organisations including the OECD, where the "Strengthening the Impact of Education Research" project represents the most visible initiative (Box 2.1).

Perspectives on knowledge mobilisation have moved away from linear research transmission towards a relationship model and, more recently, a systems approach (Best and Holmes, 2010[6]). This gradual shift is motivated by evidence showing that making research findings accessible and disseminating them to policymakers and practitioners, as well as building relationships between different communities through partnerships and networks, are both necessary but not sufficient conditions for effective research uptake (OECD, 2022[7]). Recent perspectives emphasise that education stakeholders are embedded in complex systems, and the whole system needs to be activated to establish connections among its various components. To date, however, most knowledge mobilisation initiatives have fallen short of establishing consistent systemic models (OECD, 2022[7]).

Box 2.1. The "Strengthening the Impact of Education Research" OECD project

Across OECD countries, enormous effort and investment has been made to reinforce the quality, production and use of education research in policy and practice. Despite this, using research in education remains a challenge for many countries and systems. The OECD launched the "Strengthening the Impact of Education Research" project in 2021 to respond to this challenge. The project supports countries in understanding how to use education research in policy and practice, systematically and at scale (OECD, 2022[7]).

As of 2024, the project collected quantitative and qualitative data on evidence use and "knowledge mobilisation" practices with the aim of comprehensively mapping the actors, mechanisms and relationships that facilitate research use; the barriers and challenges to using research; and the range of intermediary organisations and their activities that work to facilitate evidence use in policy and practice in different systems. In particular, the project conducted a policy survey in 2021 where data was collected in 37 systems representing 29 countries, and a knowledge mobilisation survey in 2023 that collected data from 288 organisations in 35 countries that play a role in facilitating research use. The project has also led several learning seminars, in-person events that bring together stakeholders from different countries and provide opportunities for focused reflection, critical enquiry and peer learning on pre-defined policy questions (OECD, 2023[8]).

In alignment with linear and relationship models of knowledge mobilisation, the project promoted a collaborative translation of research into ECEC policies through a structured process called 'evidence-informed deliberative stakeholder engagement'. This derives from a family of approaches for structuring conversations between stakeholders to discuss and appraise available evidence with the aim of informing policy making in a controlled way on an identified topic. These approaches have been adapted for education policy making building on their original development and application in the healthcare sector (OECD, 2023[8]).

In the evidence-informed deliberative stakeholder engagement approaches, relevant evidence is understood to include both "hard" evidence from professional research activities as well as "colloquial" evidence that derives from context-specific professional knowledge. Research evidence is thus expected to inform rather than dictate policy discussions and there is an acknowledgement of the need to combine and reconcile evidence and values. In turn, deliberative stakeholder engagement refers to iterative and structured dialogues leading to informed decision-making based on facts, in which representatives of various stakeholder groups take part (see Annex A, Workshop 2). In this context, a quality evidence use in education can be defined as "…critical engagement with the research evidence, shared deliberation about its meaning and effective integration of aspects of the evidence within practice" (Rickinson et al., 2022[9]).

With respect to their impact on decision-making, evidence-informed deliberative activities have been found to support ethical and accountable policy decisions in highly politicised policy areas; to enhance the legitimacy of policy design based on deliberation that identifies how values can be combined with evidence to arrive at a decision; and to facilitate discussions of evidence between stakeholders on high-stakes topics. Positive impacts on participants have also been documented, including the acquisition of new knowledge and a stronger culture of research use within organisations; and improved stakeholder involvement and satisfaction with strategic planning processes (OECD, 2023[8]).

Stages of the project

The "Translating Research into Policies for Quality and Inclusive Early Childhood Education and Care" project was organised around three distinct but interrelated stages:

- **Stage 1: Identification of policy questions and advancements in research.** The first stage unfolded over the first half of 2023 and pursued two parallel objectives. The first was to identify ECEC areas or challenges where policymakers perceived a need for additional or updated research evidence to inform policy directions in their countries. The second was identify, across multiple disciplines, recent research advancements leading to the emergence of novel perspectives on the drivers and contexts that matter for child development, learning and well-being, as well as results that could be mobilised to inform some aspects of ECEC policies. Stage 1 started with a consultation to members of the ECEC Network to identify countries' policy priorities and derive a list of topics and questions for discussion throughout the project. The outcomes of this consultation were discussed by the ECEC Network in March 2023 alongside other aspects of the project, such as the criteria for the composition of the multidisciplinary expert group and potential formats and approaches to organise exchanges between the two groups, collect inputs and prepare the conclusions of each meeting. Stage 1 also included a first workshop with experts, wherein research developments on the principles and contexts for healthy child development were discussed.

- **Stage 2: Implications for ECEC policies.** The second stage overlapped with the last months of Stage 1 and spanned throughout the second half of 2023 and the first half of 2024. The objective of this second stage was to derive implications for ECEC policies from recent research evidence, looking particularly at the areas and challenges of major interest countries (as identified during the initial consultation) where new and meaningful research developments had been identified. This connected to questions on the specific policy levers that would need to be adjusted, on the obstacles and unintended possible negative consequences of policy changes, and on the general directions for strengthening ECEC policies, recognising context dependencies. Discussions during Stage 2 focused on evidence-informed policy strategies and approaches of potential relevance across countries, without delving into country-specific considerations. The main activities carried out in Stage 2 were four project workshops addressing specific policy areas and challenges.

- **Stage 3: Directions for updating ECEC policies at a country level.** The objective of the third stage was to build on the findings from the previous stages of the project to examine policy questions of particular relevance to the five countries that engaged in the policy review in greater depth: Australia, Bulgaria, Ireland, Japan and Korea. The goal was to investigate how the ECEC policies of these countries could be adapted in the future to better align with recent research evidence, taking into account their contexts and policy priorities. Stage 3 aimed also to extend discussions on the parameters for implementation of potential policy changes. Activities undertaken in Stage 3 included in-depth consultations with the five participant countries and two additional project workshops addressing policy questions emerging from these consultations.

Actors and roles

Two major actors were involved in the process of translating research into ECEC policies: the OECD Network on ECEC and a multidisciplinary expert group established for the project. The OECD Secretariat supported the collaboration between these two actors.

The OECD Network is a unique knowledge-sharing platform for policymakers working on developing ECEC policies. Members of the Network include representatives from countries' ECEC policymaking agencies, typically Ministries of Education or other institutions in charge of ECEC policies. The expertise of the ECEC Network, a long-standing body of the OECD, helped identify areas of current ECEC policy for which inputs from the latest research developments could be particularly relevant. Across the different activities of the project, 14 presentations of recent policy developments were provided by members of the Network representing Canada, Finland, France, Germany (2), Iceland, Ireland, Italy, Japan, Luxembourg, New Zealand, Norway and Portugal, as well as by invited representatives from Singapore. The list of topics and policy initiatives covered in these contributions and the names and affiliations of presenters can be found in Annex A.

Members of the multidisciplinary expert group were selected on the basis on their fundamental and policy-oriented expertise in areas deemed of relevance for the project, but also with the goal to cover a broad range of scientific disciplines (see Annex A). This included their research contributions to areas related to child development, learning and well-being as well as their past engagement in ECEC or broader education policy discussions. Experts were expected to provide inputs from specific fields of research and to establish a dialogue with members of the ECEC Network and other experts with an interdisciplinary perspective.

The size of the multidisciplinary expert group was not predetermined, and the project followed a mixed approach regarding the contributions of experts, inviting the majority of them to become involved on an occasional basis and a smaller number to remain involved in the work more regularly. Overall, this served to engage a larger and more diverse set of experts, thereby expanding the breath of expertise and the range of cultures and approaches to child development represented in the group, while also supporting analytical consistency across the project stages and activities through the more stable involvement of a subset of experts. Consideration was also given to including experts who could engage in meaningful discussion with the five countries that participated more actively in Stage 3 of the project.

Across its multiple activities, the project secured contributions from 28 expert researchers working across 13 OECD countries (Australia, Belgium (Flanders), Chile, Finland, France, Germany, Italy, Korea, Luxembourg, the Netherlands, Sweden, the United Kingdom, and the United States) and international organisations (International Labour Organisation). The names and affiliations of the experts and the research topics addressed in their contributions can be found in Annex A.

The project promoted regular and structured exchanges between the ECEC Network and the expert group to ensure the relevance of research insights for policymaking. A core element of the methodology consisted in exploiting complementarities between the two groups, ensuring that contributions from the expert group addressed policy priorities identified by the ECEC Network and provided meaningful input for the design and implementation of ECEC policies. The roles adopted by the two groups across different stages of the project were as follows:

- In **Stage 1**, the ECEC Network indicated areas where input from experts on recent research evidence was sought. Additionally, three experts presented recent developments on the principles and contexts for healthy child development to the ECEC Network.
- In **Stage 2**, the ECEC Network and the multidisciplinary expert group discussed implications of new research for ECEC policies. These discussions took place during various project workshops.
- In **Stage 3**, the expertise of the ECEC Network was sought for peer-learning discussions on how ECEC policies could be updated in specific countries and jurisdictions in light of recent research

evidence. The two groups discussed how barriers to change could be overcome, building on experts' inputs and on the concrete experience of members of ECEC Networks on policy design and implementation.

Milestones of the research-policy translation process

The collaborative process for translating research into ECEC policies embraced by the project resulted in three major outcomes: i) the identification of key policy priorities for the policy review, ii) the organisation of project workshops, and iii) work with the five countries that engaged in the policy review in greater depth as part of Stage 3.

Identification of key policy priorities

The first stage of the project started with a consultation to the ECEC Network to identify countries' policy priorities and derive a list of topics and questions for discussion. The OECD Secretariat distributed a questionnaire in February 2023 to gather input from countries, jurisdictions and key partners on their ECEC policy priorities and areas of research interest.

The Secretariat received 26 responses to the consultation questionnaire. The responses came from 22 different countries and two partner organisations. Of these, 16 responses related to the entire ECEC sector in the corresponding countries, six responses were specific to pre-primary education (ISCED 02), two responses were specific to ECEC for children under age 3, and two responses did not specify.

Countries were asked to answer two main questions:

- What are the high-priority ECEC policy areas for which you would like to engage with the multidisciplinary group of experts to review, revisit, update or develop policies in your country or jurisdiction?
- What are the main research areas on children's development, learning, and well-being that you would like to learn about in order to review, revisit, update or develop ECEC policies in your country or jurisdiction?

The questionnaire included examples of potential policy and research areas, which were intended to give an idea of the type of responses countries could provide, while allowing respondents to also provide responses not included in these lists. Countries were encouraged to note their own priority areas for both policy and research. Responses to the questionnaire included a mix of new suggestions and support for the examples provided for both policy and research areas.

Results from the consultation phase underscored the high priority that countries and jurisdictions represented at the OECD ECEC Network place on ensuring more equal opportunities and inclusion through ECEC. Promoting equity is a long-standing goal of policies and investments related to ECEC. Equity and inclusion are also high-level goals that require policy action on various fronts to achieve. In light of these results, the Secretariat proposed to adopt equity and inclusion as the overarching priority and theme for the Starting Strong VIII policy review.

To support this high-level priority, results from the consultation phase also indicated two main policy directions to be considered: i) quality of ECEC for all children, particularly those from vulnerable families; and ii) co-ordinated systems and services, including supports for families. Results of the consultation also served to identify a number of policy levers where recent research evidence could be considered within each of these policy directions that are reflected in the themes covered in the chapters of this report.

Project workshops

A series of seven project workshops were organised throughout 2023-24 to promote regular and structured exchanges between a multidisciplinary group of researchers and members of the Network on the theme of achieving equity and inclusion through ECEC. All workshops involved representatives of both the ECEC Network and the multidisciplinary expert group, and were designed to provide opportunities for direct interaction, alternating between online and hybrid formats and taking place between and during regular meetings of the ECEC Network, respectively. Besides providing opportunities for evidence-informed policy discussions, the workshops were also designed to showcase examples of relevant policy initiatives describing specific contexts and implementation challenges.

The full list of project workshops can be found in Annex A. A brief description of the first five workshops, corresponding to project Stages 1 and 2, is as follows:

- The **first workshop (Stage 1)** was held as a webinar in June 2023, under the title "Achieving equity and inclusion through ECEC: What research can bring to policies". It discussed the potential of recent research developments in various disciplines to inform more effective policies for promoting equity and inclusion through ECEC.

- The **second workshop (Stage 2)** was held in October 2023 in hybrid format as part of the 32nd Meeting of the ECEC Network, under the title "Understanding and addressing gaps in participation and quality in ECEC". It discussed the measurement, evolution and major drivers of those gaps, as well as policies to reduce them by addressing structural and indirect barriers to both access and high-quality ECEC services.

- The **third workshop (Stage 2)** was held as a webinar in December 2023, under the title "Co-ordinating services and organising ECEC provision". It explored the interplay of ECEC with other support systems for young children and families, as well as how to situate ECEC within the landscape of policies to tackle early childhood inequalities.

- A **fourth workshop (Stage 2)** took place in hybrid format in April 2024 as part the 33rd meeting of the ECEC Network. The theme of the workshop was "Supporting inclusion in ECEC settings: Addressing children's needs through pedagogical and organisational practices". It discussed curriculum, pedagogical and monitoring practices that can support equity and inclusion policies in ECEC through their implementation at the setting level, as well as their implications in terms of professional development and the composition of staff teams.

- The **fifth workshop (Stage 2)** was held as a webinar in May 2024. It explored the theme of "Long-term equity and inclusion in ECEC: Lasting effects and sustainable provision models" by looking at the conditions for ensuring that impact of participation in and quality of ECEC are sustained over time, in particular for children from disadvantaged backgrounds. Topics for discussions included evidence of and mechanisms behind long-lasting effects of ECEC, sustainable funding models and related monitoring processes.

Informed by the knowledge mobilisation framework discussed previously in this chapter, the project implemented a collective evidence appraisal methodology to structure exchanges between members of the ECEC Network and members of the expert group. An example of "evidence-informed deliberative stakeholder engagement" (OECD, 2023[8]), this approach was implemented in collaboration with the "Strengthening the Impact of Education Research" project (Box 2.1) The collective evidence appraisal methodology invited participants in hybrid project workshops to address questions on the generalisability of the data and findings presented by experts, as well as on the extent to which the evidence was fit-for-purpose for policy needs (Box 2.2).

Box 2.2. Guiding questions for evidence appraisal during hybrid project workshops

The figure below describes the unfolding of sessions of hybrid project workshops. Each thematic session started with several presentations of relevant pieces of evidence by experts, after which all workshop participants engaged in a collective evidence appraisal exercise, divided into several steps addressing specific questions. Each scientific study was the subject of a separate round of discussion with the presence of the researcher and a facilitator. Each session concluded with a plenary discussion bringing together the different pieces evidence and corresponding policy questions.

Example of sessions during a project workshop
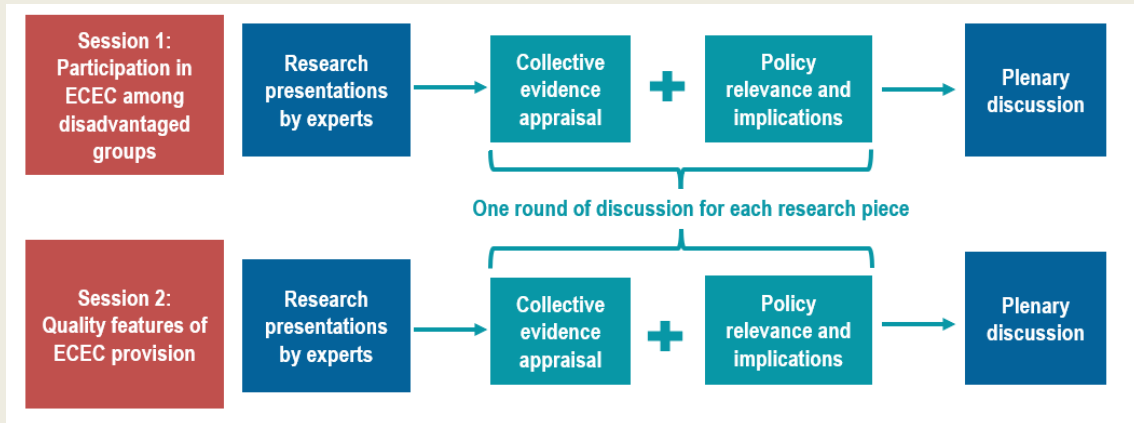
Each round of discussion included the following steps, with questions adapted from (Gough, 2021[10]):

Step 1: The evidence piece

How robust is the methodology?

- What kind of data have been gathered (primary and/or secondary) and are they extensive enough?

What are the findings?

- What do the data actually show?
- Does the evidence explore alternative explanations?

Step 2: Generalisability of the evidence piece

How generalisable are the data and findings?

- Are the findings discussed in view of the context in which the research was conducted? How strongly are they linked to the context?

Step 3: Relevance of the evidence piece

Is the evidence piece fit for purpose for policy needs (i.e. does it give guidance in answering the policy question)?

Source: (Annex A, Workshop 2).

Country-specific policy discussions

The aim of Stage 3 was to apply the lessons learned from Stages 1 and 2 to investigate directions and conditions for updating existing or introducing new ECEC policies in individual countries, focusing on their national contexts to provide a tailored assessment rooted in research and attending to their specific policy goals and constraints.

Work in Stage 3 mostly focused on the five countries that engaged more actively in the policy review, namely Australia, Bulgaria, Ireland, Japan and Korea, but was purposefully designed to also benefit OECD members and accession countries at large given that initial consultations revealed some common ground between the policy priorities and some contextual aspects of these five countries and those of other members of the ECEC Network.

Following a virtual meeting in January 2024, in-depth bilateral consultations took place between the OECD Secretariat and each of the five countries participating in Stage 3. The objective of these exchanges was to discuss the key challenges faced by these countries' ECEC systems and their current policy priorities and initiatives in the ECEC space. Building on this consultation exercise, the OECD Secretariat identified areas of convergence for policy priorities and made a proposal to participating countries regarding potential thematic foci for subsequent Stage 3 activities.

Work in Stage 3 continued with the organisation of two dedicated virtual workshops, which took place in June and October 2024 respectively. The format and focus of these Stage 3-specific workshops was determined in consultation with participating countries. The workshops included contributions from experts selected based on their areas of expertise or knowledge of national contexts, some of whom were already part of the multidisciplinary group of academics involved in project Stages 1 and 2. Other countries represented in the ECEC Network were also invited to provide presentations or take an active role in the discussions, and attendance remained open to all members of the Network.

A brief description of the two Stage 3 workshops, which built on previous project workshops, is as follows (see Annex A):

- The **sixth workshop (first workshop of Stage 3)** took place in June 2024 as a webinar addressing the theme of "Organising and funding ECEC systems and services for equal opportunities". It included sessions on approaches for integrating and co-ordinating ECEC services, on funding models supporting equity in participation and access to quality services, and on collaboration between different government sectors and agencies.
- The **seventh workshop (second workshop of Stage 3)** was held, also as a webinar, in October 2024. It explored the theme of "Supporting inclusion and diversity in ECEC services" with a dual focus on policies to support children with special educational needs and policies to support social, cultural and linguistic diversity across ECEC settings.

A tailored policy note was subsequently prepared for each of the five countries participating in Stage 3, describing their context and policy priorities, taking stock of discussions during workshops, and providing policy pointers relating to the countries' main policy priorities.

Infographic 2.1. Project methodology

**Translating research into policies for quality
and inclusive Early Childhood Education and Care (ECEC)**

This OECD project ran from 2023 to 2024 with the following key goals:

1 To support countries in strengthening their ECEC policies, with a focus on promoting equity and inclusion through ECEC

2 To develop a **collaborative process for translating research into ECEC policies**

3 To identify **conditions for successful policy implementation**

ACTORS

The OECD's ECEC Network, a knowledge-sharing platform on ECEC policies, with country representatives from ECEC policy-making agencies

Experts in child development, neuroscience, education, economics including 28 researchers from 13 OECD countries, for inter-disciplinary discussions

STAGES

STAGE 1 **Identifying** areas where recent research could inform the design of ECEC policies

STAGE 2 **Reviewing** recent evidence to derive implications for ECEC policies, considering the constrains faced by the sector

STAGE 3 **Examining** policy questions at the country level

ACTIVITIES

Desk-based research and statistical analysis of:
8 **international databases**

Initial consultation on policy priorities:
22 **countries**
In-depth consultations:
5 **countries**

Structured discussions on translating research into ECEC policies:
7 **workshops, featuring**

30 Expert presentations

14 Country policy presentations

Critical appraisal of the evidence

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Part II Inequalities in early childhood: drivers and mitigating policies

3 How children develop and sources of opportunity gaps

This chapter presents some of the key findings from recent research on early childhood development and learning, and the factors that support or hinder children's development, learning and well-being. It discusses the main drivers of inequality of opportunity in the early years (putting aside the role of policies that is addressed in other chapters of the report), and presents evidence of such inequality. The chapter also includes a framework of the dimensions of vulnerability for young children that is used throughout the report.

Key messages

- From their very first days, children develop in both cognitive and social and emotional areas, which are interconnected. Children's early development and learning are underpinned by general skills and processes such as executive function, imagination, metacognition (learning to learn) and motivation.

- Early childhood is a sensitive period for development and learning, and early experiences can have a strong impact on various life outcomes. The first two years specifically involve very rapid development in multiple areas; and interventions during this period can offset the effects of trauma and deprivation. But early childhood should be considered in relation to other important periods of neurological and physical development, such as the pre-natal period and middle childhood.

- Play is an important part of development, as it enables children to explore and experiment with the physical and social worlds. There is evidence of a decline in children's play time. Many of the factors that contribute to this trend, such as heightened safety concern, passive use of screens and the increasing prevalence of single parenthood, are more likely to affect children from disadvantaged socio-economic backgrounds.

- A robust body of evidence documents inequalities in multiple areas of early development by children's family backgrounds, but internationally comparative data are missing.

- Income inequalities shape inequality of opportunity between children. Income inequalities have increased on average across OECD countries over the last three decades. Over the last 15 years, poverty rates have remained stable on average in OECD countries.

- Data from the OECD's Programme for International Student Assessment (PISA) indicate that the socio-economic gap in mathematics performance (at age 15) increased on average across OECD countries from 2018 to 2022. In most cases, the increase was due to a decline in the performance of socio-economically disadvantaged students.

- Parents with low socio-economic status spend less time, on average, on developmental activities with their children, which is a key driver of the transmission of inequalities. On average across OECD countries, the percentage of children from an advantaged socio-economic background who are regularly exposed to early literacy and numeracy activities is 22 percentage points higher than for children from a disadvantaged socio-economic background. Recent evidence suggests that differences in parental practices with children are chiefly conditioned by families' socio-economic situations and exposure to stress, rather than by different parental beliefs on what matters for child development.

- Cumulative disadvantages – involving family stress, lesser exposure to rich inter-personal interactions, poor environmental and neighbourhood conditions, and lower access to health services – have particularly negative effects on young children, starting in the pre-natal period and continuing into the first years of life. At the other end of the distribution, socio-economically advantaged families have greater resources to support their children in multiple areas of development.

Introduction

Research on child development has seen impressive progress in recent decades, partly driven by advances in neuroscience. Knowledge of the stages of children's development has improved with an increasing awareness of the importance of the very first years and of pre-natal conditions, but also of the continuous brain development throughout later stages of childhood and beyond. Building on these findings and those from other disciplines, evidence has accumulated on the role of the family environment (e.g. income, living conditions, parenting practices) as well as the influence of other environmental aspects (e.g. communities, neighbourhoods, available services) on children's learning, development and well-being. Differences in the family environment translate, on average, into differences in opportunities from an early age. These mechanisms are often exacerbated by differences in the broader environment. Research has led to a better understanding of the multiple factors that contribute to the opportunity gaps that children experience in the early years, how they build up, and how they might accrue or accumulate later in life.

The deeply entrenched mechanisms that lead to the reproduction of social inequalities act in a context of high, and sometimes rising, economic inequality in most OECD countries, with the richest families capturing a large share of the national income and wealth. At the other end of the distribution, poverty rates have remained at high levels in many OECD countries. A range of economic and social policies shape economic and social inequalities, with those around children and families playing an important role in the early years of life, as discussed in the following chapters of this report.

This chapter addresses the following questions:

- What are the main research advancements in the understanding of how young children develop?
- What are the main drivers of the build up of opportunity gaps in the early years of children's development?

This chapter starts by reviewing some of the main findings from recent research on how children develop and learn in the early years, and the factors that support or hinder children's development and learning. It then presents a framework of the dimensions of vulnerability for young children that is used throughout this report, as well as evidence of inequalities in achievement at an early age between vulnerable children and other children. Finally, the chapter discusses the processes that lead to the build up of inequalities, putting aside the role of policies that is discussed in depth in Chapters 4 to 10.

Early childhood well-being, development and learning

This section provides a brief overview of some of the key findings from recent research from multiple disciplines on how children develop.

Processes and areas of children's development and learning

Advances in neuroscience and contributions from other disciplines (e.g. paediatrics) have led to a better understanding of how the brain develops and how children learn (see Annex A, Workshop 1). Neuroscience research has demonstrated that children have a wide range of early skills (Bendini, 2022[1]). From infancy, children have an intuitive concept of numbers and gain knowledge of objects, which guides their understanding of the physical world. Children also gain an early understanding of people's actions and goals, which serves the development of their own motor skills and their understanding of people's intentions and mental states. Children have an early sensitivity to social relationships, communication and language, which helps them learn about and from other people.

Children's early development and learning involve all areas of cognition and are underpinned by a structurally and functionally complex neural architecture. Children's learning in all areas of core knowledge

depends on general skills and processes such as executive function (focusing attention, memory), imagination, metacognition (learning to learn) and motivation. The foundations of these skills are already present at birth, with clear evidence that infants can recognise stimuli experienced prenatally.

A key contribution of recent research has been to describe the phases of development during early childhood in particular, and later stages more generally. New research using neuroimaging has enabled the development of reference standards for normal brain development and ageing through a series of brain charts spanning from a 15-week-old foetus to a 100-year-old adult (Bethlehem R.A.I., 2022[2]). The pre-natal period and the first three years of life appear as a critically sensitive period for various forms of development and learning. Brain development starts during the very first days of pregnancy through to the last trimester of pregnancy, in which the brain is considered as fully developed. From the end of the pre-natal period, children learn the characteristics of their environment and culture through these structured brain networks (Ministère des Solidarités et de la Santé, 2020[3]).

This research also explains the phases of development at a more granular level. Babies' brain networks are very similar to those of adults, which enable rapid development of phonology, vocabulary and syntax during the first three years of life. Babies' brains act like sponges, soaking up all kinds of environmental information, particularly from their parents or caregivers. In the first year, for example, babies can learn any language, but that capacity is quickly narrowed based on the sounds or signs they hear or see. Starting at about 18 months to two years of age, brain development involves both strengthening important connections and decreasing ones that are not being used. This period continues throughout childhood. Aspects of brain development involved in processes like perception, language and consciousness peak at about age two, meaning that the brain becomes increasingly specialised to focus on relevant inputs and produce relevant outputs (e.g. the sounds specific to the language(s) the child is learning) after this time. Learning – which concerns all aspects of cognition, including language but also the physical properties of objects, numeracy, geometry, navigation in space, as well as reflexive cognition such as having a consciousness of the world, knowledge of oneself and others – proceeds in a similar way across all of these domains. Children progressively learn to process emotions, interact in social settings and develop more complex communication skills, in ways that are adaptive to their contexts and cultures.

Because of enormous capacity for learning in the early years, children's development is also particularly fragile at this point. Serious nutritional and health deficits have the potential to have long-term negative effects when they occur in the early years, as discussed later in this chapter (see Annex A, Workshop 1).

The important role of play

Children develop through play from the first weeks of life. Free play, initiated by children, is at the heart of their development and allows them to build an increasing understanding of the world and their environment (see Annex A, Workshop 1). Through play, children can learn concepts relating to literacy, numeracy and science. Play stimulates curiosity, communication and active emotional engagement. Learning and play are fully compatible: playful learning captivates children's minds in ways that support better academic and social outcomes (Hirsh-Pasek et al., 2008[4]). For these reasons, scientific evidence suggests that reducing the role of play in children's lives and focusing more on the development of academic skills from an early age is not a good direction. Play also helps children develop their motor skills while offering many opportunities for parents to fully engage with their children. Overall, play helps children's development in multiple areas while fostering their well-being. It is in this vein that play is recognised as a right of the child according to Article 31 of the United Nations Convention on the Rights of the Child.

Several paediatric scientific societies have sounded the alarm on the decline in children's play time (Ginsburg, 2007[5]). This trend has been observed in the United States but has also been documented in some other countries including Canada and the United Kingdom (Loebach et al., 2021[6]), although there is no international data on the time that children spend at play. The trend is partly driven by a decline in outdoor play, but is also observed for play at home and in early childhood education and care (ECEC)

settings (Colliver et al., 2022[7]). The feeling that children cannot play safely outside of the home unless they are under close adult supervision, especially in certain neighbourhoods or communities, is an important factor behind this decline in some countries. In addition, the tendency for parents to focus more on activities that aim specifically at developing children's academic skills leaves less time for play, especially unstructured play. Other factors include the increase in the percentages of families with two working parents and families with a single parent. In ECEC settings in countries such as the United States, the last year(s) of pre-primary education have generally become more similar to the first year of primary education, with a strong focus on reading and the development of other academic skills, to the detriment of time for play (Schlesinger et al., 2020[8]).

The World Health Organisation has highlighted the risk that screen time replaces time for non-digital play and has provided guidelines on time spent in physical activity for young children (World Health Organization, 2019[9]). These guidelines recognise that physical activity mainly takes place in various forms of play during which children are active, such as playing with objects, but also pretend play.

The critical role of the home environment, parents and caregivers

Research from various disciplines has discussed the core role that the home environment, parents and caregivers play in the quality of the interactions that children experience with others, which is a key driver of their development, learning and well-being.

The neurosciences and psychology fields have shown that the development of the brain and learning in the early years of life are particularly sensitive to cognitive stimulation and therefore to the interactions that children have with parents, caregivers and other adults. The foundations of brain architecture are established early in life through a continuous series of dynamic interactions between genetic influences and environmental conditions and experiences (Fox, Levitt and Nelson III, 2010[10]). Children have a social appetite from birth, with a preference for social stimuli: human faces and bodies, biological movements, voices, behaviours addressed to them, etc. They pay attention when adults talk to them and vocalise more often when adults talk around them.

Young children therefore quickly become actors in the social world, particularly motivated to participate. They are active agents of their learning, rather than passive subjects (see Annex A, Workshop 1). They have internal models of the environment that surrounds them and are able to analyse its regularities. Infants update and modify these models thanks to error and surprise signals when their initial expectations prove false. This means that curiosity and experimentation are crucial for early learning and should be encouraged, and that errors should be seen as a natural part of this process. At the same time, children need adult guidance to focus their attention on relevant objects and dimensions, as well as to develop language, which is a crucial vector for the acquisition of further knowledge. Frequent and rich verbal interactions with adults are thus critical for children in their early years. The quantity and quality of speech addressed to children (variety of words and structures, rich and interconnected sentences, encouragement, songs and rhymes) has impact on the development of children's language skills. Parental engagement in learning activities, such as speaking and reading to children from an early age, is critical, as is parental awareness of their children's abilities, such as their curiosity.

Parent-baby interaction is a source of pleasure for both the adult and the baby, and initiates the virtuous circle of communication. The infant becomes attached to people who respond quickly, warmly and in the most appropriate way possible to his behaviour; and their feeling of security promotes learning. Beyond parents' capacity to positively support children's development through rich interactions, there is evidence that children raised in stable and secure environments tend to exhibit a future-oriented mindset and develop strategies that entail anticipation and planning for future events, which are personal traits and skills that are associated with positive life outcomes, such as enhanced academic achievement and improved overall health and well-being (Delgado et al., 2024[11]).

Children benefit from having quality interactions with both parents. For instance, some studies have looked at the specific role of fathers on child development in families with opposite-sex parents. A study in the United Kingdom – using data from the Millennium Cohort Survey linked to educational records – found that greater paternal involvement in structured educational activities (like reading and playing) provides an educational advantage to children in the first year of primary school (Norman, 2023[12]). The earlier a father gets involved in the child's life, the more likely he is to be involved later when the child is older, which has benefits for a child's educational progression.

Building on findings from the field of neurosciences, but from a different perspective, research in the social sciences has attempted to identify the various factors that make up the quality of the home environment and explain its crucial influence on children's development. Similar to ECEC settings (OECD, 2021[13]) (see Chapters 6 and 7), the quality of the home environment can be characterised by structural and process factors (Duncan et al., 2023[14]). Structural conditions include absolute level of income, number of books and toys in the home, amount of quality food for children, regularity and sufficiency of sleep, and safety of the home environment, including exposure to second-hand smoke and other toxins. Process measures include both quantity and quality of the behaviours reflecting parenting practices or the interactions children have with others within the home environment. For instance, the quality of the home environment is measured through the Home Observation for Measurement of the Environment (HOME) instrument that includes information on the family composition, gender roles, the division of childcare in families, the acceptability and advisability of different forms of discipline, and the digital environment in which children live, although this measure is not relevant to all cultural groups (Lansford et al., 2023[15]).

More generally, research in the social sciences (e.g. sociology, economics) has demonstrated the critical role of family status on a large set of life outcomes, with various drivers of inequality already at play in early childhood (see Annex A, Workshop 1). These results are discussed later in this chapter.

The consequences of stress and trauma

A large number of studies from multiple disciplines have highlighted that stress (i.e. the state of mental or emotional tension) stemming from trauma, neglect or other difficult situations in the early years can have profound effects on children's development and throughout their life. Recent research has aimed to quantify the negative effect of stress and trauma on children's development and to better understand the mechanisms behind these effects.

During early childhood, the brain is particularly sensitive to stress. Chronic exposure to stress in early developmental stages can disrupt cognitive and emotional aspects of normal development, causing a significant delay in the ability to learn. Elevated maternal stress during pregnancy is associated with atypical brain development and higher risk for psychopathology in offspring (Nolvi et al., 2023[16]). High levels of stress can diminish the normal functioning of essential nervous systems that are located in the prefrontal cortex, which are responsible for moderating social behaviour, planning and emotions (Shay, Shavit and Sasson, 2023[17]). Childhood adversity may accelerate a shift from exploration to exploitation decision-making behaviour (i.e. falling back on a familiar method versus trying a new, exploratory method), with wide-ranging effects on the adult brain and mind (Frankenhuis and Gopnik, 2023[18]).

Supportive environments during early postnatal life may promote brain development and reverse atypical developmental trajectories induced by pre-natal stress. A study found effects on brain activity of psychosocial deprivation around 2 years of age among institutionalised children in orphanages in Romania (Vanderwert et al., 2010[19]). However, removing children from psychosocial deprivation before the age of two had profound effects on brain activity. Similar experiences at 42 months of age found no effects of the intervention on the brain activity; this suggests that the intervention had its greatest effect when enacted before 24 months of age. By 8 years of age, with the continued experience of an enriched environment, and the absence of psychosocial deprivation, these children showed patterns of brain activity similar to those of children who had not suffered from deprivation. The timing effects in the findings suggest a

sensitive period after which brain activity in the face of severe psychosocial deprivation is less amenable to recovery.

The role of health

Children's health is closely related to their learning and development. This relationship has been known for decades, and has driven policies supporting good nutrition and regular health and development reviews. This section focusses on some recent developments.

Recent research has looked at how pre-natal conditions influence children's health and early stages of development with possible long-term implications. For instance, a recent collection of articles in medical sciences have highlighted the multitude of maternal factors that influence pregnancy, childbirth, and the health of both the mother and child during pregnancy and long after birth (Tong et al., 2024[20]). These factors include mothers' pre-existing medical conditions (e.g. diabetes), nutrition, maternal stress and mental health, environmental exposures (e.g. smoking, alcohol and pollution), genetics, and obesity. Heightened maternal stress has been related to preterm birth, which is a major cause of death in young children and of lifelong disability (Sutton and Darmstadt, 2013[21]).These findings point to the need for policies that support families during pregnancy and mitigate maternal stress as a preventive measure, in addition to those targeted at families and children in the early years after birth.

Sleep has also been identified as a key factor for children's development. Sleep ensures good health and physical development, as well as optimal emotional and cognitive development (Chaput et al., 2017[22]). It is one of the key elements of learning, thanks in particular to rapid reactivations (replay) of events preceding sleep episodes. These reactivations allow for consolidation in long-term memory but also the discovery of abstract relationships between events. For example, learning of vocabulary is facilitated by naps taking place after exposure to new words. Likewise, in kindergarten, learning in the morning is reinforced by a nap at the beginning of the afternoon (Kurdziel, Duclos and Spencer, 2013[23]).

Studies over the last decades have looked at the effect of exposure to pollution on children's health and development. Exposure to indoor air pollution (from cooking fuels and passive smoke during pregnancy) are associated with delays in children's development (Herrmann, King and Weitzman, 2008[24]) (Grippo et al., 2023[25]). Outdoor air pollution coming from suspended particulate matter (PM) (especially PM2.5 but also PM10) is considered as the most dangerous to human health. When such exposure occurs during pre-natal development, this can lead to lower birth weight of a baby and breathing problems. During childhood, exposure can lead to airway inflammation, coughing, nose and throat irritation, acute respiratory infection (including bronchitis and pneumonia) and chronic respiratory infection (including asthma) (UNICEF, 2023[26]).

The role of digital technologies

In home environments, young children interact with digital technologies (tablets, mobile phones, computers, etc.) at increasingly younger ages, for a wide range of activities. Digitalisation broadens the bundle of skills needed to thrive in a technology-rich world. Early childhood can be a window of opportunity for introducing children and families to safe, creative and educational uses of digital technology, as it is a time when young children gradually gain autonomy in using digital tools, but remain more accepting of adult guidance and supervision (OECD, 2023[27]).

However, research has also paid increasing attention to the negative effects of passive exposure to screens and digital technologies on children's development. For instance, passive use of screens at important times (waking up, going to bed, during meals) has been shown to replace rich interactions with adults and playtime, with detrimental effect on children's sleep and development. For example, background television interrupts children in their play and can prevent them from learning to concentrate. Regular use of the screen as a means of calming children could hinder them in developing their own emotional

regulation. Furthermore, digital content that claims to have educational properties has often not been evaluated. It is therefore important that children are protected from harmful effects and equipped with knowledge to thrive in digitally enhanced societies (OECD, 2023[27]). Research points to several principles for using digital technologies with young children, such as ensuring that children are actively engaged and work together, and that activities with digital technologies are limited in time and do not replace or limit other play and learning opportunities.

In addition, screens might distract both parents and children and affect the quality of the interactions between them. Neuroscientists insist on the risks of disruptions caused by technology on human interactions (and particularly those between parents and children), so-called "technoference". A review of 27 studies of parental mobile device use during parent-child interactions found that device use may compromise the development of a secure attachment relationship and children's general development (Kildare and Middlemiss, 2017[28]). A study of interactions during meals between mothers and their children (around 6 years old) found that mobile use by mothers was associated with 20% fewer verbal and 39% fewer non-verbal interactions, as well as 28% fewer encouragements, compared with no mobile use (Radesky et al., 2015[29]).

Evidence of inequalities in children's early years and later in life

Inequalities in children's development, learning and well-being, depending on their socio-economic background and other characteristics, come into play before birth and continue into the very early years of life. These inequalities are shaped by household income inequalities. Evidence on early inequalities and how they tend to reproduce is needed to inform policy design, implementation and assessment. In particular, this can help identify groups of children who might be in more vulnerable situations, called "vulnerable children" throughout this report, and require specific policy attention.

Defining vulnerable children

Children come from diverse socio-economic, linguistic and cultural backgrounds. These different characteristics can, in themselves, represent advantages or disadvantages for children. They may be seen as an asset that can lead to greater resilience, more knowledge of and openness to other cultures. However, children from socio-economically disadvantaged or minority backgrounds are generally more vulnerable, as they are at risk of having weaker outcomes in education and in life more generally. Research has identified a range of consistent predictors that put children at higher risks of poor development and learning conditions, starting in the early years. Those predictors can help design policies that aim to mitigate inequalities. Risk factors include parents' socio-economic status (SES), immigrant background and parents speaking a minority language at home, being from minority racial or ethnic groups, and having special education needs (SEN). These risks factors are often interrelated. This report looks at inequalities among children along these various dimensions, while recognising that children can be exposed to multiple sources of vulnerabilities (Figure 3.1).

Figure 3.1. Framework of the dimensions of vulnerability for young children

Children with special education needs

Children with an immigrant background

Children from ethnic minorities and Indigenous peoples

Children from low socio-economic background

These vulnerabilities can intersect and accumulate in certain homes

With parents with low socio-economic status:

- Household characteristics (e.g. lone parent, limited social capital)
- Low parental education
- Low income/exposure to poverty
- Low occupational status
- Precarious employment

A child's socio-economic background is determined by their parents' SES, which includes several dimensions that contribute to the likelihood of experiencing a variety of stressors (see sections below) and are therefore critical for young children's outcomes:

- Income: Low income can lead to poor housing and living conditions, difficulty buying the things children need, and less access to health services. Poverty translates into stress, psychological vulnerability, and weaker ability to adopt practices that support children's development.

- Parents' educational attainment: Research has shown that parents' education, and particularly maternal education, is related to the type and amount of practices with children (Ma, 2022[30]). For instance, higher-educated mothers are more likely to engage in daily reading, rich verbal interactions and pleasant interactions with children.

- Occupational prestige: The type of occupation, beyond the income it provides, contributes to parents' status, ability to engage with peers and the overall family social capital. Work type also influences values and beliefs about children's development, although differences in values and beliefs between white- and blue-collar occupations have reduced over time.

- Employment status: Precarious employment situations in the family such as short-term contracts, informal employment, or a single working member in the family create risk to income and can generate stress at the family level, with impacts on children.

- Household characteristics: The risk for one-parent households to be exposed to poverty and social and emotional difficulties are higher, and parents' mental health has strong impacts on children's development. Single parents might have less time to engage in rich interactions with their children. They might also be more isolated than dual-parent families, and less well connected to the larger community, which can impact children as social capital is associated with children's outcomes.

Young children with an immigrant background are vulnerable partly because of the vulnerability of their parents. Migration means a change in the individual's physical and social environment from the one that they were originally familiar with (Cerna et al., 2021[31]). The degree of adversity differs greatly across individuals, depending on their migration experience and personal circumstances. It can range from the small challenge related to understanding how services to children and families are organised to disruption

in family bonds and social networks. Children with an immigrant background often experience a different language at home than the one used in the education system.

Children from ethnic minority groups and Indigenous communities are different groups; hence, they need varying policy responses based on their specific needs (Cerna et al., 2021[31]). Nonetheless, they often face significant and similar challenges when it comes to education, such as lower educational attainment and higher dropout rates. The reasons are complex but relate to factors that start in the very early years such as discrimination, bullying, language barriers and misunderstood cultural variations.

Children with special education needs (SEN) is a term used in many education systems to characterise the broad array of needs of children affected by learning disabilities, physical impairments and/or who suffer from mental disorders (Cerna et al., 2021[31]). The challenges for parents, ECEC settings and schools in providing high-quality education to children with SEN relate to the identification of their needs and the organisation and adequate resourcing of responses. This type of vulnerability is different in nature from dimensions stemming from family characteristics, but shares similarities in the sense that systems need to adapt to respond to these needs.

Some of these risks overlap or accumulate, and are generally framed around the concept of intersectionality, or the way in which inequality is associated with multiple social categories of identity and compound inequities in outcomes for individuals. Intersectionality at the family level translates to children. Family socio-economic and psychological vulnerability are linked to parent's education, family income and family structure. Furthermore, children of migrants and from culturally and linguistically diverse communities may experience several vulnerabilities coming from the fact that their parents do not master the language used in education institutions for everyday interactions at home, and that they are usually overrepresented amongst lower social class positions and that differences related to ethnicity might lead to disparity in treatment or even forms of segregation, at least in some countries.

Evidence of inequalities in the early years and measurement challenges

There are two main and complementary approaches to evidence of early years inequalities. The first type focusses on inequalities in achievement or the extent to which children from different backgrounds are able to perform certain tasks at a certain age. The other approach focusses on inequalities in opportunities or the extent to which children from different backgrounds have different access to environments and services that relate to their development, well-being and learning.

A robust body of evidence coming from national studies documents inequalities in multiple areas of early development by children's family backgrounds. However, international data on children's outcomes before entry in primary education are still limited in scope and country coverage. The OECD International Early Learning and Child Well-being Study (IELS) provides data on children's early learning through a broad scope of aspects that comprise cognitive and social and emotional development for 5-year-old children. In England (United Kingdom), Estonia and the United States – the three countries that participated in the pilot study in 2018 – socio-economically disadvantaged children had both lower early cognitive skills and social and emotional skills than advantaged children, although the strength of the relationship varies depending on the area of development (Figure 3.2).

Figure 3.2. Socio-economic gaps in cognitive and social and emotional development at age 5

Development differences in months between socio-economically disadvantaged and advantaged children, average across participating countries, 2020
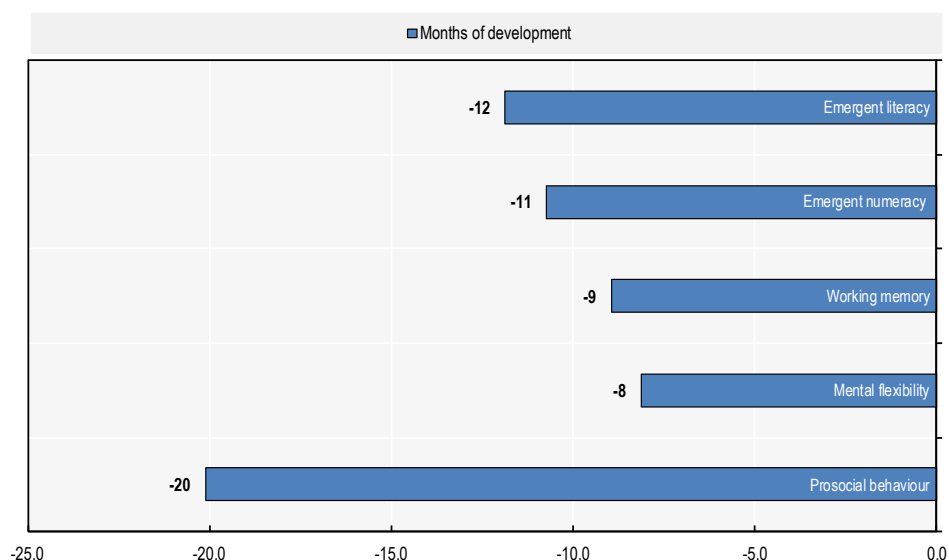
Notes: Average across participating countries: England (United Kingdom), Estonia, and the United States. Socio-economic background is measured by the IELS SES index score (see Annex B).
Source: OECD (2022), *Improving Early Equity: From Evidence to Action*, https://doi.org/10.1787/6eff314c-en, Figure 1.1, https://stat.link/6scugv.

In Europe, a study analysed the evolution of achievement gaps in children from infancy and preschool age up to end of compulsory schooling in five countries (Germany, Italy, the Netherlands, Norway, and the United Kingdom), building on national longitudinal datasets (Passaretta and Skopek (Eds.), 2018[32]). The study found evidence of gaps in achievement (e.g. in language or literacy, math and science, depending on data availability in these countries) according to several dimensions of socio-economic status and immigrant backgrounds in the early years (e.g. starting at age 2-3).

While studies on achievement gaps in the early years have progressed and have pointed to key findings, they remain limited, partly because measurement of early childhood development is complicated for several reasons. First, their age makes the assessment of young children's development complicated. Contextual or environment factors and the state of the child at the time of the assessment influence the child's responses, more so than for older children. Second, because early development spans across many domains and occurs at different paces, standardised assessments have been criticised for giving an incomplete picture of children's development. Furthermore, cultural differences and differences in approaches to ECEC mean that countries put different emphases on areas of children's development, which can contribute to differences in achievements between countries. However, these challenges also exist for measuring outcomes at older ages and have progressively been addressed as international studies have developed and their methodologies have improved. Global approaches that capture several developmental areas are better than limited ones (e.g. those looking at the number of spoken words only).

A complementary approach consists in looking at inequality of opportunity, for which there are more international data sources, although many gaps also remain in this area. For instance, in the United States, the National Academies of Sciences, Engineering and Medicine define the opportunity gap as the unequal and inequitable distribution of resources and experiences on the basis of various child characteristics (e.g. socio-economic background, race, immigrant background). This includes gaps in access to health services, quality ECEC and safe environments.

Approaches that measure early inequality of opportunity and achievement inequality need to be combined to get a better understanding of how the interplay between children and family characteristics and policies and institutions shapes achievement inequality and how this can be mitigated. For instance, the OECD Child Well-being data portal includes comparative measures on child well-being outcomes and the drivers of well-being stemming from children's environments, although without focusing on young children specifically. This report considers both approaches.

Trends in economic and education inequalities and poverty rates

Income inequalities translate into differences in children's opportunities to learn and develop. There is clear evidence that higher income has a positive causal effect on maternal mental health, parenting and the quality of the home environment, and thereby influences children's development (Cooper and Stewart, 2020[33]). Large income inequalities in a country lead to children starting their lives with different opportunities. How income inequalities evolve thereby has consequences on how differences in children's opportunities evolve: when inequalities in family income or poverty rates increase, differences in children's opportunities are likely to broaden as well.

Income inequality varies considerably across OECD countries (Figure 3.3). In 2022 (or latest available year), Czechia, the Slovak Republic and Slovenia had the lowest levels of income inequalities, as measured by the main indicator of the income distribution (Gini coefficient); while Chile, Costa Rica and Türkiye had the highest levels. Over the last 15 years, income inequality has remained stable on average in OECD countries, but increased in several OECD countries, including countries with low starting levels of inequality (Denmark, Hungary and Sweden) and in countries with high starting levels (Türkiye and the United States). Compared to the 1995-2010 period during which income inequalities expanded largely, inequalities have stabilised in the last 15-year period on average across the OECD (OECD, 2015[34]).

Figure 3.3. Trends in income inequality

Gini coefficient of household disposable income, in 2007, 2019 and 2022 (or latest available year)
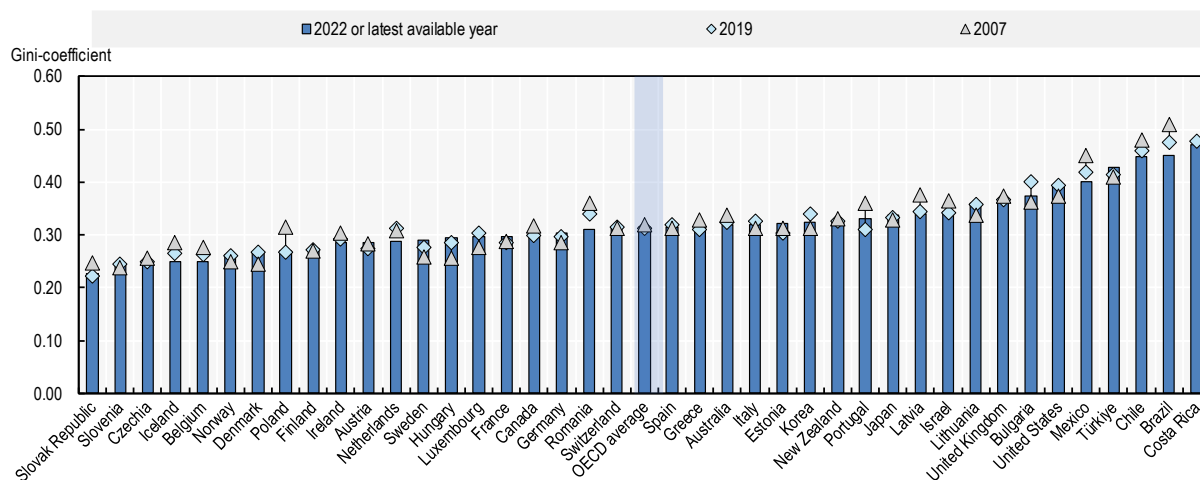
Notes: Income inequality is the difference in how household disposable income in a particular year is distributed among the population, as measured by the Gini coefficient (see Annex B). Countries are ranked in ascending order of Gini coefficient in 2022 or latest available year.
Source: OECD (n.d.), *Income Distribution Database (IDD)*, http://stats.oecd.org/Index.aspx?DataSetCode=IDD (accessed on 2 January 2025).

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A main driver of the increase in income inequality has been a large increase in the incomes of the richest 10% (and, even more markedly, the 1%), which has been larger than the increase for the rest of the population and has therefore led to an increase in the share of the income going to the richest. This has happened in the United States but also in many other OECD countries. In the United States, some authors have argued that the economic elite is now made up of individuals who tend to have gone through successful education pathways and training, and who have a strong taste for and capacity to train their children, and who invest heavily in their children's education through many channels (Markovits, 2019[35]). Competition for educational opportunities, coupled with high tuition fees in the private education sector, has pushed children from low-income parents out of the best schools. When high-income parents expand their children's capacity (as discussed at the end of this chapter) in disparity with children from low-income parents, income inequality is highly likely to increase inequality of opportunity and lead to low social mobility.

At the other end of the distribution, the share of income of the poorest 10% has declined over the last three decades, as did the share of the lowest 40%, in a phenomenon of the decline of the middle class (OECD, 2019[36]). There are also large differences between countries in poverty rates (i.e. the share of the population living with less than half the median disposable income in their country) (Figure 3.4). Between 2007 and 2022, the average OECD relative poverty rate has remained stable. However, it has increased in countries with both relatively high and low poverty rates.

Figure 3.4. Trends in poverty rates

Percentage of the national population living with less than the relative poverty threshold in 2007, 2019 and 2022 (or latest available year)
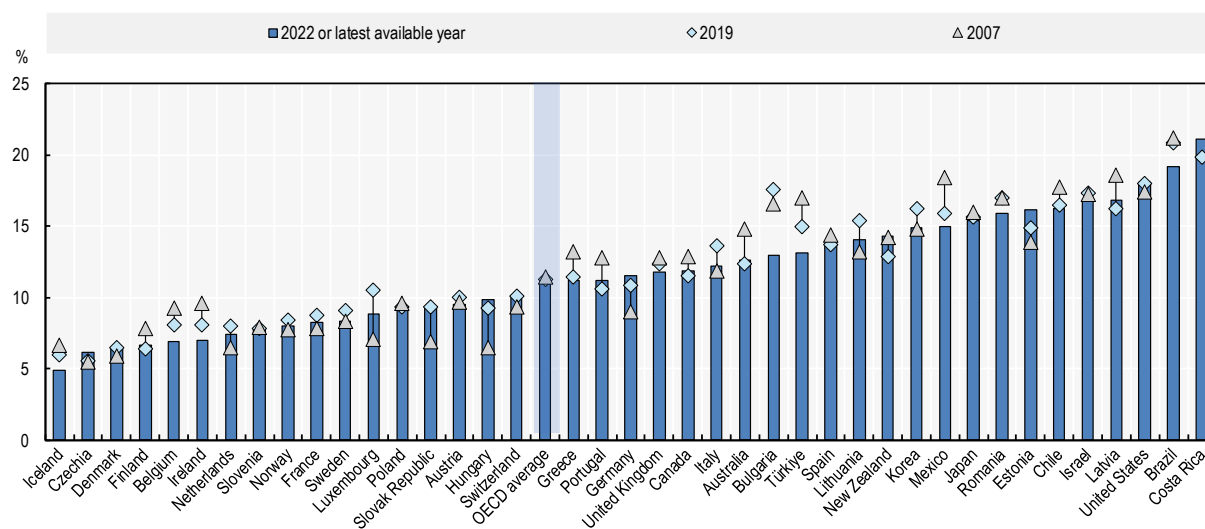
Notes: The relative poverty threshold is defined as 50% of the median equivalised disposable income, by country and by year (see Annex B). Countries are ranked in ascending order by poverty rate in 2022 or latest available year.
Source: OECD (n.d.), *Income Distribution Database (IDD)*, http://stats.oecd.org/Index.aspx?DataSetCode=IDD (accessed on 2 January 2025).

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The link between socio-economic background and education performance is highly visible in data from the OECD's Programme for International Student Assessment (PISA). These data measure 15-year-olds' knowledge and skills in reading, mathematics and science, as well as their socio-economic background through the PISA index of economic, social and cultural status, which is based on questions on parents'

highest level of education, parents' highest occupational status and home possessions. The most recent PISA data indicate that on average in OECD countries, performances of children from parents with low socio-economic status are lower than those from high socio-economic status families (Figure 3.5). Over the recent period that has been marked by a relative stagnation of inequalities, mean performance in mathematics dropped on average across OECD countries, and the socio-economic gap widened. This gap did not change significantly in the majority of OECD countries but widened in some of them. In most of these countries, these changes came from a decline in the performance of socio-economically disadvantaged students while socio-economically advantaged students' performance did not change. Among OECD countries, the socio-economic gap in mathematics narrowed only in Chile (OECD, PISA 2022 Database, Table I.B1.5.19).

How inequalities build up

Differences in opportunities build as some children are more exposed to factors that hinder their learning, development and well-being, and are less exposed to factors that are supportive. The goal of this section is to outline the main mechanisms behind the development of early inequalities, as indicated by recent research.

Inequalities in parental time investment and the quality of family practices

The quantity and quality of parental practices (or "investment") are widely viewed as a key determinant for children's future economic and social success, and a source of the intergenerational transmission of human capital, and thereby an important mechanism for the reproduction of inequalities.

Three main features of parenting are important in this respect:

- Parental beliefs include what parents expect the course of development to look like and what parents see as their own role in their children's development.
- Parenting style consists of the attitudes that parents communicate to their own children and the emotional climate in which these attitudes are expressed.
- Parenting practices cover a large domain, including the variety of interactions with their children, the kinds of home environments parents create for children, and the connections to the world outside the home that parents both enable and permit.

Parents with low socio-economic status, on average, spend less time in developmental activities with their children compared to parents with higher socio-economic status (Duncan et al., 2023[14]). This is recognised as a key driver of the transmission of inequalities. Recent evidence from United States time diary data shows that mothers with at least a bachelor's degree spend nearly six hours more per week in direct, intensive interactions (e.g. activities such as reading, playing and bathing with their children) than do mothers with a high school degree (Kalil et al., 2023[37]). This means that over a year, the children of highly educated parents receive 300 more hours of direct parental time on average than do children of less educated parents. This represents a difference of about 10 weeks of 6-hour days of preschool between the two groups.

Figure 3.5. Change in the socio-economic gap in mathematics performance at age 15

Mean performance in PISA mathematics assessment, by socio-economic background, in 2015 and 2022
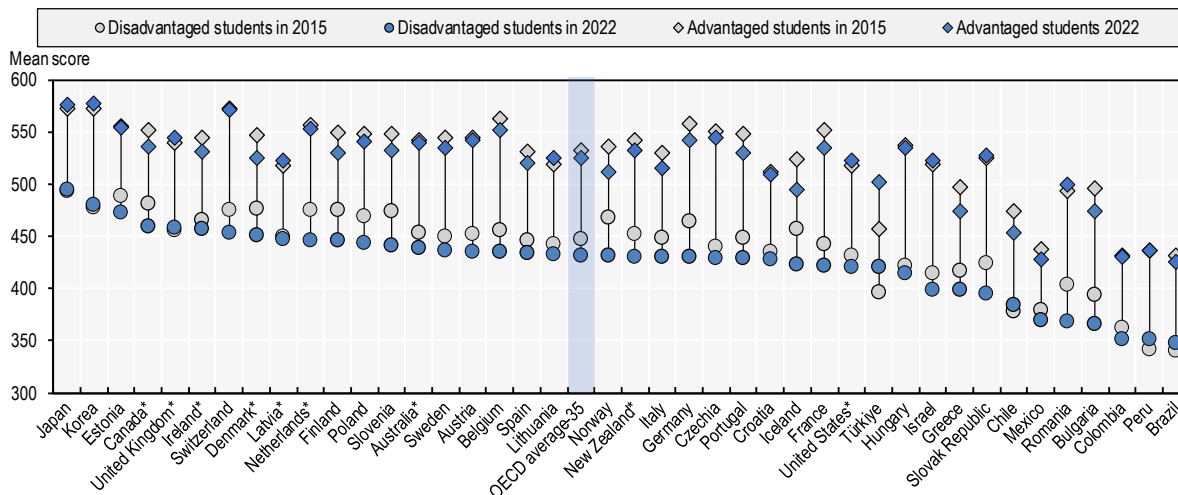
Change in the socio-economic gap in mathematics performance (PISA 2022 - PISA 2015)
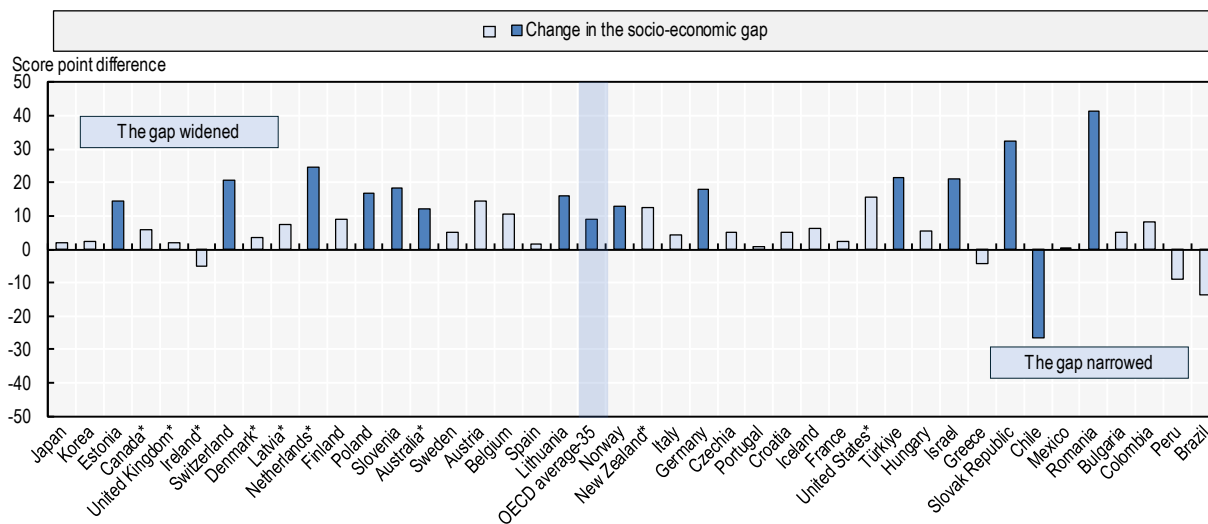
Notes: *Caution is required when interpreting estimates because one or more PISA sampling standards were not met (see Annex B).
Only OECD member and partner countries that can compare PISA 2015 and 2022 results are shown. OECD average-35 refers to the average across OECD countries, excluding Costa Rica, Luxembourg and Spain. Statistically significant differences are shown in a darker tone (see Annex B). Socio-economic background is measured by the PISA index of economic, social and cultural status (see Annex B). Countries and economies are ranked in descending order of the mean score in mathematics of socio-economically disadvantaged students in 2022.
Source: OECD (2023), *PISA 2022 Results (Volume I)*, https://doi.org/10.1787/53f23881-en, Table I.B1.5.19.

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Survey data show gaps in the frequency of the use of stimulating practices at home between families with different socio-economic status. The Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS) surveys ask parents in a broad range of countries about the extent to which they carry out early literacy and numeracy activities with their child, such as

telling stories and playing word games, or counting different things and drawing shapes. These surveys also include a measure of children's socio-economic background through the Home Resources for Learning index, which is based on parents' reports of the number of books at home, parents' level of education and their highest level of occupation. In all countries, the percentage of children from advantaged socio-economic background who are regularly exposed to early literacy and numeracy activities is higher than for children from disadvantaged socio-economic background, with a gap of 22 percentage points on average in OECD countries. However, the gap varies substantively across countries, from around 10 percentage points in Czechia, Israel and the Netherlands to over 40 percentage points in Bulgaria and Türkiye.

Figure 3.6. Socio-economic gap in home activities for early literacy and numeracy

Percentage of 10-year-old students whose parents reported doing a range of early literacy and numeracy activities with their child "often", by socio-economic background, 2019
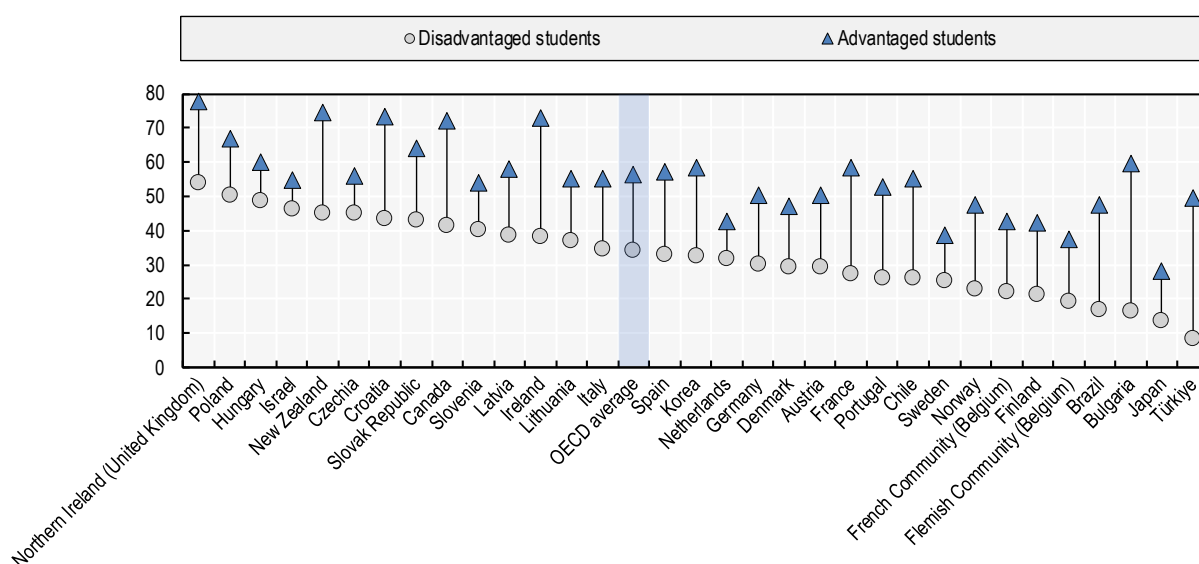
Notes: Data are from TIMSS 2019 except for Brazil, French Community of Belgium, Israel, the Netherlands and Slovenia. For these countries and jurisdictions, data are from PIRLS 2021. OECD average refers to the average across available OECD countries, excluding subnational jurisdictions. Statistically significant differences are shown in a darker tone (see Annex B). Socio-economic background is measured by the PIRLS and TIMSS index of Home Resources for Learning (see Annex B). Countries and economies are ranked in descending order of the percentage of disadvantaged students whose parents reported conducting early literacy and numeracy activities "often".
Source: International Association for the Evaluation of Educational Achievement (n.d.), *TIMSS 2011 and 2019 databases, PIRLS 2011 and 2021 databases*, https://timssandpirls.bc.edu/databases-landing.html (accessed on 13 June 2024).

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Understanding the reasons why families from lower socio-economic status spend less time on average on rich interactions with children is important to drive policy responses. Previous research brought forward differences in the degree to which parents value or enjoy spending time in enriching activities with children, as well as in the degree to which they are informed about the importance of these interactions (Hoff, 2002[38]). However, recent studies have found limited or no support for the enjoyment hypothesis: mothers of all socio-economic levels report higher positive feelings for spending time in interactions with their children compared to other activities (Kalil et al., 2023[37]). Concerning the possible role of differences in beliefs, recent evidence suggests that parents across the economic distribution similarly understand the importance of engaging in rich interactions with their children (Duncan et al., 2023[14]). Another aspect of

beliefs are the characteristics or skills that parents think they need to instil in children to prepare them for life. In the past, there seem to have been differences between parents with a high socio-economic status valuing more "independent thinking" or "self-direction", while parents with a low socio-economic status have tended to value "obedience" and "conformity." However, recent evidence suggests that differences in these beliefs have converged over the last three decades (Ishizuka, 2018[39]). Overall, parents with lower status seem to want to do many of the same enriching activities as those with higher status, but they are less likely to do them. In addition, studies and data on interactions between children and parents mostly rely on western notions of parental time investment, putting a strong focus on early literacy activities at home, that are not fully relevant to different population groups for which other types of activities prevail (e.g. outdoor activities, storytelling and oral traditions, dance).

In recent research, a variety of factors have been put forward to explain differences in the time spent with children by parents with different socio-economic status. Parents face different constraints that affect their decision making. Socio-economically advantaged and disadvantaged parents face differences in stress, in their social networks and in their own experiences that lead them to make different decisions (Duncan et al., 2023[14]). It has also been argued that parenting often requires quick, on-the-spot decisions and that p*arents make some decisions automatically, but parents with different status have* different cognitive heuristics or "shortcuts". Moreover, as parenting investments have uncertain returns, present bias can cause parents to prioritise activities involving money and time that provide immediate rather than long-term returns. Parenting in less favourable economic contexts is associated with decision making that focusses on present versus future gains and relies on habits rather than conscious problem solving. Parents with lower levels of education may be less informed about the appropriate timing of key parental inputs, in terms of child development, and about children's developmental milestones. As a result, they may fail to promote important skills at a time when it would be most developmentally effective.

In sum, mechanisms that explain the differences in parenting practices based on socio-economic status are varied and nuanced. They are linked to differences in income, family and environmental stress and time constraints, among other factors that influence parental decisions.

Inequalities in exposure to family and environmental stress

Family and environmental stress affects children directly through poorer health and lower well-being, and indirectly through effects on their parents. There is consistent evidence that parents with low-socio-economic status on average interact with and invest in children to a lesser extent because they experience more stress in their daily lives than higher-income parents, both because stress increases parents' anxiety and depression, and because it can undermine parents' cognitive ability to focus on long-term, rather than short-term, goals (Cooper and Stewart, 2020[33]).

The Family Stress Model framework shows how poverty and economic pressures faced by low-income families, especially when coupled with other stressful events that tend to be more prevalent in these families' lives, can create psychological distress, impact parents' mental health and cause parental conflict and marital problems that disrupt parent-child interactions (McLeod and Kessler, 1990[40]). Stress may lower parents' ability to acquire and process information in a way that supports their investments in their child's skill development.

Longitudinal data have enabled looking at the dynamic aspects of stress. Over time, personal distress may strain family relationships and disrupt parenting, eventually threatening the health and well-being of children living in the home (Masarik and Conger, 2017[41]). Studies have shown that depression and other forms of psychological distress (e.g. anxiety), as influenced by economic stress, are linked to: i) unsupportive parenting practices toward three-year-old children; ii) reductions in both the quality and quantity of time spent interacting with two-year-old children; iii) harsh parenting toward 6-10-year old children; iv) less provision of social and cognitive enrichment activities for 5-year-old children; v) punitive

and over-controlling behaviours toward 6-year-old children; and vi) heightened risk for child abuse and neglect in the preschool years (Masarik and Conger, 2017[41]).

Exposure to stress also relates to environmental conditions. Children experience differing levels of exposure to environmental contaminants, such as lead and those that place them at risk of asthma. This is linked to housing and local environmental conditions. Furthermore, climate change creates risks of extreme weather events such as heat and flood, with risks to children' health and feeling of home security that are related to the overall quality of the home environment. High-income parents have more resources to protect themselves and their children against these risks.

Cumulative disadvantages and reinforcing factors

Various disciplines have studied processes of accumulation of advantages or disadvantages, either focusing on children and their families themselves (neurosciences and genetics) or children and families in relation to their broader environment (social sciences).

Children who have low cognitive scores also tend to have more behavioural problems, which suggests that there is a double disadvantage for children who lag behind their peers (Allen and Hutton, 2023[42]). The relationships between children's well-being and their social and emotional and cognitive development, as highlighted by neurosciences research, explain these outcomes. Multiple developmental domains (i.e. cognitive, social and emotional, health) interact and affect the skill formation process over time These dynamics reinforce each other and are therefore complicated for policies to address.

Among the factors that lead to dynamics of disadvantages, research has made progress in better understanding the effects of genetics (Wang et al., 2021[43]); (Rustichini et al., 2023[44]). The role of the genetic profile of parents on children's development means that inequalities in opportunities tend to reproduce or reinforce inequalities at birth. Parental genotype (captured by a polygenic score that predicts educational attainment) is directly transmitted to children ("direct genetic effect"), but also indirectly shapes the environment that parents provide to their children (so-called "genetic nurture"). Environments created by parents relate to their offspring's educational outcomes independent of genetic transmission. Further, children's genetic endowments elicit different behavioural responses from parents. For instance, genetic endowment associated with greater interest in reading steers more reading by parents to their child (Cattan, 2022[45]).

At the family level, situations that create vulnerabilities (or strengths) are interrelated. For instance, poverty can induce stress through negative environmental stimuli that are caused by violence in the family and in the community, divorces, frequent residential moves, job instability and unemployment (Shay, Shavit and Sasson, 2023[17]). These might all lead to greater use of negative parenting strategies. Cycles of disadvantages are often related to a country's history and its legacies (e.g. racism, immigration patterns), leading to inequalities that affect some population groups in particular and that are deeply entrenched (Allen and Hutton, 2023[42]). Large ethnic gaps in opportunities exist in countries looking at this dimension (e.g. in the United States and the United Kingdom).

When inequalities in opportunities start in the pre-natal period, they often continue or expand throughout early childhood. These inequalities are influenced by a myriad of factors, including access to health care and adequate nutrition, low family income or poverty, neighbourhood safety, and environmental conditions, and are exacerbated by racism, segregation, implicit and explicit bias, and stigma.

Separations and divorces are also related to low income and family stress and lead to a decline in children's time allocated to educational activities (e.g. studying, reading) and an increase in children's time in unstructured activities (e.g. watching TV, video gaming, smartphone use) (Cano and Gracia, 2022[46]). In particular, separation in families with opposite-sex parents leads to a strong increase of gender inequalities in parents' time use with father-child time remaining low or declining and mother-child time doubling. In addition, when fathers spend less time with their children, other individuals who are less committed to

children's development may spend more time with them (e.g. neighbours and nannies). A literature review that looks at estimates of causal effect of fathers' absence finds negative effects on children's social-emotional development, especially if father absence occurs during early childhood, and these effects are more pronounced for boys than for girls (McLanahan, Tach and Schneider, 2013[47]).

Recent research has also focussed on the role of geographic inequalities and neighbourhood effects that might lead to or reinforce inequalities in employment, income, access to services, life expectancy and well-being, and tend to create poverty traps with implications for young children (Chetty and Hendren, 2018[48]). Inequality of opportunity is thereby concentrated in some areas. Residential segregation has increased in the United States since 2000 (Heckman and Landersø, 2021[49]). Although there are large differences in the sizes of minority populations in Europe and the United States, cities experiencing recent immigrant growth have also experienced increased residential segregation, although to a lesser extent than in the United States (Lichter, Parisi and Ambinakudige, 2019[50]).

How high socio-economic status parents expand children's opportunities

At the other end of the spectrum, socio-economically advantaged families tend to support their children in multiple ways. As already highlighted, families with a high socio-economic status stimulate children's learning and development through more time spent in educational activities and rich interactions. They also influence child personality and behaviours through the types of interactions and values they distil in children (Hoff, 2002[38]). They are more likely to consider longer time horizon in their decision making relating to children, which might lead them to select high-quality schools and also make a range of informed decisions such as those on extracurricular activities to support children's development in multiple areas and ensure that they benefit from rich interactions with other adults and children (Heckman and Landersø, 2022[51]).

Families with a high socio-economic status have a better understanding of the influence that the wider environment (e.g. neighbourhoods) plays in shaping childhood outcomes, in addition to other family resources (see Annex A, Workshop 1). They also have better opportunities to select their area of residence and choose those with good community-level resources and local institutions. Wealthy families are more able to choose neighbourhoods and localities with high-quality schools and peers from similar backgrounds. The effects of neighbourhoods on child development have received considerable attention in recent economics research (Chetty and Hendren, 2018[48]). Families with high education levels and income tend to move to rich neighbourhoods with similar families comprising their community, while families with low education and income are pushed towards poorer neighbourhoods. Such residential sorting has been increasing over the past decades in some countries, including the United States.

Studies have shown that high-SES families are more likely than other families to compensate for their children' difficulties in the early years. For instance, some authors have found that families with highly educated mothers provide more support to low birth weight children (compensatory effect) while families with lesser educated mothers provide less support to these children (reinforcing effect) (Restrepo, 2016[52]). This can be explained by budget constraints or differences in awareness of how to compensate for different endowment at birth. Families with high socio-economic status are also more likely to look for health and social services to address health problems and detect special education needs.

Some researchers have seen the compound effects of the factors discussed in these sections as resulting in diverging life paths for children depending on their socio-economic backgrounds (McLanahan, 2004[53]). Family behaviours increasingly concentrated at lower levels of socio-economic status include nonmarital childbearing, divorce, early childbearing, multi-partner fertility, and unintended childbirth, whereas those increasingly concentrated at higher levels of socio-economic status include later childbearing, stable employment, stable marriage, and more involvement of fathers in childrearing. Socio-economic bifurcation in family behaviour is thought to contribute to growing inequality and reproduction of inequalities (McLanahan, 2004[53]).

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4 The landscape of policies to address early inequalities and the role for early childhood education and care

This chapter examines the landscape of policies aimed at addressing inequalities in early childhood and the role of Early Childhood Education and Care (ECEC) within these efforts. It outlines the diverse range of supports available for families with young children, including parenting programmes, home visiting, health and nutritional services, parental leave, and wider social and employment policies. The chapter highlights the challenges and opportunities of aligning these services, considering varying degrees of co-ordination and integration, from fragmented systems to fully integrated models. It provides examples of how ECEC policies interact with and complement other policy areas to support family well-being and address disparities in access and participation.

Key messages

- Opportunity gaps and inequalities in early childhood stem from many sources, requiring intersectoral responses. Early childhood education and care (ECEC) does not operate in isolation from other policies and programmes that provide essential supports for families with young children.

- Even within more integrated systems, different types of ECEC programmes – based in homes, centres or schools; for children of different ages; with different degrees of formality and regulation; and with different objectives – are often available. This fragmentation makes co-ordination of services within the ECEC sector challenging. The different types of ECEC provision can help meet different family and societal needs, but can also be challenging for families to navigate, contributing to disparities in participation.

- Other supports for families with young children include parenting and parent engagement programmes, home visiting, primary medical care and nutritional support, parental leave, and broader social and employment services. These additional supports often operate in silos.

- Family support programmes, alongside ECEC services, provide opportunities to identify children with emerging developmental delays and other risk factors, allowing for early interventions to address and reduce inequalities. These programmes can also facilitate families' transitions into ECEC settings.

- Other social policies aim to support household income and employment through welfare and tax benefits linked to family income and employment status or training opportunities. Interactions between these policies and ECEC policies need to be carefully taken into account to ensure that they lift families out of poverty and prevent vulnerable children from being further disadvantaged.

- Taken together, public expenditure on family benefits and education per child on average across OECD countries is lowest when children are young. There is a notable gap after investments to support families around the birth of a child (when children are around 1 year old) and before education investments become prominent around the entry to primary school (when children are 5 or 6 years old).

- Different degrees of policy and service alignment can be considered in the landscape of comprehensive services, from complete fragmentation to total integration. Within this continuum, integration can be vertical (across levels of governance) or horizontal (across sectors) and may differ for specific dimensions of policy and programme implementation. The goals of policy and service alignment are key for shaping the degree and type of integration.

Introduction

Inequalities in early childhood stem from many sources, from the availability and quality of prenatal care to parental income, the adequacy of housing and the opportunities children are provided to form stable and meaningful relationships (OECD, 2019[1]). These various sources of inequalities compound, entrenching opportunity gaps very early on in life (see Chapter 3). Given the intersectoral nature of these opportunity gaps and the inequalities that underpin them, numerous policy areas play an important role in supporting equity in early childhood, including ECEC policies. Although the focus of this report is on achieving more equal opportunities and inclusion through ECEC in particular, ECEC does not operate in isolation – understanding its connections to related policies that can also address early inequalities is vital for optimising early childhood investments and outcomes.

The range of policy approaches presented in this chapter are intended to illustrate how various systems and services are organised around specific areas of support for children and families, situating ECEC among them. The overarching questions addressed are:

- What policy areas are essential for supporting families with young children, and how can this range of policy areas support maximising the contributions of ECEC in promoting equal opportunities and inclusion in early childhood?
- What does policy and programme co-ordination and integration mean in the early childhood space?

This chapter addresses these questions by mapping key policy areas that can contribute to better and more equal opportunities for young children and their families, or conversely, that can lead to the structures that maintain and entrench inequalities. Drawing on these policy domains, the chapter outlines various approaches to co-ordinating comprehensive services in early childhood. It concludes by outlining the potential and limitations of ECEC policies for encouraging co-ordination and integration of early childhood programmes and policies.

A wide range of essential supports for families with young children

This section describes a range of policies that interact with ECEC, or that can be provided alongside ECEC, as shown in Figure 4.1. First, a range of models for providing ECEC services is described. Next, other initiatives and policy areas are considered with respect to both a developmental perspective (i.e. changing needs from birth to school entry) and a proximity-to-the-child perspective, with ECEC and programmes targeting children's homes and families considered the most proximal, and more general social programmes for vulnerable individuals as less proximal. The goal is to highlight the complex governance structures and a range of policies that matter for early inequalities, and that therefore matter for how ECEC is and can be instrumental in addressing these inequalities.

Figure 4.1. Comprehensive service development in the early years

Beyond working across the traditional sectors identified in Figure 4.1, early childhood policies are developed and implemented at multiple levels of governance, from local to national. ECEC policies, when compared with other levels of education systems, tend to be highly decentralised, with significant authority at local levels (OECD, 2017[2]). This arrangement can be beneficial for ensuring policies and programmes are responsive to local communities, but also amplifies the risk of duplicated and competing efforts, as well as potentially creating confusion among families regarding available benefits and services. For these reasons, understanding the full landscape of policies related to early inequalities is critical for situating ECEC among these related efforts and investments.

The OECD and other international organisations continue to advocate for a whole-of-government approach to support vulnerable youth and children, with some of them noting that without an overarching authority to manage co-ordination across governance silos, policies risk competing with or duplicating one another instead of addressing complex needs (OECD, 2017[3]; WHO, 2018[4]; OECD, 2023[5]; OECD, 2021[6]; Dirwan and Thévenon, 2023[7]). The potential for innovation in ECEC policies to strategically connect with other policy areas to reinforce a whole-of-government focus on child development is explored further in Chapter 10.

Types and goals of early childhood education and care

ECEC itself encompasses a wide range of services, which operate under different degrees of formality and regulation, and have different objectives. The types of ECEC programmes available across OECD countries differ due to variations in the modes of provision and the degree of system fragmentation (OECD, 2020[8]; OECD, 2020[9]) (Figure 4.2). In terms of regulated ECEC settings, policies cover different types of programmes – based in homes, centres and schools – and also distinguish programmes with and without formal educational goals and for children of different ages, as indicated through their categorisation in the International Standard Classification of Education (ISCED). ISCED is an instrument for compiling statistics on education internationally, with ISCED Level 0 encompassing early childhood education. In some countries, parts of the ECEC system may be considered to fall outside of the ISCED classification scheme, for instance if considered primarily childcare rather than a starting point of the education system. Unregulated ECEC arrangements, such as individuals hired directly by a family or care provided by extended family members or neighbours, are also common. This chapter, however, focuses on the types of ECEC that are regulated, which can vary across countries (Figure 4.2).

Figure 4.2. Different types of early childhood education and care programmes

OECD Member and Partner countries indicating the availability of specific ECEC programmes, by ISCED level
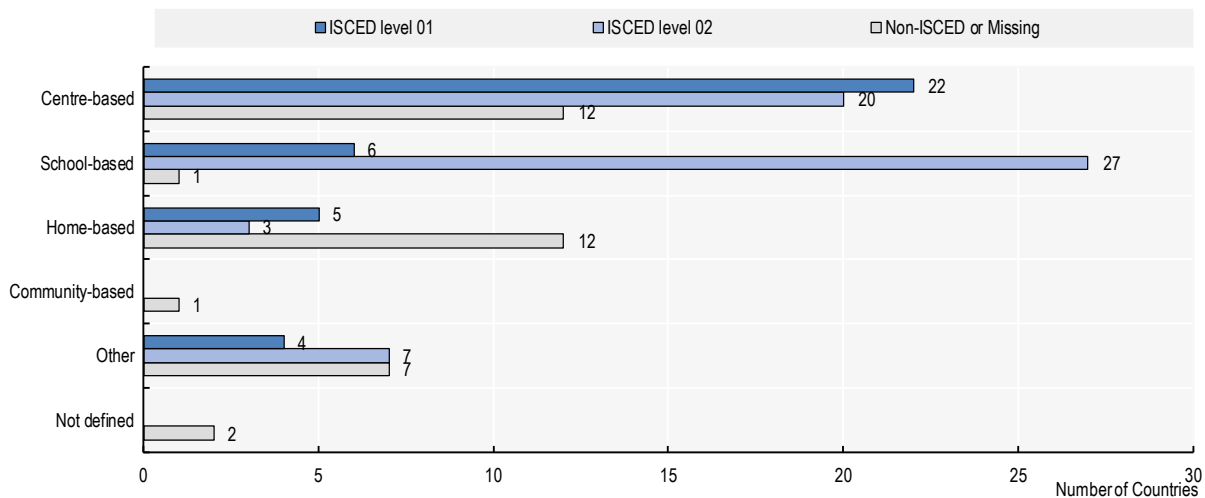
Notes: ISCED Level 0 programmes are divided into two categories: ISCED 01 refers to ECEC services provided for younger children (typically ages 0-2) with educational content, and ISCED 02 refers to ECEC services with more intensive educational content for children aged 3 to the start of primary education (ISCED Level 1). Non-ISCED programmes refer to ECEC services that do not include a structured educational curriculum or contain limited educational content that does not meet the criteria for classification under ISCED programmes. Centre-based programmes are provided in a licensed centre (e.g. nurseries, day-care centres, crèches or kindergarten) while school-based programmes are provided in a school setting. Some programmes cover both age groups, requiring classification based on educational content or participant age. For data reporting, ISCED programmes for children under three are categorised as ISCED 01, while those for children three and older fall under ISCED 02 (OECD/Eurostat/UNESCO Institute for Statistics, 2015[10]). Data are available for 35 OECD member countries, 6 jurisdictions within two member countries, and 3 accession member countries.
Source: OECD (n.d.), *Early Childhood Education and Care (ECEC) Systems Dashboard*, https://www.oecd.org/en/data/dashboards/early-childhood-education-and-care-ecec-systems.html (accessed on 1 December 2024).

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Given that young children learn through caring and responsive relationships, the separation of "care" and "education" is increasingly understood as a false dichotomy (OECD, 2020[8]; OECD, 2021[11]). However, a historical split in some ECEC systems reflects different policy goals for ECEC: on the one hand, ECEC is a mechanism to support parental labour force participation and on the other hand, it is an opportunity to provide children with enriching experiences. Depending upon these different policy intents, regulations for ECEC programmes vary in terms of key features, like the presence of explicit curricular goals or the level and type of education and training of the workforce (see Chapter 6). These divisions are sometimes reflected in the governance structures of the ECEC system. Split ECEC systems are those in which different ministries have authority for different segments of provision, in contrast to integrated ECEC systems in which all regulated components of ECEC fall under the responsibility of a single ministry. Split ECEC systems are often a result of different policy priorities for different ages of children, with care and the economic goal of parental labour force participation typically taking precedence for very young children, particularly from ages 0 to 2.

Although these classifications for split governance are a common way to describe ECEC systems (OECD, 2001[12]; OECD, 2017[3]), divisions within ECEC organisation and oversight can be significantly more complex. For example, in many countries, the private sector is growing or already large (OECD, 2023[13]), often with for-profit institutions controlling a key market segment (see Chapter 9). Furthermore, different types of ECEC programmes may have different governance, regardless of whether the system is overall

split or integrated. This can occur when home-based settings are regulated differently from centre- or school-based settings, or when certain programmes or initiatives are governed at a regional or national level (e.g. school-based settings), while others are under local or municipal control (e.g. centre-based settings). The very broad range of ECEC programmes available can be challenging for families to navigate, as they seek to match available places with their own goals and preferences for early education and care (see Chapter 5). In addition, the various splits in ECEC systems create transition points for children that have the potential to exacerbate early inequalities (OECD, 2017[3]).

In addition to providing opportunities for children to learn and explore, ECEC offers opportunities to identify children with emerging developmental delays (i.e. those who are not reaching expected developmental milestones but who may not have or need a formal diagnosis) and to support children with specific disabilities and diverse learning needs through early intervention strategies (see Chapter 7). Early intervention is a broad term that refers to programmes and services, including ECEC, intended to address areas of vulnerability for young children. It encompasses the diverse needs of children, including specific learning support needs arising from individual characteristics as well as developmental needs that may be time-limited. High-quality ECEC that recognises the diverse needs of children can itself be an effective early intervention strategy (see Chapter 6), but within ECEC settings, more specific strategies can support children in more targeted ways (see Chapter 7). Inclusion policies that permit children with different needs and abilities to be integrated in settings with their typically-developing peers and the use of individualised education plans to support this integration are common strategies that are receiving growing attention. Every child develops and learns differently, and thus strategies that respond to children's diverse needs are critical in ECEC; expanding this understanding to encompass children with developmental delays as well as formally diagnosed developmental or other disabilities is important for creating more equitable opportunities (UNESCO and UNICEF, 2024[14]).

Independent of to what extent ECEC programmes are designed with the specific intention of encouraging parental labour market participation or to provide children with enriching experiences, they may also have goals around parental engagement with the programme or connected services. These goals can be related to supporting children's development, learning and well-being by building connections between the home and ECEC setting, or they may be centred on parents themselves. These types of initiatives reflect a social function of ECEC, which can be considered a third potential goal of ECEC policies, in addition to the economic and education goals already noted (Tobin, Arzubiaga and Adair, 2013[15]; Vandenbroeck, 2006[16]; Vesely and Ginsberg, 2011[17]). Such initiatives need not be intrinsically associated with ECEC, but ECEC settings can provide a convenient way to connect with families on a range of topics, from children's health and preventative care to facilitating connections with and knowledge about the school system and more. For some families, ECEC programmes that are explicitly designed to welcome both children and parents can be more appealing than settings where parents are expected to separate from their young children for extended periods of the day (Shuey and Leventhal, 2020[18]).

Parenting and parent engagement programmes

Parents have a profound influence on their young children (see Chapter 3). Thus, another strategy for reducing inequalities in early childhood is to support parents in their roles as caregivers and resources for early learning experiences. Programmes for parents can focus broadly on promoting positive parent-child relationships, or can have more specific goals, such as supporting parents' mental health, increasing home literacy activities or improving parents' knowledge of nutrition and healthy eating (Riding et al., 2021[19]). Evidence reviews of these different types of programmes suggest that all interventions are not created equal, as some programmes fail to demonstrate benefits and others sustain changes to parents' behaviours only over a short period of time (Barone et al., 2019[20]; Bierman, Morris and Abenavoli, 2017[21]; Duncan et al., 2022[22]). Nonetheless, parenting can be responsive to interventions, with meaningful impacts for children, when programmes target specific skills, provide parents with additional resources and are delivered by trained staff (Magnuson and Schindler, 2016[23]; Moran, Ghate and Van Der Merwe,

2004[24]). Furthermore, these programmes can have spill-over effects on parent well-being and mental health while also supporting parenting skills (Lindsay, Strand and Davis, 2011[25]).

Still, these programmes often face many of the same barriers for entry and consistent participation that are relevant for children's enrolment in ECEC (see Chapter 5). For these reasons, interventions that require relatively low levels of resources and limited time investments from parents are increasingly of interest. Several efforts to increase early literacy skills using digital tools (e.g. text messaging) show promising results for both the time parents spend reading with their children and children's emergent skills, including among vulnerable families (Barone, Fougère and Martel, 2024[26]; Mayer et al., 2018[27]; York and Loeb, 2018[28]).

Programmes and policies can also support parents as children enter ECEC for the first time, and these efforts may be targeted to families who face specific barriers to ECEC participation or have lower average enrolment rates, such as lower-income families or those with migrant backgrounds (Box 4.1. and Chapter 5). Transitioning into ECEC is a milestone for children and families alike. The changes that accompany this transition naturally induce stress for children, which is mitigated by high-quality adult-child relationships (Ahnert et al., 2022[29]). Parents as well are likely to experience stress at these transition moments, which ECEC programmes and policies are well-placed to help address (Cardenas and Colwell, 2022[30]). To the extent that ECEC settings can adapt to children and families, including through learning about the family and their culture and expectations, transitions into ECEC can be smoother.

Box 4.1. Supporting children's transitions into early childhood education and care settings

Policies can support children's transitions into ECEC for the first time. For some children, this will be when they are entering pre-primary education in the year or years just before primary school. For other children, this will be even earlier, when they are infants or toddlers. Policies can encourage programmes to adapt to children's needs at these different ages, as well as to families' needs, with particular attention to how families facing different kinds of vulnerabilities are supported.

Australia's Early Years Learning Framework Version 2.0 (EYLF V2.0), updated in early 2023, emphasises "Being, Belonging and Becoming" principles, which include creating a welcoming environment for families and fostering strong partnerships with them as a core principle. By integrating family relationships into the pedagogy and practice of the ECEC curriculum, the EYLF V2.0 enhances the capacity of ECEC in building trusted relationships that support children's transitions into ECEC settings and supports their development, learning and well-being (Australian Government Department of Education, 2022[31]).

In **Québec (Canada)**, the Passe-Partout programme takes place within schools, specifically targeting the transitions into 5-year-old kindergarten for 4-year-olds and their parents. The programme has the dual objective of supporting parents in their educational role and ensuring that children have a successful start to school, with the aim of promoting educational success and equal opportunities. Passe-Partout also builds on the relationships between practitioners and parents, which can lay a foundation for school-family collaboration (Ministère de l'Éducation du Québec, 2003[32]).

In **Hamburg** (**Germany**), parent-child centres, known as *Eltern-Kind-Zentren* (EKiZ), are located in socio-economically disadvantaged neighbourhoods and offer support services for families with children under the age of 3. These centres serve as hubs for both children and their parents, providing many of the benefits of ECEC in a setting that allows for joint participation, facilitating children's transitions into ECEC-like settings (Federal State Government of Hamburg, 2024[33]).

In **Ireland**, transitions are a key theme in the two national frameworks, Aistear and Síolta. A national policy statement on transitions is under development, which will include a research digest and

implementation plan to support quality practice on transitions. The Aistear Síolta Practice Guide is a tool to help early years educators to use the two frameworks together and it includes support for transitions from home to ECEC and later to primary school by fostering partnerships and connections between parents, educators and other professionals. The practice guide offers practical guidance and examples of inspiring practice that are responsive to the unique characteristics of each child, taking into account their family background, cultural context and prior experiences with ECEC settings (Government of Ireland, n.d.[34]).

In **New Zealand**, a variety of parent/*whānau*-led services, which are community-based programmes, offer support for parents, *whānau* (extended family group) or caregivers to run community-based groups for children before they enter prmary school. These programmes aim to respond to the diversity of cultures and ensure that the needs and values of all families and communities are integrated into the early learning experiences of young children (Ministry of Education of New Zealand, 2024[35]).

Home visiting

Home visiting is another important strategy to support equitable and ready access to general health and mental health services, as well as parenting information, child development information and supports around birth that can help mitigate disadvantages. These programmes involve trained professionals such as community health nurses, social workers, or educators visiting families in their homes to provide tailored, needs-based assistance (Riding et al., 2021[19]). Home visiting programmes have been implemented in various formats across OECD countries.

Home visiting programmes *generally begin prenatally*, taking a predominantly public-health-oriented perspective to supporting pregnancy outcomes and preparing parents to welcome a newborn in the household. In this model, home visiting can also be an enabler of future enrolment in ECEC by educating parents about the options that are available to them and connecting families to relevant resources in their communities more broadly (Duffee et al., 2017[36]). Many home visiting programmes are also intended to reduce the risk of child maltreatment in families with particular risk factors (e.g. teenage parents, families in poverty), and evidence indicates that with careful implementation, home visiting can deliver on this goal (Gubbels et al., 2021[37]). Moreover, home visiting can serve as a protective mechanism by improving mental health outcomes for parents and enhancing family cohesion, thus promoting a safe and nurturing environment for children (Reuter, Melchior and Brink, 2016[38]). Notably, even when offered universally, the constellation of services proposed to families through home visiting services can be tailored to offer more targeted interventions to families with the greatest levels of need (Dodge et al., 2013[39]; OECD, 2015[40]).

Home visiting can also be connected to ECEC programmes, giving emphasis to building strong links between the home environment and ECEC. In this approach, ECEC staff – or even parent peers (Nathans, Nievar and Tucker, 2019[41]) – visit families at home to provide home learning materials and strategies for parents to use to engage with their young children. For ECEC staff, this is also an opportunity to learn about the family and understand their goals and potential constraints around participation in ECEC. This approach can be another way to support transitions, including the first entry into ECEC, but also between ECEC programmes or into primary school (OECD, 2017[3]).

Community-based birth support is a related type of service provision that is focused particularly on the prenatal and early post-partum periods. Practitioners in this model can come from a wide range of disciplinary backgrounds and act with a main goal of supporting pregnant people to navigate complex health and social service systems; this model is generally oriented towards supporting historically marginalised groups. Community-based support workers meet with families and accompany them in a variety of settings, such as through home visits as well as participation in medical appointments. Evidence suggests this service model can be highly valuable in helping families access needed services (e.g.

childbirth education, paediatric appointments), promoting child health and establishing positive parent-infant relationships (Prenatal-to-3 Policy Impact Center, 2023[42]).

Primary medical care and nutritional support

Continuous access to primary medical care in the early years can reduce health risks associated with socio-economic disadvantage and ensure children remain on a healthy developmental trajectory. Evidence shows that implementing free and accessible medical services for families with young children can improve their long-term health and contribute to better educational and professional outcomes in adulthood, particularly benefiting low-income groups (Bütikofer, Løken and Salvanes, 2019[43]). Medical services can also serve as a medium to identify and address factors that may pose a threat to healthy child development, such as poverty and maltreatment, as well as track developmental progress to identify young children who may have or be at risk for delays or disabilities. In these cases, primary medical care staff can refer families to relevant social services that are vital to prevent adversities and improve conditions for better development pathways (Burley et al., 2022[44]). For example, low-income children are at elevated risk of tooth decay and ear infections, both of which are associated with poorer academic and psycho-social outcomes (Guarnizo-Herreño, Lyu and Wehby, 2019[45]; Wang et al., 2021[46]). Evidence shows that providing information, screening and referral services to families in ECEC settings can promote children's health in their early years (Martin and Karoly, 2016[47]).

Initiatives that integrate health, nutrition and physical activity programmes into ECEC settings play a significant role in responding to health inequalities. For some children, particularly those from lower socio-economic backgrounds, school meals represent an important source of daily nutrition (OECD, 2023[48]). Quality food support provided in schools and ECEC settings can therefore buffer the health risks that result from poor nutrition and enhance educational outcomes, particularly for socio-economically disadvantaged children (Belot and James, 2011[49]). Modelling and promoting healthy eating habits and lifestyle choices is another benefit of combining nutrition and ECEC policies (Yoong et al., 2023[50]). Providing parent training as part of these initiatives can increase parent knowledge about nutrition and health, build parenting skills around healthy eating and exercising, facilitating healthy and active lifestyles in the home environment as well (Hingle et al., 2010[51]). These programmes can contribute to overall child health and play a significant role in reducing the adverse effects of infections in early years (Dewey and Mayers, 2011[52]).

Box 4.2. Integrating nutrition and physical activity supports in early childhood education and care settings

In **Australia**, the *National Quality Standard* (NSQ) requires the promotion of healthy eating and physical activity as integral components of ECEC programmes, providing resources and risk assessment and management tools for ECEC settings. In New South Wales, the *Munch & Move* programme supports healthy eating and physical activity for children 0-5 years in early childhood education settings. It provides educators with free online training and resources for play-based approaches, to help build healthy habits in young children, as well as fact sheets to communicate key messages with families. Local health promotion teams work collaboratively with services to provide tailored support (Australian Children's Education and Care Quality Authority, 2018[53]).

Active for Life is a website developed by a non-profit organisation in **Canada** that aims to provide early childhood educators with resources to support play for children to stay physically active in diverse communities across Canada, including ethnically and racially diverse communities, Indigenous peoples, migrants, and those living in rural, remote, and northern communities. The organisation's work on ECEC

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resources is funded through Canada's Early Learning and Child Care Innovation Program (Active for Life, 2025[54]).

The Head Start programme in the **United States** co-ordinates at a high level with other federal government initiatives to ensure children in Head Start programmes receive nutritious food, and support families to access food assistance programmes outside of their Head Start participation. In addition, the *I am moving, I am learning* (IMIL) programme aims to raise awareness among families and providers about the critical importance of physical activity and nutrition to promote healthy lifestyles, while building on the importance of movement as a medium for early learning (Office of Head Start of the United States, 2023[55]).

Parental leave

Parental leave accommodates various needs of parents to take time off from work to care for their children. The most common form precedes and follows childbirth to support parents in the last phases of pregnancy and allow them to cater to the needs of their infants. Infancy is a period that requires continuous responsiveness, warmth and supervision from caregivers. To meet the high demands of this developmental stage, all OECD countries, except the United States, offer nation-wide paid leave entitlements for primary carers. Additional parental leave options are typically available to either mothers or fathers or to be shared across parents; these types of leave may be paid for a certain period, with possibilities for unpaid extensions (OECD Family Database, 2024).

Paid parental leave, as a widely recognised family support policy, offers multiple benefits to families as well as society at large such as enhancing fertility rates in ageing societies, especially when combined with generous family benefits (Thomas et al., 2022[56]; Adema, Clarke and Frey, 2015[57]). However, these benefits may entail trade-offs that require careful policy design. For example, paid parental leave during the first six months is linked to improved mental and physical health outcomes for both parents and children, whereas the added benefits beyond this period have been shown to be minimal (Heshmati, Honkaniemi and Juárez, 2023[58]; Canaan et al., 2022[59]).

One such trade-off is its impact on maternal employment. While paid leave can facilitate women's re-entry into the labour market, extending leave beyond six months can negatively impact wages and long-term employment prospects (Canaan et al., 2022[59]). A review of studies with causal evidence has found either positive or neutral impacts of maternal work on children's outcomes, indicating that maternal employment following childbirth does not inherently compromise child development (Lo Bue, Perova and Reynolds, 2023[60]). Parental leave policies that involve both mothers and fathers can promote gender equality and further enhance women's employment outcomes, but these policies may be ineffective without gender-balancing incentives (OECD, 2023[61]).

Despite the significant benefits of well-designed family leave, low-income families are less likely to benefit from these entitlements due to the types of jobs they disproportionately hold (e.g. self-employed, limited working hours) and because the income replacement schemes may be too limited to enable them to remain out of the workforce for the full period of entitlement (Margolis et al., 2018[62]). Combining government investments in parental leave with investments in ECEC can help address these inequalities, as government spending on ECEC is associated with increased female employment and lower gender pay gap (Albanesi, Olivetti and Petrongolo, 2023[63]).

Thus, complementary ECEC entitlements that align with the duration of paid parental leave are crucial for maximising the benefits of both parental leave and ECEC. However, in many OECD countries, there is a discrepancy between the duration of paid leave and ECEC entitlements or targeted access to subsidised ECEC for vulnerable families (Eurydice, 2023[64]; OECD, 2024[65]). Even when parental leave and ECEC provisions are aligned, the funded hours of ECEC services often fall short of matching the working hours

of many parents, particularly lower wage workers who are more likely to be in jobs with irregular working hours. Closing the gap between parental leave and access to ECEC would allow children from socio-economically disadvantaged backgrounds to more easily access and benefit from ECEC provision, buffering the effects of family disadvantage in early childhood (Schmutz, 2024[66]) (see also Chapter 5).

Access to various forms of leave, particularly those that include flexible work arrangements, is vital for parents to fulfil essential childcare responsibilities, such as scheduling preventative paediatric visits and caring for sick children at home, as well as supporting parents to breastfeed. Flexible work patterns also offer multiple benefits for child development and well-being. Evidence indicates that flexible working options, including remote work and adjustable hours, help parents engage more actively in childcare responsibilities (Augustine, Kim and Lee, 2023[67]). Moreover, flexible work patterns can promote a better home environment for children's well-being and development through its positive effects on parent-child interactions and family cohesion (Hokke et al., 2024[68]; Kim, 2018[69]).

Other policies affecting families and children

The social policies discussed in the previous sections combine with many other policy areas that are generally beyond the scope of this report, but also have important implications for children's home environments and engagement with ECEC. For instance, housing and urban planning policies can be a critical mechanism both for reducing poverty and for encouraging use of ECEC services, as families facing housing instability have additional barriers to accessing ECEC, and high-quality ECEC programmes are typically less available in lower-income neighbourhoods (Thévenon et al., 2018[70]; Shaw et al., 2020[71]) (see also Chapter 6). Other social policies, such as family and child allowances, including cash transfers, tax relief or in-kind support, can help alleviate financial pressures and offset ECEC costs for families, especially for families at greater risk of poverty. In many OECD countries, these measures have been effective in enhancing household income and reducing child poverty (Thévenon et al., 2018[70]). These policies can also complement ECEC policies in supporting family planning choices that have positive effects on fertility rates (Fluchtmann, van Veen and Adema, 2023[72]). Nevertheless, the design of these policies – whether universal or targeted based on income, family type, size or child age – can lead to varying effects on family income depending on the country context (Thévenon et al., 2018[70]).

Likewise, employment policies shape families' income and their need for ECEC services. Among the wide range of employment policies, employment services (so-called active labour market policies) complement other social services by assisting adults, including parents, in navigating the labour market, improving their skills and finding job opportunities. These services can, for instance, propose job search support and training that match individuals' skills with market demands. While programmes that offer job search support and high-quality training, or impose welfare sanctions, can effectively boost employment and income in the long term, they can initially have negative effects on household income, while participants are investing their time in retraining rather than receiving wages in the labour market or experience a decrease in their unemployment (or other social) benefits (Osikominu, 2012[73]; OECD, 2023[74]; Vooren et al., 2018[75]). These challenges can make it more difficult for many parents to dedicate time and resources for training programmes in the face of financial disadvantages and childcare responsibilities (Zoch, 2022[76]). Offering training programmes for parents alongside ECEC services for children and other social supports can make them more appealing to families and lead to higher family income, with positive implications for children.

A variety of models for comprehensive services

Families with young children engage to different extents with the range of policies and programmes described throughout this chapter. This section defines what co-ordination and integration mean across the policy landscape and describes several models that highlight considerations for governments taking an early childhood centred approach to reducing inequalities. These models and considerations are then

applied in Chapter 10 to explore the potential and limitations of comprehensive policy approaches and service models.

Different degrees of policy and service integration can be considered in the landscape of comprehensive services, from complete fragmentation to complete integration (

Table 4.1). While complete fragmentation is unlikely to be desirable, full integration may also not be the most appropriate model for many types of services. For example, while some aspects of primary medical care can be meaningfully integrated with ECEC systems or programmes, there are many advantages to maintaining distinct health and ECEC systems, including the ability for each to specialise in their respective areas to best address their goals and meet constituent needs. Striking a balance between these extremes in the connectedness of the early years services is important for simplifying access and fostering engagement among vulnerable families (see Chapter 10). This can be achieved through different degrees of alignment, including occasional co-operation, regular collaboration, or more systematic co-ordination. Consistent with these definitions, this report uses the term "integrated" to refer to policies or programmes that have fully formalised co-ordination through intentional mechanisms such as funding, management and oversight. "Co-ordination" is used to refer to policies and programmes that have formal mandates for systematic collaboration, but that do not reach the level of full integration under one ministry, agency or another formal umbrella.

Table 4.1. Continuum of alignment among policies or programmes

Degree of policy and service integration	Characteristics
Fragmentation	Total separation between services
Co-operation	Sporadic exchanges and common activities; joint planning on occasion
Collaboration	Frequent exchanges; regular joint planning; common goals emerge
Co-ordination	Systematic collaboration through formal mechanisms of co-ordination
Integration	Fully formalised co-ordination

Source: COFACE (2023), *Towards greater family policy integration across Europe*, https://coface-eu.org/wp-content/uploads/2023/11/Towards-greater-integration-in-family-policy-across-Europe.pdf (accessed on 12 December 2024).

Previous OECD work has further identified horizontal and vertical aspects of integration as critical considerations (OECD, 2015[40]; OECD, 2023[5]; Dirwan and Thévenon, 2023[7]) (Figure 4.3). Vertical integration refers to the extent to which various levels of governance work together, as well as how they align with non-governmental organisations that provide services directly (OECD, 2023[5]). Subnational entities (e.g. regional or local ones) often bear direct responsibility for a broad range of services provided for young children and their families. These entities are influential in determining the quality and efficacy of the services provided, as well as being responsible for identifying specific needs of children and families within their communities, while working within the context of national policies.

Horizontal integration refers primarily to alignment that occurs within a particular level of governance or service provision. Child development and well-being are inherently multifaceted, necessitating the involvement of multiple actors to create a shared vision that shapes the development of comprehensive services. A co-operative approach (if not more co-ordinated or integrated) at the level of central governance can facilitate policy designed to meet the diverse needs of children, encompassing health, education and social welfare. Given the importance of local authorities in implementing and monitoring policies related to early childhood, alignment across agencies within this level of governance is also important.

Figure 4.3. Horizontal and vertical service integration
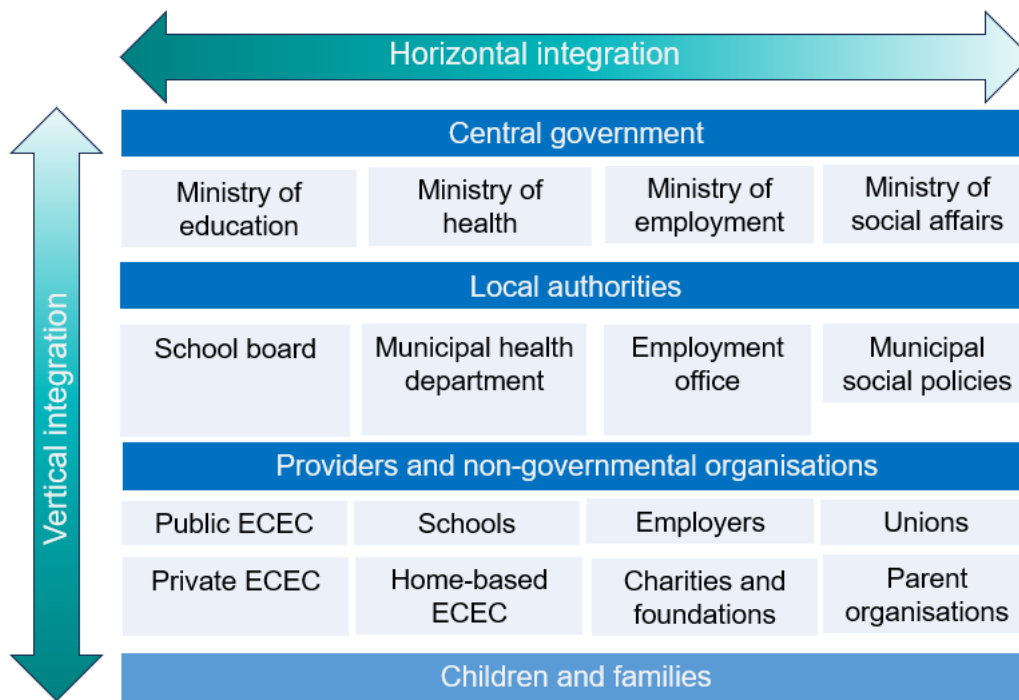
The continuum of fragmentation to integration can also be considered for other dimensions of policy implementation and programme implementation, such as geographic area or target groups. A place-based approach, which focuses on co-ordination of services within a specific geographic area (i.e. neighbourhood or community), is increasingly viewed as a promising strategy that is rooted in the ecological model of child development (Goldfeld et al., 2021[77]). Such initiatives capitalise on the common understanding that children are affected by their local environments and through multiple types of interactions and services, while also being tailored to local needs.

Similarly, integration or co-ordination of policies and services may be organised with respect to a specific target population. These target groups may be defined by age (e.g. children under age 3), by family migration or language background, by income levels or any number of other population characteristics. The principle of proportionate universalism can inform policy and service co-ordination for target groups or at the level of a geographic area. Proportionate universalism refers to the idea of catering to all while increasing the level of effort and attention paid to reaching and responding to those who most need particular services (Mamot, 2010[78]) (see Chapters 3 and 6). This approach entails identifying the factors that lead to vulnerabilities in early childhood and targeting these needs in service provision; it can involve tailored outreach programmes, specialised resources, and culturally sensitive practices to address the unique challenges faced by specific groups (Carey, Crammond and De Leeuw, 2015[79]). Profiles of some different models of service co-ordination that span these different dimensions (i.e. vertical and horizontal, place-based and targeted to specific groups) are described in Box 4.3.

Box 4.3. Models of co-ordinated services

A national scan of programmes in the **United States** serving low-income families and offering ECEC with intentional co-ordination with other health and human services identified 95 programmes that could be described with six different models of service co-ordination (CCEEPRA Research Translation, 2023[80]). Three of these models involved state-level governance and three were at the local level.

Model 1: State systems change and investment in family services

This model involved explicit vertical integration between state and local levels, with the state level aiming to reduce barriers to co-ordination or policy reform at the local level. Programmes in this model took a "whole-family" approach by improving alignment between early childhood and adult services.

Model 2: State-supported local child care and early education co-ordination

This model focused on improving alignment *within* ECEC systems, including through public-private partnerships in some cases, to develop statewide frameworks for co-ordination in this sector.

Model 3: State family services provider

In this model, states aimed to provide specific services to families in their local communities, with states taking an active role in this local service delivery.

Model 4: Family-centred co-ordination

This model operated at local levels and focused on enhancing access to services by co-locating them and streamlining intake and referral policies. This model used strong case management to co-ordinate across partner organisations and integrated data systems, focusing on horizontal integration.

Model 5: Community-oriented collective impact for families

In this model, local governments addressed goals related to positive community-level outcomes for families. Co-ordination efforts focused on data sharing, joint planning, training and technical assistance.

Model 6: Focused co-ordination

This model aimed to provide specific services to a narrowly-defined target group or geographic area. A small number of service providers were co-located and working closely together, using a single set of enrolment criteria for all programme components.

Source: Presentation by Kathleen M. Dwyer at 3rd project workshop (see Annex A).

Situating ECEC in a comprehensive early childhood policy landscape

With the complexity of policies and programmes relevant for early childhood, as well as the complexity of child and family needs during this developmental period, co-ordination or integration are promising directions for facilitating access and more effectively reaching vulnerable populations. A well-connected service environment fosters ongoing knowledge exchange among providers and stakeholders, facilitating a holistic response to children's needs. Starting with prenatal services to support healthy pregnancies, this continuity extends through the developmental milestones of early childhood. The integration of services involves a mix of provisions implemented across the ecosystem of child development, encompassing various settings, actors and policies that drive economic and social services available to families. These

provisions address needs in education, parenting, health and living conditions, thereby enhancing the resources available to parents, and promoting more inclusive and equal opportunities for young children. ECEC has the potential to serve as a central component of co-ordinated and integrated systems that involve all of these different elements.

However, looking at social spending on family benefits and education across childhood in OECD countries, there is a clear gap in the continuity of investments in families with young children (Figure 4.4). The effect varies across countries, but on average across OECD countries, cash benefits and tax breaks make a substantial contribution to household income around the time of a child's birth. This is followed by a sharp decline in social expenditures when children are about 1 year old, due to the time-limited nature of cash benefits and tax breaks associated with a birth and the fact that investments in ECEC (predominantly childcare) at this age are limited. Average social expenditures on childcare rise during the early childhood period, but do not reach the level of investments that are present once children enter the schooling sector, around age 5 or 6. This picture of investments across different modes of intervention and sectors during childhood underscores a lack of comprehensive service planning to meet the needs of families with young children, and in particular a lack of co-ordinated investments in offering high-quality ECEC.

Figure 4.4. Public spending on family benefits and education per child by type of spending

Average spending in OECD countries, in % of median household disposable income (working age), per child or young adult, by age, in 2019 (PPP in USD)
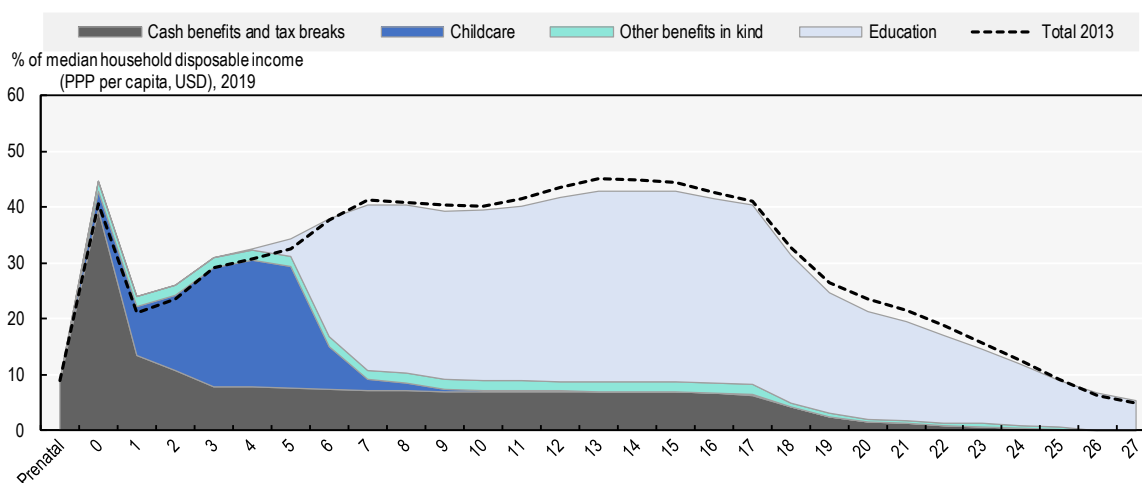
Notes: The data do not include health-related spending due to lack of data by age in a cross-country comparable manner (see Annex B). Family benefits include cash and in-kind benefits (see Annex B). Non-central government spending is not always fully captured (see Annex B).

Source: OECD (2022), *Family Database, Indicator PF1.6*, https://webfs.oecd.org/Els-com/Family_Database/PF1_6_Public_spending_by_age_of_children.pdf (accessed on 2 January 2025).

StatLink 📊 https://stat.link/db4c9u

Another important feature of social spending across childhood is the high share of cash benefits (e.g. parental leaves, subsidies for ECEC fees) (Figure 4.4) that may add to other cash benefits (e.g. unemployment benefits) received by parents. A key challenge is to find a balance between supporting parents in the early years of children's life (and thereby reducing poverty in the short-term) and the risks that recipients remain inactive or maintain low incomes (e.g. through part-time work or unemployment) to continue to benefit from these policies, contributing to long-term and even intergenerational poverty (Duncan, Smeeding and Le Menestrel, 2020[81]). Cash benefits linked to family and early childhood policies,

therefore, need to be carefully designed to support parents in re-entering the labour market after periods of parental leave and maintain incentives to move to higher-paid jobs, as family income is a key buffer against child poverty (see Chapter 5). Similarly, cash benefit or tax relief linked to other policies such as labour market policies affect parents' labour market decisions, but might also have consequences on decisions concerning their children. For instance, tax relief for working parents or welfare benefits that require a minimum number of work hours to qualify for these benefits can boost household employment (OECD, 2023[74]; Pilkauskas, 2023[82]). However, there is also evidence that, in the United States, the Earned Income Tax Credit has boosted maternal employment but has also been associated with increased reliance on informal care rather than centre-based ECEC, largely due to limited availability of subsidised ECEC services (apart from specific programmes) (Michelmore and Pilkauskas, 2021[83]). These dynamics highlight the importance of carefully designing social and employment policies in tandem with ECEC policies to ensure they support employment and access to high-quality, regulated ECEC services rather than unintentionally steering families toward unregulated or informal arrangements. This might, however, be complicated to achieve when responsibilities for these policies lie at different levels of government.

Amid calls for promoting policy coherence for sustainable development (OECD, 2019[84]), the potential for ECEC as a connector and facilitator is not always recognised. The role of early years policies in shaping inequalities through its interactions with other policies is also not often fully taken into account. Given the critical importance of the early years for human development (see Chapter 3), identifying ways to more effectively centre policies around young children and their families holds great promise for improving equity of opportunities. This will require targeted attention to enhancing ECEC access (see Chapter 5), developing ECEC provision, particularly in marginalised areas (see Chapter 9), strengthening the quality of ECEC services (see Chapter 6) and ensuring that ECEC services respond to all children's needs while valuing their diversity (see Chapter 7). Still, ECEC on its own, without consideration of the broader policy landscape, cannot be expected to mitigate early inequalities. As the models and considerations for co-ordinated services described in this chapter highlight, there is not a single strategy that is best suited to all contexts, nor one that can ensure that the full range of comprehensive services effectively reaches the most vulnerable families. The potential of co-ordinated and integrated policies and services to address early inequalities, as well as the limitations of these approaches and considerations for successful implementation, are further discussed in Chapter 10.

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Part III Supporting equity and inclusion in early childhood education and care

5 Supporting participation in early childhood education and care for all children

This chapter examines data evidence on children's participation in ECEC in OECD countries to set the stage for understanding how non-participation varies among children, particularly with children's age and background. It then examines the multi-faceted barriers that prevent equitable access to ECEC settings. Barriers to equitable ECEC participation include the availability, accessibility and affordability of ECEC services, but also indirect obstacles – such as complex administrative requirements, lack of awareness of ECEC benefits, social norms or a low level of trust in provision quality – which can hinder access to otherwise available services. Finally, it discusses policy directions that OECD countries can consider to raise participation and ensure equitable access to ECEC for all children.

Key messages

- Despite increases in enrolment rates in recent decades, inequalities in ECEC participation according to age and socio-economic background persist. Evidence from European OECD countries shows that children from disadvantaged backgrounds engage less in ECEC services, particularly in regulated provision. Inequalities are particularly pronounced for children under age 2, whereas children aged 3-5 tend to engage more, on average, in regulated ECEC services.

- Between 2010 and 2023, socio-economic inequalities in participation in regulated ECEC for children under the age of two have increased in more than half of OECD European countries with available data. More countries have succeeded in reducing inequalities in participation for children aged 3-5.

- Multi-faceted and inter-related effects of personal and environmental factors influence participation in ECEC. Some barriers to participation are direct, relating to the availability, accessibility and affordability of ECEC services, while indirect barriers (complex administrative requirements, lack of awareness of ECEC benefits, social norms or a low level of trust in provision quality) hinder access to otherwise available services. Direct and indirect barriers tend to disproportionately affect children from low socio-economic and immigrant backgrounds.

- Availability, affordability and quality of ECEC provision are central for reducing inequalities in ECEC participation. Ensuring ECEC settings reach the children most in need requires adequate funding and better co-ordinated ECEC infrastructure planning and quality assurance mechanisms to foster trust in ECEC systems.

- Universal free access to ECEC remains an important policy objective to work towards for many OECD countries. When public resources are limited, targeted funding to improve vulnerable children's participation rates in ECEC ensures spending efficiency. Legal entitlements provide strong messages about the importance of child development in the early years.

- Complementing local investments with centre-level funding, and steering the development of the ECEC network through national objectives, guiding principles for investments, and data and monitoring systems for needs identification can help reduce inequalities in ECEC sector expansion and ensure investments meet quality objectives.

- Services led in collaboration with community members that support parents and children and targeted outreach can build trust and improve engagement with ECEC for hard-to-reach and culturally diverse families.

- Flexible or alternative forms of provision that reach children in more remote areas, enable families to reconcile work and family commitments, or expose families to ECEC experiences can also alleviate inequalities in participation.

- Simplifying administrative processes and prioritising at-risk families in application and enrolment procedures can reduce barriers to ECEC services and improve access for more vulnerable children. In contexts without legal entitlements, streamlining and expanding eligibility criteria for ECEC services can reduce inconsistencies and ensure services reach vulnerable children.

- Co-ordinated services and targeted policies that effectively convey information between families and institutions, and support families during the enrolment process, are essential to the effectiveness of policies designed to improve access for vulnerable children. Policies that focus on raising awareness regarding ECEC benefits for child development can help shift attitudes about child-rearing and ECEC participation, particularly among families from low socio-economic and immigrant backgrounds.

Introduction

Available, accessible and affordable ECEC is a key precondition for ECEC provision to translate into meaningful and long-lived benefits for vulnerable children. Despite substantial increases in enrolment rates in past decades, non-participation varies among children, particularly with children's age and background. This chapter discusses the types of non-participation that should attract policy attention, given that there are differing opinions on whether children should be with their parents or in ECEC settings at the early age. It discusses the patterns of non-participation and the reasons behind it. Multi-faceted and inter-related effects of personal and environmental factors influence ECEC participation and require layered policy strategies. While accounting for these interactions, the chapter seeks to distinguish between direct and indirect barriers to participation. It examines approaches for directly addressing inequalities in participation, with a focus on policies that are not linked to the quality of ECEC itself (which is dealt with in Chapters 6 and 7), although higher quality can alleviate some informal barriers.

The overarching questions addressed in this chapter are:

- What is the scope of non-participation for children in ECEC and how does this relate to children's characteristics?
- How have inequalities in ECEC participation evolved over time?
- Which barriers hinder vulnerable children's participation in ECEC?
- How can OECD countries design policies that support equity in children's participation in ECEC?

The chapter builds on data evidence on children's participation in ECEC in OECD countries to set the stage for understanding how children engage in ECEC. It then examines the multi-faceted barriers that prevent equitable access to ECEC settings. It also discusses policy levers OECD countries can envision to address inequalities in children's ECEC participation.

The scope of non-participation in ECEC

This section examines the scope of non-participation for children under 3 and at the pre-primary education level, and how non-participation relates to children's personal or environmental characteristics. Even if percentages of non-participation are small, they remain problematic if they concern specific categories of children. This section investigates gaps in participation in different types of ECEC. The disparities in participation are analysed also with respect to the intensity of children's participation hours in different types of ECEC.

Measuring inequalities in participation

Data on gaps in participation by children's socio-economic background are not readily available at the international level for all OECD member countries. However, data from European OECD countries enable comparison of levels of participation in regulated centre-based and home-based ECEC (e.g. centre-based services, organised family day care and care services provided by qualified childminders), unregulated childminder care (e.g. babysitters or other childminders who are not organised or controlled by a structure) and informal care (e.g. unpaid care provided by relatives or friends). Despite increases in ECEC participation in recent decades, socio-economically disadvantaged children continue to engage less in ECEC services and particularly in regulated ECEC services that are likely to provide higher-quality education and care (Figure 5.1 and Figure 5.2) (see Chapter 6). Inequalities are particularly pronounced for children under age 2, whereas children aged 3-5 tend to engage more on average in regulated ECEC services.

Figure 5.1. Socio-economic inequalities in early childhood education and care participation among children aged 0-2 years

Share of disadvantaged (lowest income tertile) and advantaged (top income tertile) children aged 0-2 years-old participating in different types of ECEC, 2023
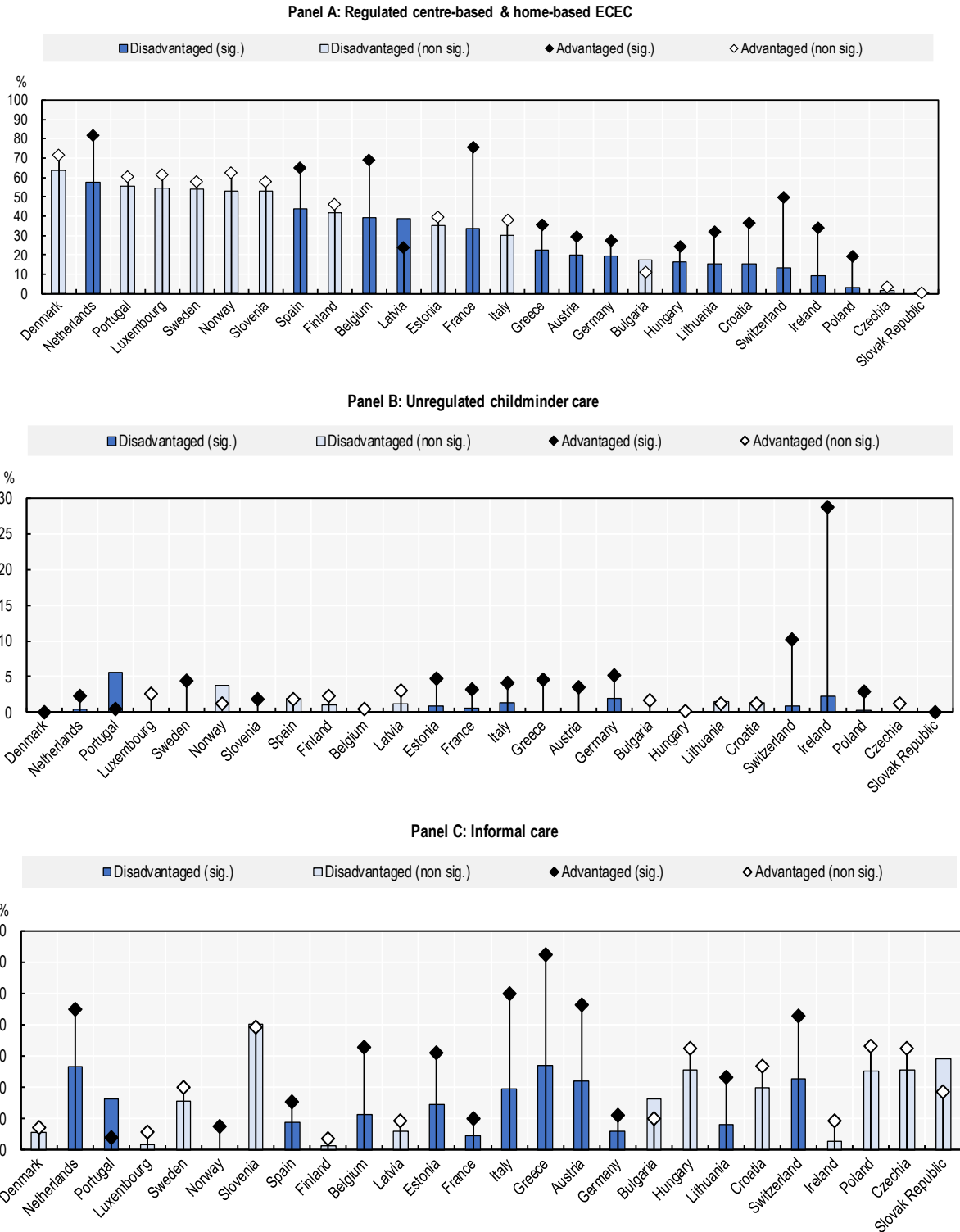
Notes: Data for Germany are for 2022; data for Switzerland are for 2021. Estimates based on fewer than 50 cases have been removed. Socio-economic background is measured based on the equivalised disposable household income (see Annex B). Statistically significant (sig.) differences between advantaged and disadvantaged children are shown in a darker tone (see Annex B). Countries are ranked in descending order of participation in regulated centre-based and home-based ECEC for disadvantaged children.

Source: Eurostat (2024), *European Union – Statistics on Income and Living Conditions*, https://doi.org/10.2907/EUSILC2004-2023.

StatLink https://stat.link/v0dun4

For children aged 0-2, participation in regulated centre-based and home-based ECEC is consistently lower in almost all OECD countries with available data in 2023 for children from disadvantaged backgrounds (32% on average) relative to more advantaged ones (51%). Participation gaps are particularly wide in Belgium, France, Ireland and the Netherlands (Figure 5.1). While Ireland displays higher engagement in unregulated childminder care, children from socio-economically advantaged backgrounds participate disproportionately more in this type of care. On average across countries with available data, socio-economically disadvantaged children are less likely to be engaged in unregulated childminder care and to be taken care of by relatives (informal care). Gaps in informal care participation may reflect differences in labour market participation of mothers from advantaged and disadvantaged backgrounds, whereby the former may be more likely to return to the workforce faster and work for longer hours (e.g. if they are in high-skilled occupations) and hence, to rely more extensively on informal care from their families.

Inequalities in participation for children aged 3-5 years-old reproduce the same pattern as for younger children (Figure 5.2). While more children of this age engage in ECEC (reflecting legal entitlements for ECEC participation and compulsory pre-primary years in a range of countries), children from socio-economically disadvantaged backgrounds in European OECD countries still tend to be enrolled less in regulated ECEC services (86%) than advantaged ones (95%). Socio-economic gaps in participation in regulated centre-based and home-based ECEC tend to be more pronounced in countries with lower average participation in ECEC provision (such as Croatia, Czechia, Poland, Romania and the Slovak Republic). Other types of education and care – unregulated childminder care, informal care and after-school care – also tend to be more recurrent among socio-economically advantaged 3-5-year-olds. While evidence on after-school care may underestimate children's participation (e.g. if parents incorrectly report after-school care hours as part of the regulated ECEC centre-based hours), available data show inequalities in some of the countries where after-school care tends to be more widespread (e.g. France, the Netherlands), which are likely to also come from more part-time work among socio-economically disadvantaged families.

Figure 5.2. Socio-economic inequalities in early childhood education and care participation among children aged 3-5 years

Share of disadvantaged (lowest income tertile) and advantaged (top income tertile) children aged 3-5 years participating in different types of ECEC, 2023

Panel A: Regulated centre-based and home-based ECEC

Panel B: Unregulated childminder care

Panel C: Informal care

Panel D: After-school care

StatLink ᴹˢᴾ https://stat.link/p48hzg

When they participate in regulated ECEC, socio-economically disadvantaged children also tend to experience fewer hours of provision, although gaps in the intensity of participation are typically more moderate (Figure 5.3). Countries that display lower average hours of participation also tend to display larger inequalities in participation hours. These gaps are particularly pronounced in France, the Netherlands, Spain and Sweden and for 0-2-year-olds and in France, Romania, Spain and Sweden for 3-5-year-olds. These differences in intensive participation in ECEC can also lead to inequalities between children when ECEC services have high quality.

Figure 5.3. Inequalities in hours of participation in regulated early childhood education and care services

Average usual weekly hours for children participating in regulated centre-based and home-based ECEC, by age and children's socio-economic background, 2023

Panel A: 0-2 year-olds
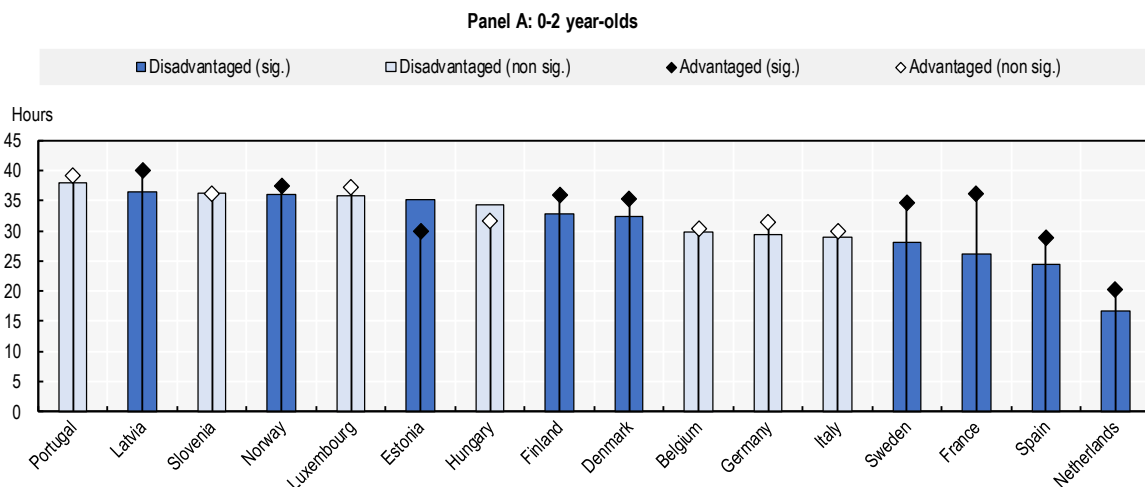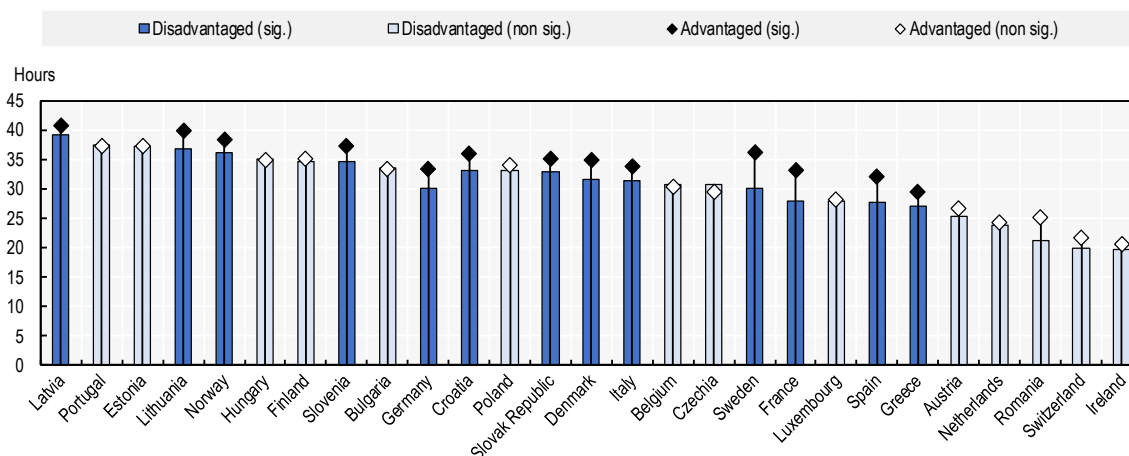
Panel B: 3-5 year-olds

Notes: Data for Germany are for 2022; data for Switzerland are for 2021. Estimates based on fewer than 50 cases have been removed.
Data refer to children using regulated centre-based services, organised family day care, and care services provided by (paid) qualified childminders organised and controlled by a structure (see Annex B). Socio-economic background is measured based on the equivalised disposable household income (see Annex B). Statistically significant (sig.) differences between advantaged and disadvantaged children are shown in a darker tone (see Annex B). Countries are ranked in descending order of number of hours for disadvantaged children in each of the panels.
Source: Eurostat (2024), *European Union – Statistics on Income and Living Conditions*, https://doi.org/10.2907/EUSILC2004-2023.

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Multi-faceted barriers to participation in ECEC

Participation in ECEC services is shaped by a complex and dynamic interaction of factors. These factors are interwoven, creating an intricate web of barriers, particularly for socio-economically disadvantaged families (Figure 5.4). To understand the barriers to ECEC participation, it is critical to recognise the multi-layered nature of these barriers, ranging from immediate and tangible challenges such as cost and location to more subtle factors including social norms, parental perceptions or institutional biases. The literature offers a range of frameworks for conceptualising these factors to identify the drivers behind both participation and non-participation (Vandenbroeck and Lazzari, 2014[1]; Archambault, Côté and Raynault, 2019[2]; Carbuccia et al., 2023[3]) (see Annex A, Workshop 2). This chapter categorises these barriers into two broad domains: direct and indirect barriers, which together shape the landscape of ECEC participation.

Direct barriers include practical and structural challenges that hinder families from enrolling their children in these services due to problems with service availability, affordability and accessibility through logistical factors such as operating hours, geographical location and service capacity. Identifying these direct barriers is typically straightforward. Indirect barriers, in contrast, are more complex and nuanced, as they also involve families' preferences and beliefs on what is best for their children.

Both direct and indirect barriers intersect with family characteristics, such as socio-economic status or cultural background, putting families in vulnerable situations at greater risk of facing multiple barriers to ECEC participation (Figure 5.4). For instance, while affordability is a major challenge for low-income families, simply removing financial barriers may not close participation gaps if ECEC centres remain inaccessible or unavailable in socio-economically disadvantaged neighbourhoods, thus limiting logistical access. Similarly, targeted policies aimed at addressing direct barriers may fall short in reaching groups with historically low participation rates if indirect barriers persist – such as limited information about subsidies, mistrust of formal ECEC, or preferences for parental care (Carbuccia et al., 2023[3]).These

indirect barriers can either amplify or mitigate the effects of existing direct barriers, making them equally essential to tackle in efforts to improve participation rates and address the root causes of non-participation.

System-level characteristics and the broader policy context further shape the presence and extent of these barriers. Funding models, for example, play a pivotal role – while funding mechanisms may incentivise private or for-profit providers to participate in subsidy programmes, these services are often more accessible to advantaged families due to additional costs of these services and demand-driven location choices (Slicker and Hustedt, 2022[4]). Similarly, family leave policies, housing policies and broader social welfare policies significantly influence families' decisions to enrol their children in ECEC, with distinct implications for families across the socio-economic spectrum (see Chapter 4). A well-co-ordinated and inclusive approach across these policy domains is essential for mitigating both direct and indirect barriers to ECEC participation, creating a more equitable and inclusive ECEC environment (see Chapter 10).

Figure 5.4. Multi-faceted barriers to participation in early childhood education and care
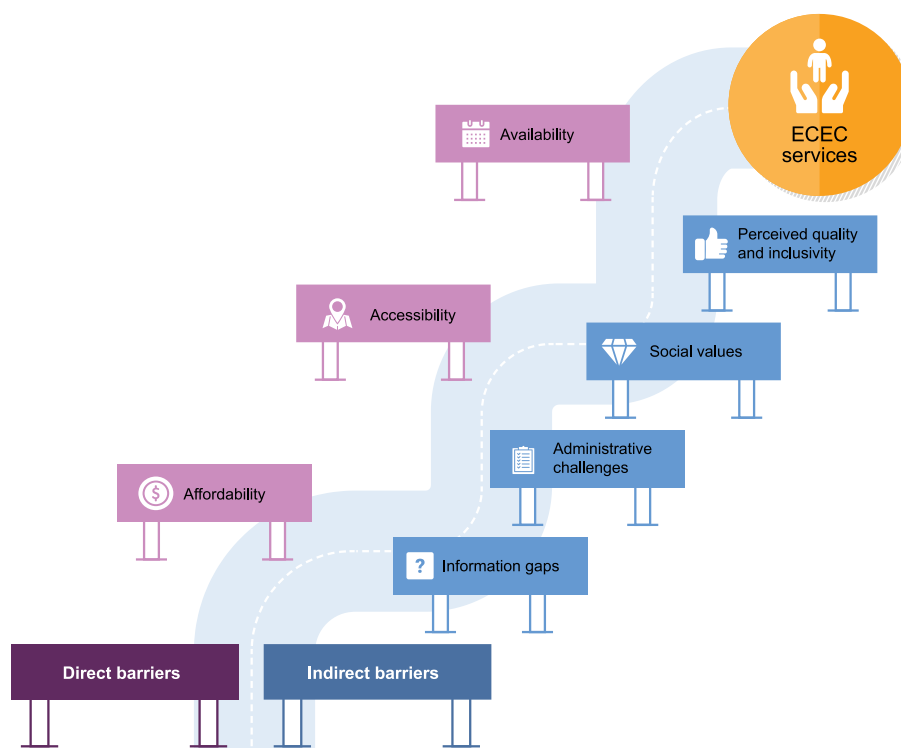
Direct barriers to children's participation

Structural constraints related to the availability and affordability of ECEC services have been shown to play a key role in explaining low ECEC uptake in a range of OECD countries, especially for disadvantaged children (Pavolini and Van Lancker, 2018[5]).

Availability of ECEC services across the territory

Participation levels in OECD countries partly reflect an insufficient offer relative to demand for ECEC services, particularly for children under 3 years-old. The increasing recognition of ECEC benefits for children and families coupled with evolutions in female labour market participation has enhanced demand for ECEC services. While governments have expanded investments in children's early years as a result

(see Chapter 9), investments have not always been sufficient to match the rise in demand for ECEC services. Evidence from countries participating in the Teaching and Learning International Survey (TALIS) Starting Strong 2018 for settings covering children under age 3 shows that even in countries with relatively high ECEC enrolment rates, the sector still displayed room for growth – ECEC leaders in Israel, Germany and Norway reported high shares of children seeking enrolment but who were placed on waiting lists (OECD, 2020[6]). This finding is echoed by other surveys of parents in European OECD countries (OECD, 2020[7]).

Lack of availability of ECEC services can reflect a range of factors, including insufficient capital investments or an ineffective distribution of the ECEC network across the territory. In addition, in many OECD countries, staff shortages coming from limited staff attraction, high staff turnover and poor retention remain major obstacles to the expansion of ECEC provision. An ageing ECEC workforce also amplifies needs for ECEC staff. In 2022, almost one in three early childhood education (ISCED Level 0) teachers was above 50 years old on average across OECD countries, and in some countries this figure exceeded 40% (in Czechia, Estonia and Hungary for pre-primary education – ISCED 02; in Latvia and Lithuania for both early childhood educational development – ISCED 01 and pre-primary education – ISCED 02) and even 50% (in Italy and Portugal for pre-primary education – ISCED 02) (OECD, 2024[8]). The difficulty to attract sufficient male staff also deprives the sector of a pool of needed ECEC staff (OECD, 2019[9]).

Beyond the overall availability of ECEC provision, the geographic distribution of ECEC settings can also hinder equal access to ECEC. Where families live can be a key determinant of children's access to ECEC services. Evidence from European OECD countries on geographic inequalities in ECEC accessibility shows that while for many families, accessibility is high, some families, particularly those in lower-income regions, are relatively underserved (Almeida et al., 2024[10]). Urban, dynamic areas but also rural, isolated ones often display relatively high unmet demand due to a shortage of facilities (OECD, 2020[7]; Eurostat, 2016[11]). Families living in areas that are closest to cities tend to have shorter travel times to ECEC services in contrast to those living in more remote areas (Almeida et al., 2024[10]; Hurley, Tham and Nguyen, 2024[12]). This also means, however, that urban areas tend to concentrate higher demand for ECEC due to requests coming from parents living in cities and from those coming from nearby areas. Lack of convenient transportation options can particularly hinder disadvantaged children's access to ECEC services. Indeed, physical proximity to ECEC facilities is even more important for disadvantaged families who are less likely to be mobile (Carbuccia et al., 2023[3]).

The distribution of responsibilities for the organisation of the ECEC network matters for the distribution of ECEC services across the territory. The decentralisation of many ECEC systems, with shared responsibilities between central and sub-central authorities for ECEC funding, means local authorities' investments and priorities likely play a key role the development of the ECEC network (see Chapter 9). While decentralised planning enables easier adaptation to local needs, it can also result in an inequitable access to ECEC services within countries and across different groups of children. Wealthier localities are more likely to raise revenues and spend at higher levels on developing new ECEC facilities. Evidence from Sweden shows that multi-level governance can result in variation between municipalities in the availability of ECEC and access to quality provision, even in the context of an integrated ECEC system with universal ECEC entitlement from age 1 (Garvis and Lunneblad, 2018[13]; Leseman and Slot, forthcoming[14]). In a similar vein, communities where awareness about the benefits of ECEC is higher tend to exhibit a higher demand for ECEC services.

Market dynamics can also result in insufficient coverage of certain areas (e.g. poorer or more isolated areas) and segregation of children by socio-economic background (Simon et al., 2022[15]; OECD, 2019[16]). Acquiring other centres is often a key objective of private for-profit chains, translating into expanding company chains rather than increasing the number of ECEC places (Simon et al., 2022[15]). In Australia and England (United Kingdom), "childcare deserts", or areas with scarce ECEC, are more widespread in remote or disadvantaged areas and are estimated to cover a large share of the child population (for

example, nearly half of under-5 year-olds live in "childcare deserts" in England) (Pollard et al., 2023[17]; Hurley, Tham and Nguyen, 2024[12]).

ECEC costs for families

Lack of affordability of ECEC services remains one of the major barriers to socio-economically disadvantaged children's participation in a range of OECD countries. Direct ECEC costs (e.g. fees) and also parents' opportunity costs of staying at home and caring for their children matter in understanding the extent to which ECEC services are affordable to families (Carbuccia et al., 2023[3]). Evidence from the OECD net childcare cost indicator shows that costs for centre-based ECEC for young children can place an important burden on families' budgets. While most OECD countries provide some form of support for parents to reduce the costs of ECEC, out-of-pocket costs remained substantial for families in several countries in 2023 (Figure 5.5). In Ireland, New Zealand, the Netherlands, the United Kingdom and the United States, costs associated with centre-based care exceeded 20% of average earnings for a two-earner couple in full-time employment. In countries with relatively low gross childcare fees or benefitting from considerable government financial support, out-of-pocket childcare costs for families were lower. While single and low-income parents tend to benefit from additional financial support and hence, have lower out-of-pocket costs than double-earner families on average across OECD countries, parents still experienced high net costs in a few countries, particularly when gross fees are high (e.g. the United Kingdom and the United States) (OECD, 2022[18]). However, since data for this indicator come from 2023, they do not reflect any policy changes introduced later on.

Figure 5.5 Out-of-pocket early childhood education and care costs

Net childcare costs for a two-earner two-child (aged 2 and 3) couple family with full-time earnings at 100% of average wage for the first earner and 67% of average wage for the second one, as a % of average wage, 2023
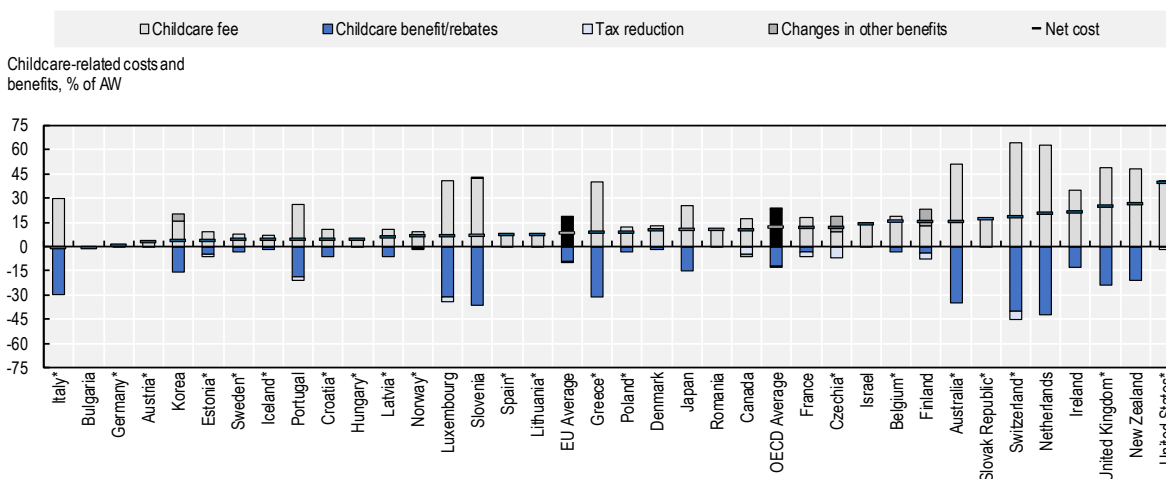
Notes: *Data for these countries are based on estimates for a specific region or city, rather than for the country as a whole (see Annex B).
Data based on assumptions of full-time, centre-based care, and income without deductions (see Annex B). Countries are ranked in ascending order of net childcare costs as a percentage of average earnings.
Source: OECD (n.d.), *Net childcare costs*, https://www.oecd.org/en/data/indicators/net-childcare-costs.html (accessed on 16 January 2025).

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While the type and degree of support for parents varies widely across OECD countries (Figure 5.5), (OECD, 2020[7]), such support may not be sufficient to address families' financial constraints and facilitate

children's participation in ECEC provision. In 2016, in European OECD countries with available data, up to one in four low-income households with children aged 0-5 reported an unmet need for ECEC due to financial reasons (OECD, 2020[7]). Affordability reasons for disadvantaged families and lack of ECEC access were most recurrent in Ireland, the Netherlands, Spain and the United Kingdom. In some European countries with available data in 2022, families with low work intensity still experienced substantial ECEC costs (25% or more of family budgets) in spite of substantial public support (Rastragina and Pearsall, 2023[19]).

Indirect barriers to children's participation

Despite welfare policies across OECD countries designed to mitigate financial barriers and ensure the availability of ECEC services, many children still do not participate in these services because of indirect barriers. These barriers – such as limited awareness of available services, complex enrolment processes, and a lack of understanding of the benefits of ECEC – diminish the reach of policies designed to help vulnerable families. This, in turn, contributes to consistently lower participation rates among the children who would benefit the most from ECEC provision. This section examines these indirect barriers, how they disproportionately affect certain groups, and how system-level characteristics and policies can hinder ECEC services from being equitable in their reach and accessibility.

Information gaps

Accessible information on the availability and types of ECEC settings, how to apply, the cost and the various financial support options is essential to ensuring that ECEC policies effectively reach socio-economically disadvantaged families and facilitate their access to ECEC. Widespread communication of this information, along with support mechanisms, is critical to improving enrolment rates among harder-to-reach families. However, the complexity of the ECEC sector in many countries can lead to information gaps, particularly in the eligibility for available provisions, application and enrolment processes, and the costs and benefits of services. Non-transparent or complex application procedures, as well as inconsistent enrolment requirements across regions and ECEC settings, can make it difficult for parents to navigate the system. As a result, even in universal ECEC systems, these barriers may prevent families from fully accessing the services available to them (Hermes et al., 2021[20]).

Across OECD countries, families from socio-economically disadvantaged backgrounds are more likely to face information gaps in understanding ECEC systems, which contributes to lower uptake of these services, even when the services are free and widely available (Carbuccia et al., 2023[3]) (see Annex A, Workshop 2). Across European OECD countries that offer free provision with a guaranteed place for 3-5-year-olds (e.g. Estonia, Hungary, Luxembourg, Poland, Portugal and Sweden), participation gaps persist, larger in some countries than in others (Figure 5.2). Research sheds light on why enrolment may remain low despite the efforts to make ECEC free and accessible, and why some families are more likely to use these services than others. In Germany, for example, socio-economically disadvantaged or immigrant families are more likely to experience barriers to accessing services due to a lack of information about the application process, key deadlines, and the need to apply early to secure a spot (Hermes et al., 2021[20]).

Families with an immigrant or refugee status are at an increased risk for information gaps about the availability of public services and their eligibility to benefit from them due to a combination of risk factors (Zimmermann, 2024[21]). Proficiency in the country's official language plays a key role in parents' ability to navigate a new education system. Language skills help parents understand the welfare systems and comply with bureaucratic requirements to benefit from these services. Not knowing the official language can lead to social exclusion and a limited access to available services. Research from Germany, England (United Kingdom) and the Netherlands highlights that the language proficiency of immigrant parents significantly influences their utilisation of ECEC services (Wolf et al., 2020[22]). Systemic barriers, such as

a lack of interpretation support in public services, can aggravate this risk further (Khatri and Assefa, 2022[23]).

While access to formal information channels is crucial for understanding welfare services, informal networks also play a significant role. Parents from culturally or linguistically diverse backgrounds often struggle to use formal information sources and therefore tend to rely on informal networks, such as community contacts (Khatri and Assefa, 2022[23]). This reliance simplifies decision making by reducing the cognitive load, allowing parents to focus on more immediate concerns. This practice can, however, hinder a full understanding of available ECEC services – particularly if informal networks do not rely on ECEC – resulting in limited awareness of available options or the required procedures to access the services (Carbuccia et al., 2023[3]).

Administrative challenges

Administrative requirements that request parents to invest time to obtain documentation or complete extensive paperwork to verify eligibility can also pose challenges during the enrolment process, especially for families experiencing vulnerability. Enrolment processes in ECEC services may involve multiple steps, including choosing a programme (or finding one based on eligibility), applying for a spot, verifying eligibility, and completing the enrolment. The variability and complexity of these individualised processes can place a cognitive and logistical burden on families, particularly those with limited resources or familiarity with the system.

Administrative difficulties compound the already challenging childcare responsibilities many parents face, particularly those with long working hours, multiple children and no work flexibility. The need to update information and provide proof of changes in financial circumstances can lead to increased stress and frustration for parents when using these services (Halling and Baekgaard, 2023[24]). The challenges that come with the enrolment process can lead to cognitive short-cuts in decision making that parents may choose to forgo the benefits of formal ECEC services altogether (Jenkins and Nguyen, 2021[25]).

Administrative requirements can be especially challenging for families with precarious settlement or work status when accessing ECEC provisions. Benefiting from ECEC subsidies often requires documentation that is more readily available to families with stable living arrangements and access to other services for their children (e.g. healthcare for vaccination records). Parents with precarious living (e.g. temporary or undocumented residence) or working conditions (e.g. frequent job changes) are more likely to struggle with accessing these services as a result of difficulties with providing the required documentation (Naldini, Adamson and Hamilton, 2022[26]; Sainsbury, 2012[27]; Yoshikawa, 2011[28]). These barriers can render them ineligible for formal ECEC settings. For instance, in the United States, immigrant families were less likely to access public ECEC services if they did not hold US citizenship or receive additional assistance to support them through the documentation process to access these services (Johnson, Padilla and Votruba-Drzal, 2017[29]).

The impact of administrative challenges on ECEC enrolment rates is particularly evident with demand-side subsidies. Policies that offer vouchers or tax credits give financial support directly to parents, allowing them to choose among various ECEC providers. While this approach offers financial relief and supports parental choice, it also requires parents to be well-informed about the process to claim such benefits. The evaluation of North Carolina's ECEC subsidy programme in the United States, for example, has shown that many Hispanic families struggled to provide the necessary documentation to access public services (Lin et al., 2022[30]). These challenges can lead to the discontinuation of the use of ECEC services among socio-economically disadvantaged children even when, for instance, updates of documentation are required (Jenkins and Nguyen, 2021[25]).

Social values related to child-rearing

The understanding of the role of ECEC in children's lives is necessary for motivating parents to use these services and enhancing ECEC participation in many OECD countries. However, parents' views on ECEC vary across segments of societies (Redman, Harrison and Djonov, 2021[31]). Some parents of children under the age of 3 may view ECEC services as a childcare solution rather than as an experience supporting child development.

The perception of a false dichotomy between education and care, and the importance of parental care for children of different age groups contributes to varied views on the role of ECEC, particularly for children aged 3 and under. Policies addressing affordability and accessibility barriers alone may not be sufficient to challenge and shift these deeply rooted perceptions. For example, in Germany, despite the significant expansion of public ECEC services between 1997 and 2020 – making services widely available and free for 3-6 year-olds and subsidised for under 3 year-olds – the enrolment rates for children under 3 saw only minimal increases, while enrolment for 3-5 year-olds grew substantially (Gambaro, Schäper and Spiess, 2024[32]).

Parents' attitudes towards ECEC play a pivotal role in enrolment, alongside socio-economic factors (Tang, Kelly and Pic, 2021[33]). These attitudes can shift as parents become more aware of the developmental benefits of ECEC, which can lead to higher participation rates among younger children. A study in Spain, for instance, found that parents' recognition of ECEC's role in fostering social skills, coupled with their mothers' education level and employment status, are strong predictors of ECEC enrolment at younger ages (Villar-Aldonza, Mancebón and Sancho, 2023[34]).

The view that ECEC services are not suitable for younger age groups is also related to social norms that emphasise the importance of parental childcare, particularly provided by mothers. Research shows that this view is especially prevalent among families where the traditional role of women as the primary caregivers is entrenched (Aarntzen et al., 2020[35]; Aarntzen et al., 2019[36]). The belief in the superiority of parental care over formal ECEC settings persists, influencing ECEC participation in many OECD countries (Rose and Elicker, 2010[37]; Tang, Hallam and Sawyer-Morris, 2020[38]; Beatson et al., 2022[39]). On average across OECD countries, around 34% of individuals think that children suffer when their mothers work (Figure 5.6). In countries such as Mexico and Türkiye, this view is likely reflected in the low ECEC enrolment rates for children aged 0-2. However, in countries with universal ECEC systems that extend free provision to younger age groups, such as Korea, this view no longer aligns with actual enrolment rates, where participation among younger children is significantly higher.

In many OECD countries, social norms related to caregiving responsibilities contribute to gender-based disparities in employment and pay, with implications for children's enrolment in ECEC services (OECD, 2023[40]). The effects are particularly severe for women in lower-wage jobs and with multiple young children, where caregiving demands constrain participation in the workforce (Kleven, Landais and Leite-Mariante, 2023[41]; Kleven et al., 2019[42]; Budig and Hodges, 2010[43]). High costs or limited availability of ECEC services often lead women to stay out of the labour market to provide childcare at home, reducing access to ECEC for children from disadvantaged backgrounds. (Gauthier, Emery and Bartova, 2016[44]; Debacker, 2008[45]). In turn, gender disparities in employment and pay reduce household income, increasing the risk of poverty and restricting children's access to essential resources and services (Thévenon et al., 2018[46]; OECD, 2023[40]). In contrast, countries that have implemented gender-equitable policies – such as parental leave and expanded ECEC provision – tend to show more balanced labour market outcomes and higher ECEC participation rates, benefiting both parents and children (OECD, 2018[47]; OECD, 2023[40]).

Figure 5.6. Social attitudes related to working mothers and enrolment rates among 0-2-year-olds

Association between the national population who agrees that "when a mother works for pay, the children suffer" and ECEC enrolment for 0-2-year-olds
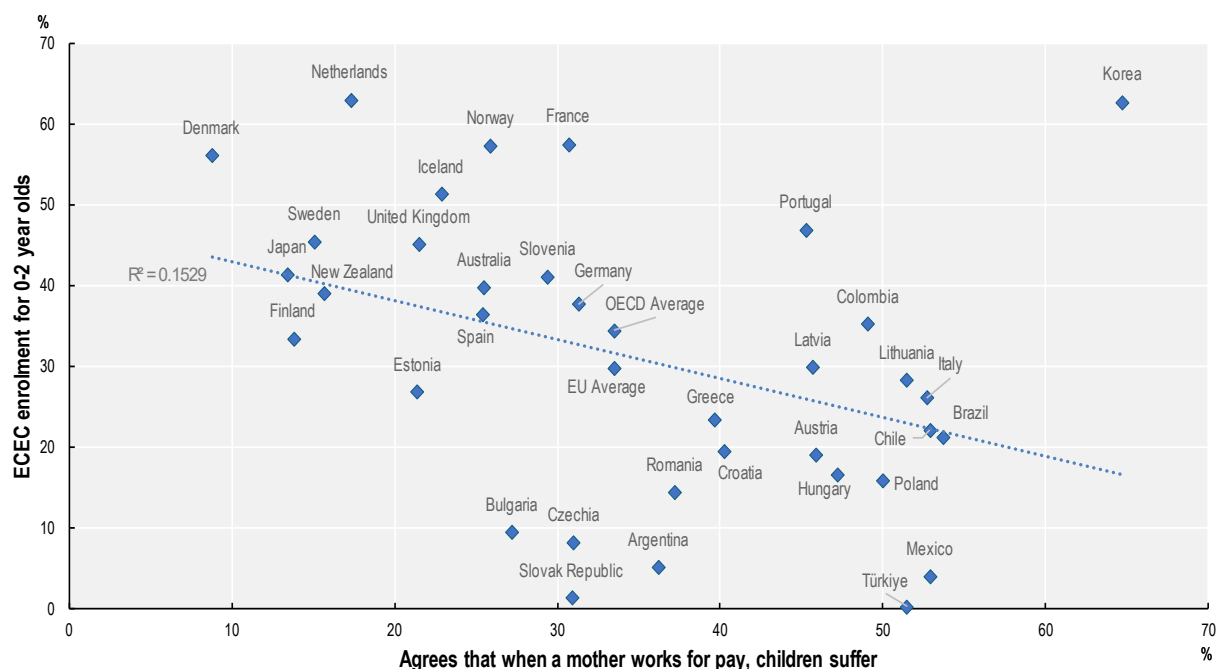
Notes: Data for 0-2-year-olds generally include children enrolled in early childhood education services (ISCED 2011 Level 01) and other registered ECEC services (outside the scope of ISCED Level 01, because they are not in adherence with all ISCED-2011 criteria) (see Annex B). Percentages for the response options "agree" and "strongly agree" from the World Values Survey (WVS) were combined (see Annex B). The WVS data was matched to the closest, most recent year of ECEC enrolment data available for each country. Only OECD member and accession countries with available WVS and ECEC enrolment data were included.

Sources: OECD (2024), *Family Database, Indicator PF3.2*, https://www.oecd.org/content/dam/oecd/en/data/datasets/family-database/pf3_2_enrolment_childcare_preschool.pdf (accessed on 12 September 2024); Haerpfer (2022), *World Values Survey Wave 7 (2017 – 2022) Database*, https://doi.org/10.14281/18241.24.

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Perceived quality and inclusivity of ECEC settings

Even when ECEC services are widely accessible and women's labour force participation rate is high, decisions about whether to use these services often depend on the availability of alternative childcare options and parents' preferences. In many OECD countries, informal, kinship-based childcare – particularly from family members like grandparents – is a preferred choice during a child's early years (Zanasi et al., 2023[48])**.** In some contexts, high-income families more frequently opt for informal care, while in others, low-income families rely more on these arrangements **(see** Figure 5.1 **and** Figure 5.2**).** Evidence from Germany, for instance, shows that during the expansion of ECEC services, formal ECEC enrolment rates for children from immigrant families increased more significantly than for children of the native-born. Native families, with stronger ties to extended family networks, are more likely to have easier informal care options (Gambaro, Schäper and Spiess, 2024[32]).

The perception that formal ECEC services are of lower quality than alternative forms of childcare can influence parents' decisions to opt for these alternatives. While there is no consensus on which specific quality aspects are most important to parents, a lack of trust in the quality of ECEC services can lead parents to seek alternative childcare arrangements. For low-income parents, finding affordable and

trustworthy ECEC settings can be particularly challenging, making informal childcare provided by family members or people within their social network more appealing to them (Sandstrom and Chaudry, 2012[49]).

Studies from various OECD countries highlight the significance of quality indicators for parents when selecting ECEC services. In Sweden, for example, research shows that many parents, particularly mothers, prefer to limit the time their children spend in ECEC settings partly because of concerns about potential negative effects from long hours in large group settings, where teacher-child ratios may not adequately support children's needs (Grönlund and Öun, 2020[50]). In Australia, parents rate several factors as highly important when choosing ECEC services, including the professional training of staff, effective communication between centres and parents, and staff's ability to understand children's needs (Beatson et al., 2022[39]). Similarly, in Ontario, Canada, research indicates that while parents' ECEC choices vary based on individual characteristics, factors such as centre licensing, staff qualifications, responsive staff-child interactions, and space availability are key considerations for many parents (Davidson et al., 2021[51]). Although the evidence is limited, studies also suggest that for children with special educational needs, the capacity of ECEC services to accommodate diverse needs influences parents' decision to use these services or opt for parental care (Glenn-Applegate, Pentimonti and Justice, 2010[52]; Beatson et al., 2022[39]).

For parents from culturally diverse backgrounds, perceptions of ECEC quality extend to concerns about whether these settings provide a supportive environment for children's cultural identity and thereby support their well-being. Parents may be reluctant to enrol their children in ECEC settings if they perceive a lack of cultural and emotional support provided to their children (see Chapter 7). For instance, a study conducted in Australia has shown that Indigenous parents had concerns about ECEC services not adequately reflecting or supporting their cultural practices and values (Sianturi, Lee and Cumming, 2022[53]). Similarly, a review of research evidence from Canada has shown that Indigenous parents preferred ECEC settings that are safe, nurturing, developmentally appropriate environments, supportive of children's cultural and identity development (Freeborn, Mardhani-Bayne and Soetaert, 2023[54]).

Immigrant parents value the cultural diversity and inclusivity of ECEC services when choosing ECEC settings for their children. Experiences of discrimination can significantly impact the life experiences of immigrant parents as well as their parenting behaviours (Guerra et al., 2023[55]). Public services can lack the infrastructure or the capacity to provide culturally sensitive support for immigrant populations (Suphanchaimat et al., 2015[56]). These experiences can result in a general avoidance of services by immigrant families, including ECEC settings (Jessen, Schmitz and Waights, 2020[57]). Evidence from OECD countries indicates that immigrant parents are more likely to prefer informal forms of childcare through their social network to provide a culturally and linguistically responsive experience (Miller et al., 2014[58]; Trappolini et al., 2023[59]; Seibel and Hedegaard, 2017[60]).

Policy directions to address barriers to participation

This section focuses on a few policy directions countries can consider in their efforts to raise participation and ensure equitable access to ECEC provision for all children. Ensuring high-quality ECEC is a cornerstone of efforts to expand participation in ECEC systems and reduce inequalities. Policy levers to enhance quality in ECEC for all children are addressed in Chapter 6.

Legal entitlements and targeted support

Legal entitlements send strong messages about the importance of child development in the early years. Legal entitlements tend to vary across and within OECD countries, with some countries providing free provision to all children aged 3-5 (e.g. France), while others provide a right to a place but limit the number of free years or target services based on family needs (e.g. United Kingdom) (OECD, 2020[61]).

Governments across the OECD have also used such entitlements to drive expansion in supply and demand for ECEC. Some OECD countries have moved beyond legal entitlements to achieve more equitable ECEC participation by extending compulsory pre-primary education. Since 2013, 10 OECD countries have extended the duration of early childhood education to increase the number of years in mandatory pre-primary education (OECD, 2024[8]).

Universal free access remains an important policy objective to work towards for many OECD countries. While participation in ECEC has expanded across the OECD (see Chapter 1), increases in enrolment rates have not always benefitted children from more disadvantaged backgrounds. Socio-economic inequalities in regulated ECEC participation for children under the age of two have increased in more than half of OECD European countries with available data (Figure 5.7). However, in a few countries including Finland, Latvia, Luxembourg, the Netherlands and Portugal, inequalities in participation have been reduced in the past decade. These countries tend to combine above-average ECEC participation in 2023 (Figure 5.1) with lower inequalities. More countries have succeeded in reducing inequalities in participation for children aged 3-5, potentially reflecting stronger investments at this level in contrast to younger ages. These figures also suggest the importance of targeted approaches to enhancing ECEC participation, as inequalities in ECEC access can remain even in systems that make ECEC widely available.

Figure 5.7. Trends in socio-economic gaps in participation in regulated early childhood education and care

Difference in participation rates in regulated ECEC between children from disadvantaged (lowest income tertile) and advantaged (top income tertile) backgrounds, by age and year

Panel A: 0-2 year-olds

Panel B: 3-5 year-olds
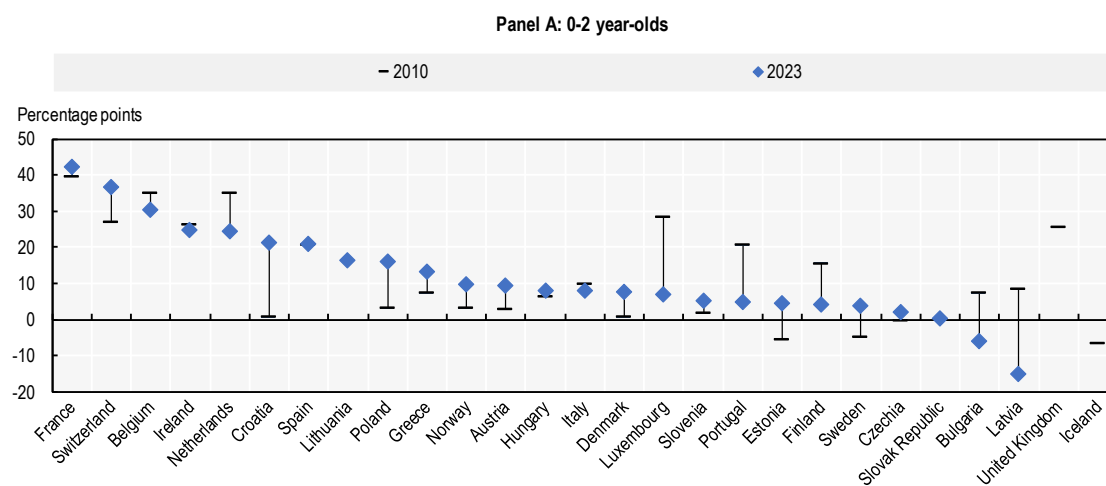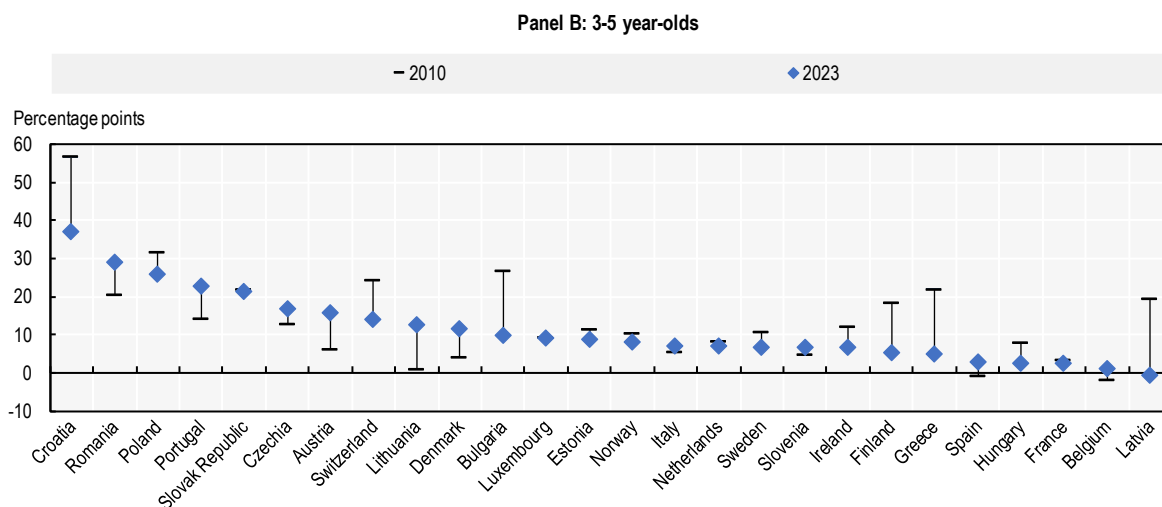
Notes: Data for 2023 in Germany are for 2022; data for 2023 in Switzerland are for 2021. Estimates based on fewer than 50 cases have been removed. Data refer to children using regulated centre-based services, organised family day care, and care services provided by (paid) qualified childminders organised and controlled by a structure (see Annex B). Socio-economic background is measured based on the equivalised disposable household income (see Annex B). Countries are ranked in descending order of the difference in regulated ECEC participation rates between children from disadvantaged (lowest income tertile) and advantaged (top income tertile) backgrounds in 2023.
Source: Eurostat (2024), *European Union – Statistics on Income and Living Conditions*, https://doi.org/10.2907/EUSILC2004-2023.

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Free or publicly subsidised ECEC access requires adequate ECEC investments that can drive expansion in infrastructure and alleviate costs for families experiencing vulnerability (Box 5.1). Capital expenditure constitutes only a limited share of OECD countries' spending on ECEC (see Chapter 9). Even when capital investments support sector expansion, governments also need to match such funding with current expenditure (e.g. to cover workforce salaries) to ensure ECEC services are operational. For legal entitlements to ECEC to translate into higher enrolment, they also need to be accompanied by suitable investments in infrastructure and provision of qualified staff, with targeted support for disadvantaged areas or for vulnerable children. They may also require designing regulations that place responsibility on local authorities to ensure sufficient places and meet quality objectives. Access, equity and quality need to be jointly considered.

Box 5.1. Comprehensive reforms to make ECEC more affordable and expand participation

In **Norway**, children are entitled to a place in publicly subsidised kindergartens from the age of 1. The Kindergarten Agreement of 2003 initiated a series of comprehensive policy changes to enhance participation and address availability and cost barriers in the sector. Public funding for the sector tripled between 2003 and 2011 to enable the provision of kindergarten places under reduced parental fees. The Agreement provided municipalities enhanced funding and obligated them to provide per-child funding for private kindergartens. An individual statutory right to a kindergarten place for all children aged 1-5 entered into force in 2009. The policy changes resulted in an expansion of kindergarten spaces since 2003 and of children enrolment, particularly for the youngest children and children from low-income families. The reforms have resulted in a shift in parental attitudes of Norwegian parents towards ECEC, with stronger preference for ECEC services as the best form of care for preschool-age children (EllingsÆter, Kitterod and Lyngstad, 2017[62]).

A fee cap was set for public and private kindergartens, and discounts were granted depending on household income. While the system sets a maximum attendance fee, parents do not have to pay fees that represent more than 6% of gross household income. Families earning below a given threshold are also entitled to 20 hours of free kindergarten attendance for children aged 2-5. Additional discounts are also provided at the municipality level for parents with several children enrolled in ECEC. These fee control mechanisms and discounts have ensured the affordability of ECEC services, particularly for low-income families, though cumbersome administrative application procedures and documentation requirements created a gap between eligibility and take-up (OECD, 2023[63]).

Since 2017, the Government of **Canada** has developed a collaborative approach to fund ECEC sector expansion. In Canada, provinces and territories have primary responsibility for the design and delivery of ECEC programmes and services (called early learning and childcare (ELCC) in Canada). Each province and territory has its own system governed by legislative and regulatory frameworks. Indigenous governments can also exercise jurisdiction in ECEC and have stated that Indigenous control in the design and delivery of ECEC is essential. In 2017, in recognition of their shared commitment to increase access to high-quality, affordable, flexible and inclusive ECEC, federal, provincial and territorial governments (with the exception of the Government of Quebec, which has an asymmetrical agreement), signed the Multilateral ELCC Framework. A complementary distinctions-based Indigenous ELCC Framework was co-developed with Indigenous Peoples and released in 2018. Both Frameworks set out principles to guide joint investments in ECEC (Government of Canada, n.d.[64]).

In 2020, the Government of Canada committed to creating a Canada-wide ECEC system with a more sustainable approach to funding. It made new investments to lay the groundwork and made the ELCC investments announced in previous federal budgets permanent and ongoing. As part of the 2021 federal budget, the Government of Canada made new investments over five years and committed to ongoing annual investments for ECEC and Indigenous ECEC, starting in 2025/26, with the goal of ensuring families have access to affordable, inclusive, flexible and high-quality ECEC.

The 2021/22 agreement included commitments to develop new high-quality regulated ECEC spaces by 2025 and demonstrate meaningful progress on improving quality (through early childhood educators wage frameworks, and the development and implementation of quality frameworks, standards and tools) (see Annex A, Workshop 5). Further federal efforts for ECEC have included a commitment for an Infrastructure Fund that will provide additional funding to provinces and territories to create childcare spaces in communities with insufficient provision, with a focus on not-for-profit and public providers. In addition, the 2024 federal budget makes further commitments to supporting public and not-for-profit providers to build more spaces and renovate existing centres (see Annex A, Workshop 5).

The federal vision and principles of access, affordability, inclusion, high quality and commitments to long-term funding were enshrined in the Canada Early Learning and Child Care Act, which became law in 2024. Respecting provincial and territorial jurisdiction and Indigenous rights, including the right to self-determination, the Act also enhances accountability through new reporting requirements, and establishes in law the National Advisory Council on ECEC, which has the role of providing third-party expert advice to the Government of Canada and serving as a forum for engagement on issues facing the sector (Government of Canada, n.d.[64]).

In **Ireland,** the Early Childhood Care and Education (ECCE) programme was introduced in 2010 to ensure universal access to ECEC to children in the two years before starting primary school. The National Childcare Scheme was introduced in 2019 and provides both universal and targeted subsidies to reflect progressive universalism as an approach. Targeted subsidies depend on parents' income to cover hours in addition to the ECCE programme.

In 2024, the government introduced Equal Start, the fourth strand of Together for Better – the funding model for ECEC. Equal Start comprises a set of universal and targeted measures to enhance access

to ECEC for children from socio-economically disadvantaged backgrounds. It takes a tiered approach, through three strands: strand 1 – universal measures (empowering parents, embedding inclusion in ECEC settings, supporting partnership between settings, families and communities); strand 2 – child-targeted measures to support children from priority target groups in all ECEC settings, and strand 3 – setting-targeted measures that provide additional resources to settings with a high concentration of children from socio-economically disadvantaged backgrounds.

Priority groups for the programme were identified through a combination of methods: research evidence, consultations, obligations under the European Child Guarantee, etc. To target the support to specific ECEC settings and to children from priority groups, administrative data were combined with a deprivation index and geocoded data to enable the identification of the proportion of children in different ECEC settings who live in disadvantaged communities or are from priority groups (Ireland's Department of Children, Equality, Disability, Integration and Youth, n.d.[65]).

A range of strategies can enhance ECEC spending for sector expansion. Redistributing public education spending across education levels may be one avenue, given that OECD countries tend to allocate the largest share of gross domestic product (GDP) to secondary education relative to other education levels (OECD, 2024[8]) (see Chapter 9). Countries with low levels of private contributions to ECEC spending can also consider tapping into private funding (e.g. through income-linked parental fees or incentives for employer investments in ECEC provision for their employees) to be able to redirect public resources to areas or children most in need.

ECEC network planning

Enhancing the planning of the ECEC network can help ensure ECEC provision reaches vulnerable children. The design of national objectives, guiding principles and criteria for investments can steer a more effective development of ECEC that ensures sector expansion meets equity and quality criteria (Box 5.1). This also entails enhanced co-ordination and alignment between different funding sources (e.g. central and sub-central) and also funding areas (e.g. measures targeting ECEC affordability, infrastructure, workforce, quality assurance) since the latter often tend to be funded separately rather than as part of an integrated system (NASEM, 2018[66]) (see Chapter 9).

To support sector expansion that addresses participation gaps, ECEC systems require effective targeting strategies that ensure resources reach the children and communities most in need (see Chapter 9). Funds can be targeted to areas or communities with insufficient ECEC services based on evidence of need. In addition, targeted transportation funding can also be allocated to enable children to access the nearest ECEC facility when there is no ECEC provision in their own community. The design of funding allocation mechanisms is key for mitigating inequalities across sub-central authorities and steering them towards specific policy objectives in terms of equity and quality (see Chapter 9). When central-level authorities allocate funds to sub-central ones for the development of the network, the criteria on which the allocation is determined (e.g. local demand, population growth, detailed analyses of needs) shape the extent to which funds reach vulnerable children and communities. Relying on local applications for capital grants or ineffectively targeting children or communities due to low data capacity to monitor ECEC supply means that new ECEC facilities are unlikely to be developed in areas most in need.

Efforts to support more effective management of investment projects at the local level need to accompany public resources allocations. Central authorities can expand efforts to build the capacity of local authorities and ECEC providers (particularly smaller ones or those from disadvantaged communities) to plan and manage infrastructure projects, through professional development programmes, additional guidance, and simplified application procedures for central-level infrastructure funds (see Chapter 9). ECEC network planning platforms or co-ordination mechanisms at the sub-central level can also enable local authorities to work together and co-ordinate provision (e.g. between urban and suburban areas), learn from each

other (e.g. when smaller or more disadvantaged localities cannot develop investment projects) and potentially engage in joint ECEC provision (OECD, 2018[67]). Efforts to build capacity at the local level for network planning thus require more vital collaboration between all stakeholders with roles and responsibilities in ECEC provision – vertically (across levels of governance) and horizontally (across local agencies or services with roles in ECEC funding, management, etc.) (see Chapter 4).

Enhancing public provision can also support ensuring equal availability of ECEC settings within countries and across different groups of children. While lowering cost barriers to enrolment is critical (see sections below), public management and central steering of sector development matter to address inequalities in service coverage in market-based systems and ensure services are created in areas most in need. Providing sufficient places is a challenge but expanding ECEC provision through the private sector risks leading to low quality and should therefore be closely monitored (see Chapter 9). Evidence from TALIS Starting Strong 2018 data show that publicly managed-centres are more likely than privately managed ones to be in rural areas or enrol larger shares of children from socio-economically disadvantaged backgrounds (OECD, 2019[16]). National and local policies and funding to enhance ECEC provision in specific areas need to be accompanied by regulations that set out quality goals for sector expansion and build the capacity of ECEC centres to deliver quality provision.

Data and monitoring mechanisms for needs identification

Strengthening ECEC network planning depends on effective monitoring systems that enable the identification of needs, allowing for targeted investments in areas where they are most beneficial, and tracking progress. While evidence on ECEC participation is more readily available at the national level, many gaps persist in assessing inequalities in ECEC access. Data sources often provide a snapshot of participation in specific types of settings (most often, centre-based and thus, failing to account for the diversity of ECEC provision forms), at a national level (rather than disaggregated at more local levels) or focused on a specific period (rather than in a longitudinal matter to enable tracking changes). In addition, evidence on the infrastructure needs of ECEC providers is seldom available or collected systematically.

Longer-term, dedicated financing mechanisms and central steering need to underpin ECEC data collections and monitoring mechanisms that enable understanding the demand for and supply of ECEC services. Identifying the causes of gaps in ECEC participation and how these gaps are distributed in the country is critical. On the demand side, collecting evidence on parental needs and preferences for ECEC services (e.g. in terms of hours, format, location) would support better tailoring of the ECEC offer to vulnerable families. On the supply side, data on infrastructure needs coupled with studies of real estate markets and available financing options for infrastructure development (particularly for small providers) can inform financing support needs (NASEM, 2018[66]).

ECEC affordability

OECD countries provide a range of supports to socio-economically disadvantaged families. The amount of support to cover ECEC costs matters. Closing equity gaps in ECEC would require more substantial investments, as illustrated by the experience of OECD countries that have enhanced participation (see Box 5.1).

The extent of public and private provision shapes the accessibility and affordability of ECEC services. While direct public provision can enable authorities to control fees and vary fees in proportion to parental income, the level and spending pattern of public resources shape the availability of sufficient places. In contrast, market-based systems can enable more flexible adaptation to demand, but also entail less control over fees and a risk that public subsidies translate into fee increases for parents in the absence of fee regulations (OECD, 2020[7]).

Beyond the provision of adequate funding, the design of supports, modality of funding, and regulations to contain ECEC costs for parents are therefore equally important. Early evidence from the 2000s on funding modalities in OECD countries highlighted that public supply-side investment models, managed by public authorities, tended to support higher quality and coverage relative to parent subsidy approaches (OECD, 2006[68]). Tax support incentives or support paid directly to parents may fuel more competition pressure on providers to operate efficiently and maintain delivery costs, while enhancing parental choice. At the same time, administrative burden associated with applying for or proving eligibility for support may hinder parents' reliance on public support for ECEC and translate into lower ECEC participation. Parents may also be more inclined to base their choice on provider cost rather than quality, particularly since the latter is hard to assess. More generally, subsidies paid directly to providers tend to facilitate public authorities' control over quality and provide greater accountability for public expenditure (Paull and Wilson, 2020[69]).

Regulations play a key role in containing prices and ensuring that public support for ECEC is not captured by providers rather than lowering costs for parents (OECD, 2020[7]). Fee controls, restrictions on profits and wages for subsidies, and hourly caps on reimbursements for costs in refundable tax credit schemes are a few measures used in OECD countries to limit the risk that public funding results in higher costs for parents (Paull and Wilson, 2020[69]). Evidence shows that fee control mechanisms can reduce ECEC costs for parents and support higher ECEC participation, as well as maternal employment, which enables an increase in tax revenues and lower transfers to families. However, fee control mechanisms may also result in shortages of available places or detrimental effects on quality (when providers reduce delivery costs to ensure financial sustainability) (Paull, Petrone and Wilson, 2020[70]). This illustrates the importance of setting fee caps at a level that ensures that provision remains operational and of intended quality (see Box 5.1 and Box 5.2). Quality standards need to accompany the design of fee control mechanism, both to ensure quality provision and to guide the definition of delivery costs meant to be covered by fees (Paull, Petrone and Wilson, 2020[70]). Funding conditionality that links receipt of resources and subsidies with compliance with quality standards and measures to enhance ECEC accessibility is equally critical in ensuring that funding supports greater quality and equity (see Chapter 9). Together with regulations on profits, funding conditionality plays a key role in market-based systems where fee controls are more challenging to implement.

The design of targeting mechanisms can enhance the effectiveness of public support for ECEC affordability and ensure spending efficiency in contexts of scarce resources. Evidence from European OECD countries shows that a few countries display "reverse targeting", whereby ECEC support benefits higher-income families more. This may be due to tax income credits being used only by high-income families or loss of homecare allowances when parents start using non-parental childcare (Rastragina and Pearsall, 2023[19]). Carefully design targeting mechanisms and eligibility conditions is critical to ensure public resources reach those most in need. Accounting for a range of characteristics that can relate to disadvantage beyond income (e.g. family size, accounting for both children in ECEC and children of school-ages, or other characteristics that tend to lead to higher vulnerability depending on countries' contexts) also shapes the effectiveness of targeted support. Tax-based support measures for low-income families may need to be balanced with additional targeted support measures to minimise "reverse targeting" (OECD, 2020[7]).

In addition, ECEC fee scales and entitlements need to be designed carefully and may require cross-government collaboration to support the use of ECEC and participation in the labour market of mothers in general and of both parents in the case of low-income families. Policies that encourage shared parental leave combined with ECEC supports can help shift caregiving expectations more equitably between parents, further normalising maternal workforce involvement while increasing ECEC enrolment (Fluchtmann, 2023[71]; Thévenon, 2013[72]). Policies that improve the accessibility and affordability of ECEC services can **thus also mitigate indirect barriers to ECEC participation (see sections below). In addition, u**niversal and targeted ECEC policies can help mitigate the motherhood penalty on the labour market (Andringa, Nieuwenhuis and Van Gerven, 2015[73]), thereby raising family income with a range of possible benefits for children. Additionally, policies that encourage shared parental leave combined with

gender balancing incentives and ECEC supports can help shift caregiving expectations more equitably between parents, further normalising maternal workforce involvement while increasing ECEC enrolment (Fluchtmann, 2023[71])

Box 5.2. OECD approaches to make ECEC affordable for families from disadvantaged backgrounds

Increasing ECEC accessibility in the non-formal sector – Luxembourg

The *Chèque-Service Accueil* (CSA) subsidy funding scheme was introduced in 2009 for non-formal education to enhance access to quality ECEC for all children, regardless of their parents' social and economic situation. Through the scheme, families benefit from price reductions based on their household incomes, compositions (e.g. the child's rank in the family with smaller costs for additional children) and the number of hours spent in the service (see Annex A, Workshop 6). Non-formal education structures are run by external providers. The scheme has resulted in a considerable expansion of the non-formal sector – contracted places for children (delivered mainly by municipalities or non-profit organisations) have more than doubled in the decade following the launch of the scheme. The sector also saw an expansion of non-contracted places (delivered by for-profit providers) (OECD, 2022[74]).

In 2016/17, the government also introduced a series of quality assurance measures for the sector. Educational quality needs to be ensured in accordance with the national reference framework "non-formal education for children and youngsters"; and the Ministry of National Education, Children and Youth also exerts quality control (see Annex A, Workshop 6).

Targeting support to providers meeting accessibility criteria – the Flemish Community of Belgium

The Flemish Community of Belgium provides additional support to vulnerable families within a universal offer. The subsidy scheme for formal ECEC for children under 3 years old is a system from Level 0 up to Level 3. The higher the level, the more subsidies one may receive, but also the more compulsory conditions one must fulfil. In settings at Level 2 or 3, families pay an income-related fee (for nearly 80% of the places in Flanders, parents pay an income-related fee). Settings at subsidy Level 2 or 3 are obliged to observe several priority rules; for example, settings at Level 3 must uphold a proactive admissions policy to give a place to vulnerable families and disseminate expertise on how to deal with vulnerable families in a respectful way (inclusion). Settings at Level 3 must also make efforts to recruit workers from vulnerable groups. The revenues from the financial contributions of the families are offset against the subsidies at Level 2 and 3. As a result, ECEC provision for children from low-income families does not have any negative financial consequences for the settings' operating budget.

Combining universal and targeted approaches to enhance participation – New South Wales (Australia)

The New South Wales Start Strong programme is an example of strategic combination of both universal and targeted approaches to enhancing access and participation in ECEC (NSW Government, 2024[75]):

- Start Strong for Long Day Care and Community Preschool offers a universal payment for up to 600 hours of preschool for children in the 2 years before school with additional loading for Aboriginal and Torres Strait Islander children and for services in areas of relative socio-economic disadvantage.

- Start Strong for Community Preschools provides funding for up to 600 hours of preschool for 3-5-year-old children with higher funding rates for services in areas of relative socio-economic disadvantage. The programme provides loadings for children from low-income families, children with an Aboriginal and Torres Strait Islander background, children with disability or additional

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> needs and children with English language needs. Additionally, Start Strong for Community Preschools includes additional funding for services operating in outer regional, remote and very remote areas. Start Strong Pathways programme provides financial assistance through a closed, non-competitive grant to not-for-profit services to support the early learning needs of young children (aged 0-3), offering families a pathway into more formal ECEC. The providers must deliver activities that prioritise engagement of equity cohorts to receive the grant.

Flexibility of ECEC provision

Developing flexible ECEC provision is essential for addressing the diverse needs of families and promoting greater participation in ECEC services (OECD, 2017[76]). Flexibility in operating hours, duration, frequency and types of provision can enhance accessibility for families facing various responsibilities and constraints. Accommodating different family schedules through a range of ECEC options can support parental engagement and influence their decisions on ECEC services (Baxter, Hand and Sweid, 2016[77]). By offering variable hours, part-time slots and drop-in services, ECEC programmes can support parents who have variable work schedules or those who prefer to remain actively involved in their children's early development. In addition, flexible service provision can equally support reaching more remote or isolated areas where standard settings may be more costly to establish due to insufficient numbers of children.

When designed to be accessible and affordable, flexible ECEC arrangements can support greater participation of women in the labour force. Evidence from Finland and the United Kingdom shows that flexible ECEC arrangements are more frequently used or needed by socio-economically disadvantaged and single parents (Rönkä et al., 2017[78]; Rutter et al., 2012[79]). Access to affordable and flexible ECEC options, therefore, can facilitate women from socio-economically disadvantaged backgrounds entering or re-entering the workforce or sustaining employment following childbirth, and therefore reduce the caregiving burden that disproportionately affects women. Moreover, the integration of alternative service models, such as co-located ECEC and community resources, facilitates holistic support for families, allowing for better awareness of the services and their benefits (see Chapter 10). This not only alleviates the logistical challenges that parents face but also enhances the overall effectiveness of ECEC services in reaching children and families, facilitating their transition into formal ECEC environments.

Information services and administrative accessibility

Information services and targeted outreach can also mitigate barriers to participation in ECEC coming from information gaps. Research from OECD countries highlights the role of information services and support networks in closing these gaps for socio-economically disadvantaged or immigrant families (Hermes et al., 2021[20]; Weixler et al., 2024[80]). These services can assist parents in the application and enrolment process by providing information on eligibility criteria, service availability and enrolment timelines. To ensure equitable access to these resources, it is important to offer the services through diverse and inclusive communication channels. Integrating these channels into frequently used early childhood services, such as healthcare, social services and other social hubs accessed by families, can play a key role in reaching vulnerable families, ensuring that even those who may not actively seek information are well-informed (see Chapter 10).

ECEC systems with better-designed administrative structures can simplify the enrolment process for all families. Administrative systems that unify the application and enrolment process across providers and different segments of the sector can reduce the time and cognitive burdens resulting from having to navigate multiple deadlines, eligibility requirements, application and enrolment procedures. Well-designed systems that incorporate digital support mechanisms – such as automatic reminders, accessibility formats and multilingual assistance – can help ensure that parents are informed of service availability and important deadlines, preventing them from missing critical steps in the enrolment process.

Administrative requirements designed with at-risk families in mind can improve their access to ECEC services and further enhance the effectiveness of these services in reaching families. Application and enrolment procedures that prioritise at-risk groups can help reduce waiting times, ensuring that families are not discouraged by complex processes. By simplifying documentation requirements for verifying service eligibility, potential administrative barriers that lead to non-participation or discontinuation of services can be removed. This approach can help reduce the risk of negative interactions with the system, facilitating engagement by harder-to-reach groups and their access to ECEC services.

To promote equitable access to ECEC, streamlining and expanding the eligibility criteria within administrative systems is important, particularly in contexts without legal entitlements to ECEC services. When selection criteria for ECEC placement are determined locally or by individual providers, inconsistencies can arise, impacting access and coverage, especially for more vulnerable populations (European Commission, 2018[81]). In response, several countries have introduced guiding principles or standardised selection criteria at the central level to promote uniformity in access. These criteria may consider factors such as parental employment status, family structure, or citizenship or legal residence. However, they need to be carefully designed and build upon robust data systems to avoid inadvertently excluding some families, ensuring that vulnerable children are not further disadvantaged due to their socio-economic backgrounds. Box 5.3 presents some initiatives that respond to information gaps by providing support services and simplifying the application and enrolment procedures.

Box 5.3. Examples of mechanisms aiming to facilitate ECEC participation

Local information and support points in the Flemish Community of Belgium

Local information and support points in the Flemish Community of Belgium are co-ordinated by the local authority and work in collaboration with an array of services for families to assist parents in accessing ECEC services. These support points help families identify the most suitable services, provide information on financial options, and promote accessible ECEC solutions to parents but also to the ECEC services themselves (make them aware of possible thresholds in the service). Special attention is given to vulnerable families and those in need of urgent or flexible ECEC arrangements (Child and Family Agency of the Flemish Community of Belgium, n.d.[82]).

***Eltern Leben Familie Erziehung* (ELFE) Study in Germany**

A randomised controlled trial in Germany investigated the impact of providing information services to improve access to ECEC settings for children under 3 years old. The study targeted a region where socio-economic disparities in ECEC access persisted, despite the availability of universal childcare. In the treatment group, parents received support through a video explaining the ECEC system in Germany, their entitlements and individual assistance with the application process, including help with paperwork and deadlines. The findings showed that this programme led to a 21% increase in application rates and a 16% increase in enrolment rates among socio-economically disadvantaged families (Hermes et al., 2021[20]).

"Go First School" platform in Korea

In Korea, parents can apply and enrol for their preferred ECEC services through centralised online platforms. The "Go First School" online system, managed by the Ministry of Education, facilitates preschool admission. A guide in English is made available for non-Korean speaking parents. Families facing various disadvantages, as well as those from multicultural backgrounds, receive priority access to these services, as well as priority placement in ECEC services (Korea's Ministry of Education, n.d.[83]).

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Family hubs in England (United Kingdom)

Family hubs are centres provided by local services to offer advice for parents of children aged 0-19, supporting them on various topics related to children's development and parenting. Programmes offered in these hubs, such as "Start for Life," provide parents with information on early years and guidance on parenting. These hubs also guide parents through the ECEC system, helping them understand their eligibility for childcare benefits. Some hubs also offer free childcare settings for parents attending courses at the hub (Government of the United Kingdom, n.d.[84]).

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Family and community engagement and trust

Quality is one of the primary factors influencing decisions around ECEC, often shaping whether parents trust in services (Saleem et al., 2021[85]). Ensuring that all ECEC services are high-quality (see Chapter 6) could foster greater trust among parents, encouraging more families to choose formal ECEC services over informal alternatives. Equally important is enhancing transparency and communication with parents regarding ECEC quality, such as through the publication of monitoring reports (e.g. with information on quality standards, staff qualifications and safety measures) and information on the developmental benefits of formal services.

Building trust plays a key role in encouraging participation in ECEC services among harder-to-reach communities. In marginalised or underserved communities, concerns about the quality of ECEC services, cultural sensitivity and inclusion, and ability of these services to address children's unique needs can result in heightened levels of mistrust. Addressing these concerns requires more than simply increasing access to high-quality ECEC settings; it requires fostering relationships and engagement with communities, ensuring transparency in service provision, and promoting shared leadership in both decision making and service delivery (Lansing et al., 2023[86]), which can entail involving community members and parents in service delivery as well as in day-to-day activities in ECEC centres.

Initiatives that support community involvement in ECEC services can provide families from diverse backgrounds with culturally-responsive options for their children's needs, thereby increasing trust in these services among hard-to-reach families (Haight et al., 2018[87]). The services led in collaboration with community members can respond to and prioritise the social and cultural needs of families and foster an inclusive environment that matches the expectations of parents from culturally diverse backgrounds. Evidence from neurosciences indicates that children are more responsive to adults who are close to their environments (see Annex A, Workshop 1 and Chapter 7). Involving staff from the local community can therefore also raise the quality of the interactions that children experience in ECEC settings, and the trust that parents have in ECEC services.

Leveraging community resources can enhance access to information, raise awareness and encourage participation among families who may otherwise lack access to formal information channels. Access to ECEC services for families facing multiple barriers often depends on the availability of information shared within social networks. To effectively reach families at risk of exclusion, outreach efforts need to be culturally sensitive and tailored to the specific needs of diverse communities. Training individuals within these communities to serve as local advocates and trusted intermediaries can be an effective strategy for raising awareness and fostering engagement in public services (Schaaf et al., 2020[88]). Examples of initiatives that recognise the need for community engagement to address some of the barriers to ECEC participation are discussed in Box 5.4.

Box 5.4. Examples of initiatives to improve ECEC participation through community involvement

Stadtteilmütter, "District Mothers" in Germany

This outreach initiative in Germany trains mothers from diverse communities to support fellow parents in accessing essential services for their children. The project has engaged families from 15 different language backgrounds, conducting over 15 000 home visits to assist parents in navigating parenting challenges. District Mothers provides guidance on a wide range of topics, including immigration, language acquisition, employment, healthcare, legal matters, childcare, and the developmental needs of children and young people (Stadtteilmütter, n.d.[89]).

Indigenous Early Learning and Child Care Framework (IELCC) in Canada

The Indigenous Early Learning and Child Care (IELCC) Framework in Canada is an initiative that aims to strengthen ECEC programmes for Indigenous children and families. The framework outlines a shared commitment by Indigenous communities, programme administrators, service providers, policymakers and governments to ensure access to high-quality, culturally appropriate ECEC programming for First Nations, Inuit and Métis communities. The framework promotes Indigenous governance and tripartite agreements (federal-provincial-Indigenous), increasing access to quality programmes for Indigenous communities, supporting the recruitment and training of Indigenous early childhood educators, and ensuring funding opportunities to sustain long-term development (Government of Canada, n.d.[90]).

The Engaging Priority Families (EPF) service in New Zealand

The Engaging Priority Families (EPF) aims to engage families with children aged 3-5 who are not enrolled in ECEC services, specifically targeting Māori, Pasifika, low socio-economic status families, and immigrant families. The EPF programme is run in collaboration with community organisations who reach out to families and provide them guidance on the ECEC system. In addition to guiding families throughout the enrolment process, the programme also enhances their understanding of the importance of regular ECEC participation for their child's development and fosters the development of relationships among families, ECEC services and primary schools (New Zealand's Ministry of Education, n.d.[91]).

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6 Providing quality for all in early childhood education and care

This chapter discusses policies to increase overall quality in ECEC systems while also providing additional support to the children who need it most, through a combination of universal and targeted approaches. The chapter investigates how broad quality frameworks can consistently activate the policy levers of curriculum, staff training and professional development, standards for child-staff ratios and group sizes, and system-level monitoring. The chapter also discusses how some of the constraints faced by the ECEC sector in many OECD countries condition this policy space.

Key messages

- Fragmented governance, financial constraints and staff shortages represent major challenges to ensuring consistently high levels of quality and to promoting equity within ECEC systems.

- A strategic combination of universal and targeted approaches can help raise quality and promote equity in ECEC systems. This requires consistent quality frameworks which activate multiple policy levers, include standards that apply broadly throughout the sector and from which all children can benefit, and offer additional supports to those who need it most.

- Variation in quality between and within types of ECEC exists across OECD countries. Evidence suggests that children from disadvantaged and minority backgrounds tend to experience lower levels of process quality (i.e. the quality of their interactions with others within ECEC settings).

- Regulated types of ECEC tend to have structural conditions more conducive to high-quality provision. In 2023, in more than half of European OECD countries, the participation rate in regulated ECEC with high time intensity (25 hours or more per week) was at least 10 percentage points higher for children from high-income families than for children from low-income families.

- Curriculum frameworks informed by high-quality features identified by research can strengthen quality and equity across an ECEC system. This requires extending their coverage across types of provision, including to traditionally under-regulated settings.

- Overcoming the dichotomy between whole-child and skill-specific curricula, an integrative curriculum model can maintain a holistic approach to early learning, development and well-being, while also promoting targeted and intentional interactions focused on specific skills.

- ECEC staff in all roles and types of provision can benefit from initial training to work with young children specifically, covering a broad range of areas and including a practical work-based component. Targeted supports to participate in continuous professional development can be provided for staff in settings with a higher share of vulnerable children.

- Research shows modest benefits from improving child-staff ratios and group sizes alone in contexts where they are already adequate, but system-wide standards for these structural quality features remain important to enable staff to establish positive relationships with children. Where needed, efforts to improve child-staff ratios and group sizes could first target ECEC settings with high shares of children from disadvantaged backgrounds.

- System-level monitoring can contribute to quality assurance across the sector by establishing a shared understanding of standards and clear expectations for all types of providers. Monitoring policies can also support equity and inclusion by mobilising data to focus on these objectives generally and design targeted supports more specifically.

Introduction

ECEC systems aspire to provide high-quality early education and care for all children. However, varying levels of quality across the different types of ECEC available to young children – as well as between settings – is an inherent feature of any large-scale ECEC system. While some variation in the quality of ECEC provision may be inevitable, large variability is problematic from an equity and inclusion perspective, especially when some groups of children consistently experience lower levels of quality. Policies aiming to promote equity and inclusion through ECEC should be driven by the ambition to raise quality across the entire ECEC system, rather than by merely reducing its variability across settings.

This chapter addresses the following overarching questions:

- What policies can strengthen overall quality throughout an ECEC system while providing additional targeted supports to the children who need it most?
- How do major constraints faced by the ECEC sector across OECD countries – notably, fragmented governance, financial constraints and staff shortages – condition the policy space for supporting all children through high-quality ECEC?

This chapter addresses these questions by exploring how broad ECEC quality frameworks can consistently activate the levers of curriculum, staff training and professional development, standards for child-staff ratios and group sizes, and system-level monitoring. The focus is mainly placed on the structural aspects of quality (e.g. curriculum frameworks, staff training requirements, child-staff ratios), which are instrumental in setting the conditions for achieving process quality (i.e. meaningful interactions for children within ECEC settings) while being better reactive to policy change. Chapter 7 complements this perspective by focusing on setting-level practices with a more proximal influence on process quality. As a preliminary step, the chapter reviews research on variation in quality across different types of provision and its driving factors within ECEC systems.

Variation in the quality of ECEC within systems and how it affects children from different backgrounds

ECEC systems can embrace multiple forms of provision (see Chapter 4). Universal ECEC systems with a largely integrated structure rely on a single or few types of provision, often with strong public subsidies and early entitlement as strategies to promote equity. Less integrated systems combine different types of ECEC provision that differ on dimensions such as whether centre- or home-based, managed by public or private providers (and among the latter, for-profit and not-for-profit); these systems are typically more marketised and rely more on targeted programmes to level opportunities. Different types of ECEC may also exist for children across age groups and reflect overseeing by different national or regional authorities.

Variation in quality can arise when different standards and regulations apply to different types of ECEC within countries, and when resources and funding vary across settings (see Chapter 9). Nonetheless, even within ECEC systems with largely uniform types of provision, variation in quality can exist between settings, for instance in relation to their location, to the composition of children in the setting or classroom, or to variability in how shared standards and frameworks are implemented in practice.

Evidence on variation in quality

A large body of evidence documents variability in the quality of ECEC between and within types of ECEC. In England (United Kingdom), while 3- and 4-year-olds living in more income-deprived areas were more likely to attend settings employing better qualified staff, these settings (within both the public and private sectors) received lower quality ratings in inspections (Gambaro, Stewart and Waldfogel, 2015[1]). In

Germany, migrant children and children from low-educated parents have been found to attend settings with moderately lower levels of quality on a set of structural (e.g. facilities and equipment) and orientation (e.g. staff satisfaction, frequency of staff meetings) quality indicators, as well as with higher concentrations of children with their same backgrounds (Stahl, Schober and Spiess, 2018[2]); (Becker and Schober, 2017[3]). In the context of Norway's heavily subsidised and regulated universal system, children from highly-educated parents have been reported to attend ECEC centres with higher structural quality, with both factors in turn predicting higher quality relationships between staff and children (Alexandersen et al., 2021[4]). In the United States, a nationwide between-sector comparison documents systematically higher levels of quality, including regarding basic safety conditions, staff education levels, and both self-reported and observational measures of classroom practices, in formal programmes as compared to informal arrangements, with the pattern of between-sector differences being similar for settings serving toddlers and preschool-age children (Bassok et al., 2016[5]). At the state level, within Georgia's universal pre-kindergarten programme, classrooms in low-income communities with a high share of minority groups have been found to receive lower process quality ratings but to have similar structural quality indicators than classrooms in more advantaged communities (Bassok and Galdo, 2015[6]). There is more limited evidence of differences in process quality between seven early education and care programme types in Massachusetts (Jones et al., 2020[7]). Large gaps in quality are also documented between providers within New York City's universal pre-kindergarten programme in relation to neighbourhoods' racial composition (Latham et al., 2021[8]); (Fuller and Leibovitz, 2022[9]). And within a particular programme (Head Start), substantial variation has been found in both structural and process quality between classrooms within centres (Sabol, Ross and Frost, 2019[10]).

Across countries, a systematic review of studies on the association between classroom composition and process quality indicates that process quality tends to be lower, especially in the emotional and instructional support domain, in ECEC classrooms with a high concentration of children from minority or immigrant backgrounds or a high concentration of children from socio-economically disadvantaged families (Aguiar and Aguiar, 2020[11]).

Another strand of research infers variability in quality based on differences in children's outcomes. A meta-analysis of quasi-experimental evidence on the impact of universal programmes in eight countries finds that ECEC arrangements of high quality systematically yield more favourable outcomes than those of lower quality, particularly in cognitive domains and for disadvantaged children, with some indication that higher intensity (full-time) and public provision tend to generate more positive effects (van Huizen and Plantenga, 2018[12]). Evidence from France shows that attendance of centre-based and highly regulated settings (crèches) at age 1 is beneficial for children's language skills, relative to less intense and less formal modes of care (Berger, Panico and Solaz, 2021[13]). Regarding emotional and behavioural outcomes, a meta-analysis of child cohort studies from five European countries (Denmark, France, the Netherlands, Spain and the United Kingdom) finds that, relative to parental care only, attendance of centre-based ECEC between ages 0 and 4 is associated with lower levels of social and emotional difficulties in middle childhood and early adolescence, while informal childcare is associated with increased levels of difficulties, which suggests a positive impact for regulated structural quality characteristics in centre-based ECEC services (Barry et al., 2024[14]).

Robust cross-country comparisons of quality variability within ECEC systems are hindered by data limitations, but correlational analyses using the Teaching and Learning International Survey (TALIS) Starting Strong 2018 data suggest that many of the aspects that define quality in ECEC vary between ECEC centres with higher and lower shares of children from diverse backgrounds, in most of the countries that participated in the survey (OECD, 2023[15]). For instance, quality tends to positively associate with diversity regarding the presence of staff with special roles, staff training profiles, staff use of adaptive pedagogical practices with children, and the frequency of centres' co-operation with support services. Across countries, these indicators point to generally higher quality in centres or groups with higher shares of diverse children. By contrast, other drivers of quality such as the adequacy of material resources and

levels of family engagement tend to be lower in more diverse centres in many of these countries (OECD, 2023[15]). This analysis indicates possibilities for a targeted allocation of resources based on the composition of ECEC settings, which are compatible with systems maintaining a universal approach (limited differentiation) in service provision.

Overall, available indicators of structural and process quality show complex and often country-specific patterns of association with both the features of different types of ECEC and the composition of children in settings and classrooms. Much of this complexity stems from the multidimensional nature of both structural and process features of quality. Nonetheless, the evidence suggests benefits for children of attending formal and regulated types of ECEC with high standards when the alternative are more informal and less regulated arrangements. At the same time, process (rather than structural) quality emerges as the major determinant of outcomes, and large variation in process quality is documented even within integrated systems with little between-type differentiation and within well-structured targeted programmes.

Differential experience of formal ECEC arrangements

While there is a scarcity of comparative studies on how quality variation within ECEC systems affects different groups of children, participation in regulated ECEC arrangements can be used as a proxy to explore whether a feature of provision that is generally associated with quality characterises the experiences of children from different socio-economic backgrounds to the same degree. As compared to more informal arrangements (e.g. unregulated childminders, babysitters), regulated types of ECEC (centre-based and home-based) generally have a licensing process and more often align with a regulatory framework established by the relevant authorities (e.g. curriculum framework), employ trained or accredited staff, and provide a greater intensity (e.g. hours per day), albeit in some countries not all registered ECEC services may meet all the criteria to be classified as educational programmes (International Standard Classification of Education (ISCED) Level 0). Research shows that the regulatory requirements to which formal types of ECEC are subject represent necessary, albeit not sufficient conditions for consistent quality. Further, the beneficial effects of centre-based ECEC found by multiple studies, particularly relative to the counterfactual of family care, and particularly for disadvantaged children, typically apply to contexts where there exist stringent regulations concerning staff-child ratios, group sizes and staff qualifications (Duncan et al., 2023[16]).

An analysis of income-related gaps in high-intensity participation in regulated services where structural conditions tend to be more conducive to high-quality provision indicates that, in most European OECD countries, these experiences remain more common for young children from socio-economically advantaged families than for peers from less advantaged backgrounds (Figure 6.1). In 2023, in most of these countries, children from families in the top third of the national income distribution were more likely than children from families in the bottom third of the distribution to participate in regulated types of ECEC for 25 hours or more per week (or 5 hours per day on average), an intensity threshold that might provide more opportunities for implementing educational activities in ECEC settings (see Chapter 8). This difference between children from high- and low-income backgrounds was of 10 percentage points or larger in more than half of the countries with available data, but amounted to 20 percentage points or more in Croatia, France, Germany, Lithuania, Poland, Portugal, Romania, the Slovak Republic and Sweden.

Drivers of variability in quality within ECEC systems

Variability in the quality of ECEC within systems is driven by multiple and interacting factors. The *Starting Strong VI* policy review identified the connections between different dimensions of quality in ECEC and the policies that, beyond setting minimum standards and requirements, can enhance the quality of the interactions that children experience in ECEC settings (OECD, 2021[17]). Drawing on information about 56 curriculum frameworks and staff training requirements in more than 120 types of ECEC settings across 26 countries and 41 jurisdictions, the review uncovered substantial variation in the approaches adopted in

these two policy areas, while shedding light on some of the main challenges for ensuring consistently high-quality provision within ECEC systems.

Figure 6.1. Socio-economic gaps in intensive participation in regulated early childhood education and care services

Participation rates in regulated ECEC for at least 25 hours per week, 3-to-5-year-olds, by income tertile, 2023
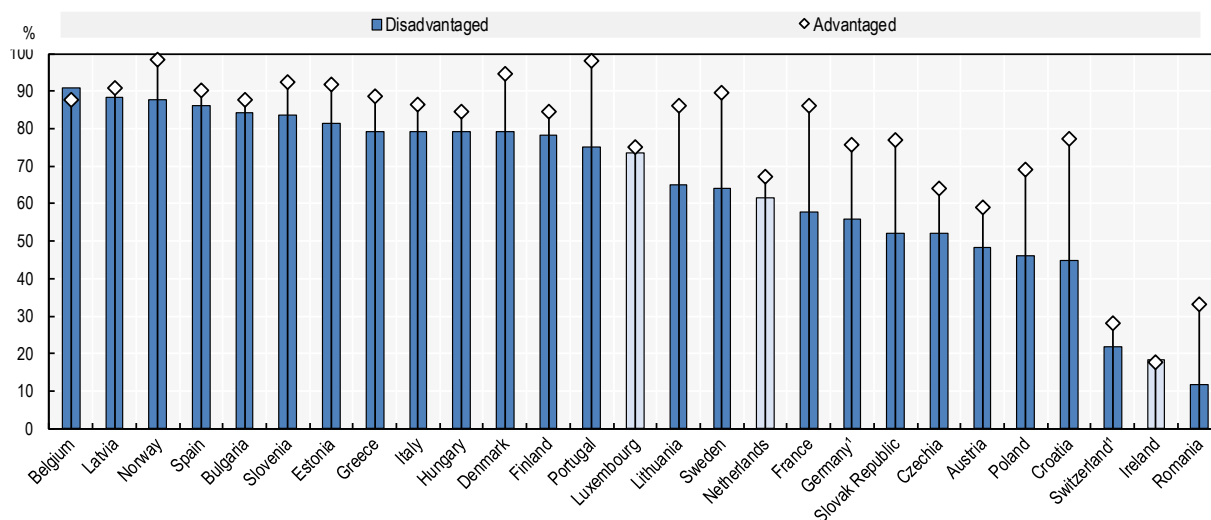
[1]Year of reference differs from 2023: 2022 for Germany, and 2021 for Switzerland.
Notes: Data are OECD estimates based on information from EU-SILC. High-intensity participation in regulated ECEC refers to children using regulated centre-based services (e.g. nurseries or day care centres and preschools, both public and private), organised family day care, and care services provided by (paid) professional childminders organised and controlled by a structure, regardless of whether or not the service is registered or ISCED-recognised, for 25 hours per week or longer on average over the previous school year. Income tertiles reflect equivalised disposable income and are calculated using the disposable (post tax and transfer) income of the household in which the child lives. Countries are ranked in descending order by participation rates of children in the lowest income tertile. Countries with statistically significant differences are shown in a darker tone (see Annex B).
Source: Eurostat (2024), *European Union – Statistics on Income and Living Conditions*, https://doi.org/10.2907/EUSILC2004-2023.

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On the one hand, almost one-quarter of countries and jurisdictions reported having multiple curriculum frameworks in place for the same or overlapping age groups across different services and settings. This situation can make it complex for staff to navigate guidelines and align pedagogical resources and for authorities to monitor implementation, and can potentially limit access to high-quality ECEC for some children, which contributes to uneven quality throughout the sector. Further, close to 40% of countries and jurisdictions reported not having a common framework for all children aged 0 to 5, and around 14% reported not having a curriculum framework covering settings serving children under age 3. Generally, the lack of a common set of frameworks can hinder curricular continuity for children from birth to entry into primary education, and make transitions within the sector more difficult. The review also revealed uneven attention to the different types of interactions that define process quality in ECEC when curriculum implementation is monitored (OECD, 2021[17]).

On the other hand, substantial variation emerged regarding the qualification and training requirements for different ECEC staff roles, both within and across countries and jurisdictions. This concerns qualifications for entering the profession, content areas and requirements of work-based learning in initial education, and requirements and supports for participation in ongoing training. Within systems, variation tends to map

differences between the pre-primary sector (typically 3-5-year-olds) versus settings for children under age 3, with lower qualifications and requirements for staff in the latter group, as well as differences between teacher and assistant roles, which reflect a higher value placed on education than on care, also within the pre-primary sector. Such variation, as well as related gaps in working conditions, can also create barriers for ensuring a consistent level of quality throughout the sector (OECD, 2021[17]). Overall, the fragmentation of curriculum frameworks and workforce preparation strategies represents potential blind spots for consistent quality provision within ECEC systems. These can be amplified in less systematically regulated segments of the sector, as is sometimes the case for home-based settings, settings serving the youngest children, and settings under private management.

Especially compared to primary and secondary levels of education, private institutions play a prominent role in many countries' ECEC systems (OECD, 2021[17]). On average across OECD countries, in 2022 about one-third (32%) of children enrolled in pre-primary education (ISCED 02) and half (50%) of those enrolled in settings for children under age 3 (ISCED 01) were attending private institutions (Figure 6.2). These averages mask important variation, partly due to how countries categorise different types of ECEC offerings. For instance, at the pre-primary level, in Australia, Chile, Germany, Ireland, Japan, Korea and New Zealand, more than 60% of the children attend privately managed centres, whereas in Bulgaria, Czechia, Estonia, Lithuania, Luxembourg, Romania, the Slovak Republic, Slovenia and Switzerland, this is the case for less than 10% of the children (OECD, 2024[18]). Similarly large differences between countries are observed in enrolment in settings for younger children (OECD, 2024[18]).

Figure 6.2. Enrolment in private early childhood education and care institutions

Percentage of children enrolled in private institutions, either government-dependent or independent, by level, 2022
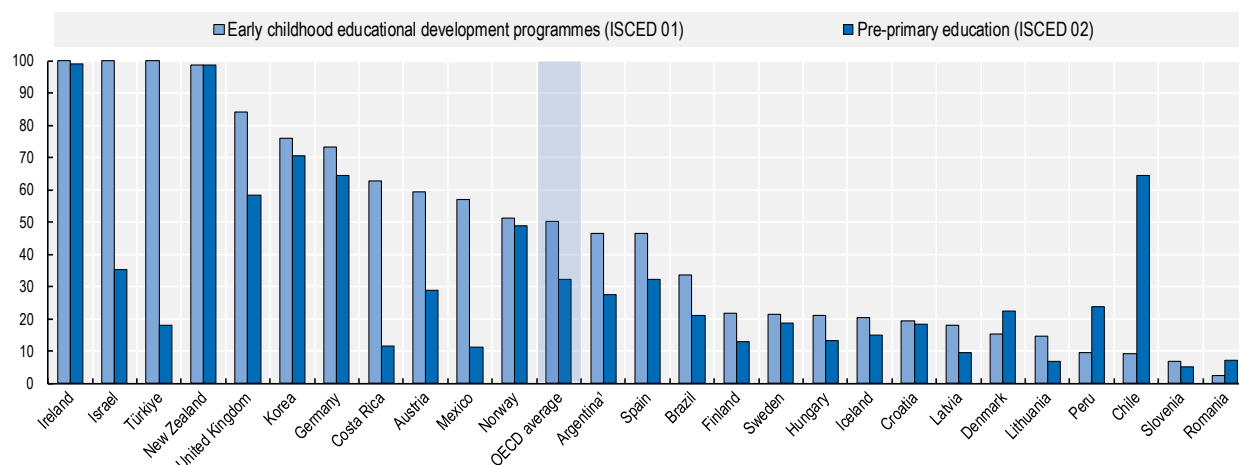
[1] Year of reference differs from 2020: 2021 for Argentina.
Notes: Only countries with available data for early childhood educational development programmes (ISCED 01) and pre-primary education (ISCED 02) are shown. Countries are ranked in descending order by percentage of children enrolled in private institutions at the ISCED 01 level.
Source: OECD (2024), *Education at a Glance 2024*, https://doi.org/10.1787/c00cad36-en, Table B1.3.

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The monitoring and governance of private settings can present challenges for ensuring equitable, affordable access to high-quality ECEC for all children, even when private institutions receive public funding. Among other considerations, quality monitoring and assurance in more fragmented and marketised systems (which tend to have both small independent providers and large chains), requires comprehensive arrangements, incentives that reward quality provision, and supports for improvement (see

Chapter 9). Countries also need to set stringent requirements for providers who wish to benefit from major public funding schemes (OECD, 2022[19]). Concerns raised by the growth of the private for-profit sector include socially segregated provision, higher costs for families, less favourable working conditions for ECEC professionals, and lower incentives for quality than in public or not-for-profit provision (Lloyd, 2019[20]). Research on the expansion of free preschool with public funding for private provision in England (United Kingdom) in the early 2000s suggests strong crowding-out effects of privately paid formal care and lower quality, as proxied by staff qualifications, in the private than in public providers (Blanden et al., 2016[21]). Research on changes in quality ratings in the Australian ECEC sector in the 2010s found improvement towards meeting and exceeding standards more likely among not-for-profit rather than for-profit providers, and among large multi-site rather than small stand-alone providers (Harrison et al., 2023[22]), although gaps in meeting quality standards have narrowed more recently through proportionately more for-profit providers increasing their standards (ACECQA (2024[23])).

Overall, the hybrid nature of many ECEC systems and the complex ways in which providers adapt to local contexts warns about oversimplification regarding the links between the public versus private dichotomy and levels of quality and inclusion. Recent research in the Netherlands (van der Werf et al., 2021[24]); (Romijn, Slot and Leseman, 2023[25]) argues that settings' organisational characteristics are more consequential for these outcomes than their type of management. These studies find that ECEC organisations characterised by strong connections with parents and communities, a clear social mission and investments in collaborative professional development outperform other types of organisations on both quality and inclusion, without excluding a commercial and for-profit orientation and without being linked to more favourable structural indicators.

Policies to ensure quality and promote equity in ECEC systems

This section discusses some policy directions to ensure quality of ECEC for all children, especially those from disadvantaged backgrounds. It aligns with a multidimensional understanding of quality in ECEC and with the research-based tenet that realising the benefits of ECEC for children's learning, development and well-being relies on ensuring high-quality provision (OECD, 2021[17]); (Rankin et al., 2024[26]). Core components of high-quality provision are the interactions that children have with other children, adults, their families and their environment – known as process quality. Conditions for supporting these processes are created by other aspects of quality, more distal to children's experiences and more influenced by standards and regulations – known as structural quality (OECD, 2018[27]) (OECD, 2021[17]). In line with other OECD work in this area (OECD, 2023[28]), an equitable ECEC system is understood as one that supports all children to flourish in their learning, development and well-being by offering high levels of quality for all and addressing their needs, and by providing additional support for some children to compensate for the uneven distribution of resources and experiences by personal background.

Consistent ECEC quality frameworks that provide additional support to children who need it most

Universal and targeted policies can be combined to achieve consistently high quality for all children and promote equity in ECEC systems. The combination of universal and targeted approaches is a recurrent theme in policy debates on the reduction of social inequalities, including in the early years. This has been formulated as "proportionate universalism" in the public health field (Marmot et al., 2010[29]) and as "targeted universalism" in relation to social justice more generally (powell, Menendian and Ake, 2019[30]) and to opportunity gaps among children (NASEM, 2023[31]). The approach involves actions that have a universal reach but are applied with a scale and intensity that is proportionate to the level of disadvantage experienced by different groups (Marmot et al., 2010[29]). It entails setting universal goals for all groups concerned while implementing processes and strategies targeted to the needs of different groups, so that

each group can reach the universal goal. The diverse needs of different groups are assessed and targeted based on how those groups are situated within various societal contexts (e.g. socio-economic status, cultural background, location) (powell, Menendian and Ake, 2019[30]).

In ECEC policy, the strategic combination of universal and targeted policies guides, for instance, Ireland's "First 5" whole-of-government strategy (2019-2028) to improve the critical years from birth to age five (Department of Children, Equality, Disability, Integration and Youth, 2019[32]) and its companion "Equal Start" plan, which sets out a funding stream for ECEC (Department of Children, Equality, Disability, Integration and Youth, 2024[33]). The approach has also been proposed to address early education gaps in the Dutch ECEC system (Leseman and Slot, 2020[34]).

Broad quality frameworks are necessary to increase quality for all children, with a universal approach (Figure 6.3). These frameworks combine multiple policy levers and primarily address structural aspects of quality, such as curriculum frameworks, child-staff ratios, or minimum staff qualifications. These policy targets are essential to create conditions to ensure quality: while not sufficient in themselves, they can enable and support good process quality. For example, in Australia, the ECEC sector is guided by the National Quality Framework (NQF), which provides a national approach to regulation, assessment and quality improvement for ECEC services. Alongside approved learning frameworks and quality assessment processes, a core component of the NQF is the National Quality Standard (NQS), which sets a national benchmark for ECEC settings in Australia by bringing together seven quality areas that are important to children's outcomes. This holistic approach addresses multiple dimensions of quality to ensure a consistent quality floor across the sector and provide a lever for future improvement, while building on a shared understanding of quality to reflect culturally safe and responsive practices (ACECQA, (2024[35])).

Regulating as many ECEC settings as possible under such quality frameworks is of utmost importance to raise overall levels of quality as well as to reduce variability within the system. In many countries, this involves extending quality standards to settings for children under age 3, including home-based settings, and to all privately managed settings. When sizable segments of the ECEC sector are subject to variable and particularly to less stringent regulations, quality may suffer. The regulation of home-based provision is a relatively new topic. Another development which attracts growing attention is the expansion of private providers, sometimes in the form of multinational groups operating as an oligopoly. This creates challenges for governments in ensuring compliance with quality frameworks, and may also raise equity issues (see Chapter 9).

With the goal to promote equitable outcomes, quality frameworks can include targeted measures to provide additional support for children at a disadvantage (Figure 6.3). These can be enriched experiences or additional resources for children who, because they come from personal and family backgrounds where they have had less opportunities, can benefit from supports boosting the quality of their ECEC experiences. Implementing targeted measures involves identifying children with additional needs and providing them not just with equal access to ECEC services but also with proportionally resourced services, for instance, enhanced funding, more favourable child-staff ratios, or adapted pedagogies.

Figure 6.3. Key elements for a strategic combination of universal and targeted approaches to raise quality and promote equity and inclusion in early childhood education and care systems

Policy levers	**Universal** Standards and regulations that apply consistently throughout the sector	⟷	**Targeted** Additional supports for some groups of children and some ECEC settings
Curriculum and pedagogy	Features of curriculum that support process quality for all groups of children Covering multiple types of provision and age groups		Culturally responsive and linguistically affirming pedagogies Provisions for children with special education needs Provisions for engaging families from diverse backgrounds
Staff education and training	Minimum qualification requirements Features of initial education and CPD that support process quality for all children		Supports for participation in CPD Training on responding to diversity
Ratios and team composition	Minimum staff-to-child ratios Maximum group size		Allocating staff based on centres' composition Recruiting and retaining more staff from diverse backgrounds
System- and setting-level monitoring	Consistent criteria for quality and equity monitoring Monitoring of both structural and process quality Incentives to reward high quality and equity		Monitoring equity at the system-level to guide a targeted allocation of resources Monitoring the inclusiveness of setting-level practices

Notes: Universal approaches are discussed mainly in Chapter 6, whereas targeted approaches are discussed mainly in Chapter 7. CPD: continuous professional development.

Increasing the coverage and effectiveness of quality regulations throughout the system, and hence the number of settings that provide high-quality ECEC services, is also a way to prevent the so-called Matthew effect, i.e. that risk that the benefits of ECEC end up being concentrated among socially advantaged children whose uptake of these services is faster or more intense (Pavolini and Van Lancker, 2018[36]); (Van Lancker, 2020[37]).

Designing and implementing an effective mix of universal and targeted policies is not without tensions. Potential trade-offs exist between quantity and quality, for instance, when the elevated cost of universal entitlements may compromise the amount of provision (e.g. less hours) or its quality (e.g. lower staff-child ratios). Another potential caveat of programmes with a universal design is their lack of flexibility to adapt to local needs. Similarly, a compromise between levels of aggregate spending and societal impact characterises targeted programmes, given their lower number of beneficiaries compared to universal measures (Leseman and Slot, 2020[34]).

Policy levers to ensure quality and promote equity

This chapter focuses on aspects related to some of the levers of quality identified in the Starting Strong framework (OECD, 2021[17]), namely curriculum, workforce development, standards for staff-to-child ratios and group sizes, and system-level monitoring. Other chapters of the report cover aspects connected to funding and governance (see Chapter 9) and to family and community engagement (see Chapter 10). For ECEC policies to be effective in raising quality and promoting equity, it is essential to activate as many of these levers together as possible, rather than separately or without alignment.

Curriculum framework

Curriculum frameworks are a powerful driver of quality in ECEC. Curricula make explicit the overarching values and goals embedded in the system, such as children's rights, expected learning and development outcomes, or the importance attributed to promoting children's well-being and respecting their diversity. The articulation of curriculum and pedagogy clarifies notions of what constitutes stimulating experiences for children, and their translation into practice within ECEC settings is particularly important for enhancing process quality (Edwards, 2021[38]); (OECD, 2021[17]). In interaction with other factors, a research-based curriculum that describes developmentally appropriate goals for children and orients responsive and intentional interactions from staff can have a major influence not only in shaping high-quality experiences in ECEC settings but also in enabling a more equitable distribution of cognitive, social and emotional, and well-being outcomes among children (Melhuish et al., 2015[39]); (Phillips et al., 2017[40]).

Curricula can differ on multiple dimensions, including theoretical underpinnings, focal developmental areas, or expectations for staff and children. The Starting Strong VI review identified some of the main curriculum features that support process quality. These include i) being child-centred, i.e. informed by evidence on children's learning and development and well-being principles, and setting directions to support those through play, enjoyment, active participation, experimentation and interaction; ii) aligning with developmental stages, i.e. ensuring that experiences are well-suited to children's levels of development and build from concepts appropriate to those levels into more demanding and conceptually-rich learning; iii) supporting continuity and consistency, i.e. underscoring the place of ECEC as part of the continuum of education and supporting smooth transitions for children as they grow; iv) being comprehensive, i.e. keeping a holistic approach that includes both cognitive (e.g. early numeracy and literacy) and social and emotional development (e.g. self-confidence, creativity, curiosity); and v) recognising the importance of and supporting family engagement, i.e. encouraging connections and continuity between the home and ECEC environments (OECD, 2021[17]). A consensus report of the US National Academy of Sciences, Engineering and Medicine identifies similar criteria in relation to high-quality ECEC curricula, and additionally emphasises aspects more explicitly related to advancing equity, such as being culturally relevant, linguistically supportive and affirming, and supporting individualisation for children with special education needs (NASEM, 2024[41]).

Curriculum frameworks are also essential for alignment and co-ordination across stages of education. This is particularly important for transitions both within ECEC (from one ECEC setting to another, including formal to non-formal) and towards primary education. Achieving consistency and complementarities in curricula across these different stages contributes to extending the benefits of high-quality ECEC experiences beyond early childhood (Shuey et al., 2019[42]); (see Chapter 8).

Moreover, curricula give recognition and meaning to children's rights in the ECEC system. In keeping with the UN Convention on the Rights of the Child, curriculum frameworks can emphasise their rights to be active protagonists of their learning, to play and to be positively recognised as citizens in their multiple identities, and can encourage conscious efforts to listen to children's voices and ensuring their learning and well-being (UN OHCHR, 1989[43]).

A recurrent discussion among researchers investigating different curricular approaches for the early years is the comparison between so-called "whole-child" curricula (i.e. comprehensive and high-level frameworks that establish goals and principles for development and learning without addressing specific domains separately, and that articulate interactions over a longer time frame) and so-called "skill-specific" curricula (i.e. targeted to the development of particular skills or learning domains, and providing more structure for activities with a shorter time frame). A major concern with relatively unstructured curricula is that, in the absence of a consistent capacity for high-fidelity implementation of the proposed environment, substantial differences in quality may emerge across ECEC settings, resulting in limited effectiveness in improving children's outcomes. In turn, concerns about more domain-oriented curricula relate to an excessive focus on school readiness and direct instruction, which may not appropriately support young children's holistic

development and well-being. The ongoing debate on the effectiveness of these approaches highlights findings indicating that skill-specific curricula are more positively linked to skills development, but also that their effects are often short-lived (Jenkins et al., 2018[44]); (Weiland et al., 2018[45]); (Rege et al., 2024[46]); see Chapter 8). The debate is plagued by methodological tensions (Nesbitt and Farran, 2021[47]), including divergent counterfactuals and a measurement bias that favours studies designed to assess more academic (and more easily measurable) outcomes that capture only some of the multiple and interrelated dimensions of children's early learning, development and well-being.

An emerging perspective sees the opposition between the two curricular models as a misleading dichotomy and advocates for an integrative and more nuanced approach, which would build on effective and complementary principles for supporting the development of a range of early cognitive and social-emotional competencies (NASEM, 2024[41]). This perspective is related to the recognition of play-based learning, particularly through guided play activities (Weisberg, Hirsh-Pasek and Golinkoff, 2013[48]); (Skene et al., 2022[49]), and to the benefits of giving ECEC teachers concrete goals to focus on during structured educational sequences, as these help build meaningful interactions with individual children and make academic content more engaging for young children, which is often not the case, particularly for disadvantaged children (Burchinal et al., 2022[50]). This integrative approach holds promise to support equity, as it adds flexibility in responding to a wider range of children's needs, and because more explicit guidance on pedagogical practices with children can facilitate curriculum implementation, particularly in more challenging settings. However, this requires strengthening staff preparedness to implement this kind of curricular approach.

Overall, countries can strike a balance in their early years curricula to maintain a holistic approach to early development and well-being while supporting specific areas of learning and engagement with ECEC staff (OECD, 2021[17]). Policy and research examples of the integration of domain-specific intentional teaching into comprehensive ECEC curricula can provide insights in this direction (Box 6.1).

Research also increasingly emphasises the role that ECEC curriculum and pedagogy can play in helping children to develop their executive function and social and emotional skills, two sets of competencies which act as a foundation for learning and self-regulation, and which are positively associated with a range of later outcomes (NASEM, 2024[41]). Curricula can foster the development of these competencies by promoting supportive and consistent relationships between staff and children; recurrent and predictable routines that give children the opportunity to practice goal-directed behaviours and emotional regulation; and intentional instruction in targeted activities (Bailey et al., 2019[51]); (Barnes, Bailey and Jones, 2021[52]).

As a structural quality pillar, curriculum frameworks can strengthen quality and equity across an ECEC system, provided they emphasise high-quality features, as outlined above, and that their coverage extends to a broad range of settings and types of provision (Box 6.2). Looking forward, ECEC curriculum frameworks need to advance towards a more concrete recognition of goals and strategies related to outcomes that are more difficult to measure, including social and emotional skills (e.g. curiosity, creativity) as well as positive identity or sense of belonging (OECD, 2024[53]); (NASEM, 2024[41]).

With a more targeted approach, ECEC curricula can also promote quality and inclusion by providing additional supports to specific groups of children, and most notably by promoting culturally-responsive and linguistically-affirming pedagogies; by including special provisions for children with disabilities; and by promoting effective approaches to engaging families with diverse backgrounds, including those that belong to Indigenous communities or national minorities (see Chapter 7).

Box 6.1. Integrating structured components into comprehensive ECEC curricula

This Box discusses the early years curricula implemented in Boston (United States) as well as a project developed in Norway by independent researchers.

Early-years curricula in Boston (United States): Focus on Early Learning and Focus on Pre-K

The Boston Public Schools Department of Early Childhood (BPS DEC) developed the *Focus on Early Learning* programme for young children from pre-kindergarten (three-year-olds) through the second year of elementary school (typically seven-year-olds) (Boston Public Schools Department of Early Childhood, n.d.[54]). A central motivation was to align content, modes of instruction and related teacher professional development to build effectively on prior learning throughout the grades. A feature of *Focus on Early Learning* is to align the early primary grades with kindergarten, rather than make kindergarten look more like school (McCormick et al., 2020[55]).

Over the last two decades, BPS DEC has increasingly emphasised standardised curricula for pre-primary centres. Research found that the BPS pre-kindergarten programme, which consisted of two evidence-based curricula (*Opening the World of Learning* for early language and literacy, and *Building Blocks* for early mathematics) paired with substantial teacher training and coaching, had positive impacts on children's literacy, language, mathematics and emotional development, domains directly targeted by the curriculum, and in executive functioning, a non-targeted domain (Weiland and Yoshikawa, 2013[56]). More recently, BPS DEC has developed its own comprehensive curriculum for three- and four-year-olds, *Focus on Pre-K*, adapting the two curricula above with a play-based and exploratory approach that seeks to extend children's learning and understanding of language, literacy and mathematical concepts through problem solving and positive peer interactions, and building familiar routines across the grades (McCormick et al., 2020[55]). The 2023-24 revision of *Focus on Pre-K* brought an additional focus on equitable literacy, i.e. texts and resources that recognise, affirm and celebrate children's identities, and differentiation for diverse learners.

Research in Norway: The Agder Project and the Playful Learning Curriculum

Two large-scale randomised controlled trials investigated the effects of a structured curriculum for five-year-olds in the context of the Norwegian universal preschool system, where the norm is a curriculum providing general guidelines, emphasising free play in mixed-age groups and giving ECEC centres a large degree of freedom with respect to approaches to learning. The *Agder Project* consisted of two main components implemented over nine months in 71 preschools. First, the provision for children of at least eight hours of weekly instruction intentionally focused on mathematics, language and executive functioning, following a curriculum that included 130 skill-building activities in these areas, which were guided by a playful learning approach. Second, a course for teachers on curriculum foundations and coaching during implementation (University of Stavanger, n.d.[57]). The curriculum did not present a scripted programme for teacher practice but suggested schedules for how to structure the learning activities by day, month and year, allowing teachers flexibility to put them into practice, adapting the levels of challenge and complexity The intervention was found to have positive effects on children's early development, both on a summary score across assessment areas and in mathematics, the most structured component of the curriculum, at post-intervention and one year later. Moreover, effects were larger in ECEC centres identified as being at the bottom of the distribution of centre quality at baseline (Rege et al., 2024[46]).

A second intervention, the *Playful Learning Curriculum*, investigated the scalability of this approach through a simplified version of the Agder Project that included only the curriculum, a one-day teacher course, a webpage with video-based resources to support implementation, and weekly nudges

(University of Stavanger, n.d.[58]). Results indicated a positive but moderate effect on the mathematics skills of five-year-olds, compared to a less structured curriculum (Størksen et al., 2023[59]).

Staff training and professional development

Developing a skilled ECEC workforce is paramount to ensuring high-quality ECEC for all children and to advancing equity and inclusion in the system. ECEC staff need strong preparation for setting up safe and stimulating environments for young children, for engaging with them in high-quality personal interactions, and for promoting continuity across ECEC and home environments through positive relationships with families. This requires a solid understanding of the principles that underlie children's learning, development and well-being, as well as strategies to respond to a diverse range of children's and families' needs.

The great variety of features of initial educational and in-service training programmes for ECEC staff poses a challenge to identifying robust links with the quality of ECEC services and children's outcomes, but a number of key factors associated with higher levels of quality emerge from the evidence base (Falenchuk et al., 2017[60]); (OECD, 2018[27]); (Manning et al., 2019[61]).

Research demonstrates the initial education of ECEC staff is an important determinant of process quality, and, as such, a key policy target. Among the elements most commonly regulated are minimum qualifications for staff working with children, which can vary depending on their specific and complementary roles within settings. In the OECD area, the most prevalent qualification required for teachers is a bachelor's degree or equivalent (ISCED Level 6), although lower qualifications (e.g. ISCED Level 5) are accepted in some countries. Less variation exists in requirements for assistants, most often the completion of upper secondary education (ISCED Level 3). A meta-review provides evidence of positive correlations between the level of education of lead teachers and the quality of classroom learning environments, as reflected in multiple subdimensions, including language and reasoning or personal care routines (Manning et al., 2019[61]). These associations are one of the factors behind quality differentials across types of ECEC provision. For instance, a study looking at all the publicly-funded ECEC programmes in the state of Louisiana (United States) finds that differences in teachers' average levels of education explain a substantial share of the variation in the quality of teacher interactions with both toddlers and preschool-aged children between more and less regulated programmes (Markowitz, Sadowski and Hamre, 2021[62]).

Overall, however, staff levels of educational attainment predict levels of process quality with just moderate consistency and strength, suggesting the need to look beyond qualification requirements and into more specific aspects of pre-service education and training (OECD, 2018[27]) (Manning et al., 2019[61]).

In this respect, three features related to the content and delivery of ECEC initial preparation programmes appear instrumental in promoting process quality (OECD, 2021[17]). First, receiving specialised ECEC training that specifically prepares professionals to work with young children is essential to provide staff with a multifaceted knowledge about child development and to guide them in reading children's behaviours, emotions and thought processes, and responding accordingly. Second, ECEC staff benefit from receiving initial training with a broad thematic scope, including child development, pedagogy and diversity among other areas. Results from the 2018 TALIS Starting Strong survey show that the breadth of training content is positively associated with staff sense of self-efficacy and, when coupled with in-service training in the same areas, also with greater use of practices that adapt to children's individual backgrounds, interests and needs (OECD, 2020[63]). These two features are also important in the initial preparation of ECEC centre leaders, for whom having completed a course specifically on early childhood is linked to spending more

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Box 6.2. Extending high-quality curricula to traditionally under-regulated ECEC settings

The curriculum framework for non-formal education in Luxembourg

Luxembourg is unique in its recognition of non-formal education as a continuum of services for children from birth through adolescents' transition into adulthood, guided and regulated through a unifying curriculum framework, the national reference framework on non-formal education for children and young people (*Cadre de référence national sur l'éducation non formelle des enfants et des jeunes*). This framework includes dedicated sections on ECEC for young children who are not yet enrolled in the formal education system, and for children who are simultaneously attending formal education, as well as for older youth. The curriculum was first introduced in 2013, became compulsory in 2017, and was last updated in 2021. Non-formal education encompasses ECEC for young children who are not yet enrolled in the formal education system, as well as education and care for children provided outside of school hours (e.g. after-school care) (Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse, 2021[64]).

The carefully articulated curriculum framework for non-formal education, and its compulsory status for all non-formal ECEC settings in Luxembourg, including home-based providers, is a strength for building a high-quality ECEC system (OECD, 2022[65]). The concept of process quality is embedded in the curriculum framework, which specifies conditions for educational processes in non-formal settings relating, for instance, to the arrangement of indoor and outdoor spaces, the use of play and learning materials, the organisation of children's day, and the role of the social environment and interactions. Furthermore, the non-formal curriculum framework includes a dedicated section on working with children from birth to entry into the formal schooling system. It also provides guidance for staff in intentionally supporting children's exploration and engagement with others and with their environments, thereby contributing to the professionalisation of this workforce.

The pedagogical framework for childcare of babies and toddlers in Flanders (Belgium)

In Flanders (Belgium), a Parliamentary Act in 2014 led to major reforms in childcare settings for children under the age of 3, including a new framework for quality assurance. One of the consequences was the launch of the Measuring and Monitoring of Quality (MeMoQ) project by the governmental Child and Family (*Kind en Gezin*) agency for childcare. Two major axes of the project were the development of a new pedagogical framework to define quality in the early childcare sector and the development of instruments for its measurement, monitoring and improvement.

The pedagogical framework for childcare for babies and toddlers (*Pedagogisch Raamwerk voor de Kinderopvang van Baby's en Peuters*) is intended for both centre-based and home-based ECEC settings attended by young children before they go to nursery school or kindergarten, a transition that typically takes place at the age of three or some months before. The pedagogical framework describes four areas of experience identified as critical for offering every child rich opportunities for holistic development: "Me and the Other", for developing positive identities in interactions with peers and adults; "Body and Movement", for developing gross and fine motor skills; "Communication and Expression", for creative self-expression both verbally and non-verbally; and "Exploration of the World", for developing a logical understanding of the both the physical and social worlds. The frameworks also aim to provide a firm pedagogical basis for practice in interactions with both young children and their families in centre-based and home-based childcare settings (Kind en Gezin, 2014[66]).

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time on pedagogical leadership tasks (OECD, 2020[63]). Finally, a practical, work-based component in pre-service training gives ECEC staff a first opportunity to combine theoretical and experiential learning and to

reflect critically on their own assumptions and practice, which is important to develop a situated understanding of work with children and of strategies to engage in more sensitive interactions with them.

Widespread implementation of these features in initial preparation programmes for ECEC professionals would support high quality in ECEC systems. While present in the initial education and training programmes established in many OECD countries, the Starting Strong VI policy review also identified areas of limited application (OECD, 2021[17]). These include less frequent requirements for work-based learning components in the initial education of staff in assistant roles and of teachers working in settings for children aged 0 to 2. Another area of concern is the large variation in the breadth of content covered by initial education programmes across countries. Generally, assistants are required to cover less content areas in their training. For teachers, most systems require training in child development, play-based learning and other pedagogy principles, but curriculum implementation and continuity between ECEC and home environments are less common (OECD, 2021[17]).

Continuous professional development (CPD) is another fundamental pillar for supporting the ECEC workforce and achieving higher and more consistent levels of quality within ECEC systems, as well as in responding to the growing diversity of children participating in ECEC. A consensus emerges from the research literature that high-quality CPD is the most robust predictor of the quality of staff practices generally and of their interactions with children and families in particular. Among the features of high-quality CPD most often identified by researchers are active learning methods, centre-embedded delivery and personalised feedback on professional practices, such as through coaching or mentoring (Egert, Fukkink and Eckhardt, 2018[67]); (Brunsek et al., 2020[68]). The peer feedback and practical components represent enhanced opportunities for staff to learn to adapt their practices in real contexts and be better prepared to work with diverse groups of children. Further, CPD programmes targeting specific content areas (e.g. language and literacy, social and emotional functioning) tend to be associated with positive outcomes for children, which points to the benefits of close alignment between training contents and skill-specific developmental targets (Brunsek et al., 2020[68]).

Ensuring that CPD offerings are designed and implemented according to evidence-based effectiveness principles is complex. Moreover, a pre-emptive challenge is to provide all ECEC staff with opportunities to take part in CPD activities regularly and in adequate conditions. More than half of the staff surveyed across countries in TALIS Starting Strong 2018 reported that the lack of staff to compensate for their absence was a barrier to participating in professional development (OECD, 2019[69]). With tight budget constraints in addition to staff shortages, ECEC settings may not have the capacity to help their staff access in-service training opportunities. Moreover, on average across OECD countries, pre-primary staff spend more time in direct contact with children than teachers at other levels of education, leaving less time for professional development (OECD, 2020[63]).

Barriers to participation in CPD can also vary depending on the characteristics of ECEC settings. A targeted approach to workforce development can therefore involve additional supports to address these barriers for staff working in settings facing more resource shortages or serving larger shares of children experiencing vulnerabilities. Such supports can take the form of protected time for training and additional funding or human resources (OECD, 2021[17]). Supports should also be tailored to promoting participation in the types of professional development that have clear evidence of enhancing process quality.

Another stepping stone for efforts to foster equity and inclusion in ECEC is the provision of high-quality training specifically on responsiveness to diversity (see Chapter 7). In several countries, staff who cover training contents related to working with a diversity of children in both pre-service and in-service training (i.e. cumulatively) are more likely to use classroom-level practices adapted to suit different children's interests, levels of development or cultural backgrounds (OECD, 2020[63]).

Recruiting, training and motivating a high-quality ECEC workforce represents one of the greatest current challenges for ECEC systems (European Commission, 2023[70]); (Nordic Council of Ministers of Education, 2024[71]). This relates to an insufficient supply of well-prepared new entrants to the profession and high

turnover rates among current staff, as well as to a shortage of specific types of competencies. A high turnover of staff can be highly detrimental to process quality since children need to develop a stable relationship with adult figures, and given that staff teams need time and continuity to engage in effective collaboration and peer learning. Further, the lack of specialised competencies can hinder strategies to provide additional supports to some groups of children.

A range of strategies are being explored to address these challenges. For instance, in Canada, the federal government has worked multilaterally with provinces and territories to develop a new workforce recruitment, retention and recognition strategy for its ECEC system, as in 2023, the employment of early childhood educators and assistants was estimated as below pre-pandemic levels (2019) by nearly 15 000 fewer people (Government of Canada, 2024[72]). In Germany, many states have made progress in the recognition of foreign credentials, but have also relaxed licensing regulations and lowered requirements in pedagogical training. These measures need to be supported by strategies to ensure adequate staff teams' compositions within settings, so as to reap the benefits of inter-professional co-operation, avoid the risk of de-professionalisation and, most importantly, maintain or increase levels of quality (Grgic and Friederich, 2023[73]). In many OECD countries, the root causes of staff shortages in the ECEC sector are connected to structural aspects such as poor working conditions and a lack of attractiveness of the profession, which need to be addressed with a consistent approach.

Staff-child ratios and group sizes

Standards on minimum staff-child ratios and maximum group sizes are two of the structural features most commonly regulated for improving quality in ECEC. Developmental science highlights the importance that responsive and individualised interactions with adults have for children, particularly in their earliest years (see Chapter 3). Smaller class sizes and more favourable staff-child ratios can enable staff to reduce the amount of time spent on classroom or playgroup management and focus more on the needs of individual children, thereby establishing richer relationships with them. This is expected to positively influence process quality and, thereby, children's learning, development and well-being outcomes (OECD, 2018[27]); (OECD, 2021[17]).

Average staff-child ratios in ECEC have improved across many countries in recent years, reflecting both demographic trends and policies implemented with this goal. Between 2015 and 2019, the number of children per teaching staff at the pre-primary level dropped by 7% on average across OECD countries, due, in most cases, to the number of teachers growing at a faster rate than the number of children enrolled in pre-primary education. In Belgium, Czechia, France, Korea, Mexico, Norway and Portugal, the number of teachers increased despite a drop in the number of children enrolled at that level (OECD, 2021[74]). On average across OECD countries in 2022, the teaching staff-child ratio was 1:9 in settings for children under age 3 (ISCED 01) and 1:14 in pre-primary education (ISCED 02). However, ratios of 1:5 or lower in settings for the youngest children existed in Costa Rica, Denmark, Germany, Korea, Latvia and New Zealand, and ratios of 1:10 or lower at the pre-primary level were maintained in Denmark, Finland, Germany, Greece, Lithuania and New Zealand. At both levels, the number of children per contact staff (which also includes assistants and other auxiliary staff) is lower than that of children per teaching staff in most countries, and particularly in settings for children under age 3 with an average 1:5 ratio, reflecting the importance attributed to personal interactions for the youngest children (OECD, 2024[75]). This is broadly in line with research-backed recommended ratios of 1:3 for children below age 2, and ratios of 1:4 or 1:5 for two- and three-year-olds, respectively (Melhuish et al., 2015[39]).

Research has long explored how staff-child ratios and group sizes in ECEC relate to various indicators of process quality and to children's outcomes, with only partially consistent patterns emerging from the literature (Bowne et al., 2017[76]); (Perlman et al., 2017[77]); (Dalgaard et al., 2022[78]). Regarding process quality, a large number of studies find that smaller ratios and group sizes are associated with better staff-child interactions, particularly in terms of the provision of emotional support to children, mainly in centre-

based settings, and for children aged 3 to 5. However, a lack of significant relationships is also reported in several studies, particularly for overall group size (OECD, 2018[27]); (Dalgaard et al., 2022[78]). A meta-review of studies in the United States found that both staff-child ratios and group size bear non-linear relationships with children's cognitive and achievement outcomes at the pre-primary level, and that improvements in these conditions predict significant and small positive effect only when translating into very low ratios and sizes (e.g. below 1:8 and below 16, respectively, in the case of pre-primary classrooms) (Bowne et al., 2017[76]).

The evidence therefore points to positive relationships between staff and children being more likely in ECEC settings where child-teacher ratios and group sizes are relatively small, albeit this applies mainly to classrooms for 3-to-5-year-olds and does not consider other aspects such as child well-being. Generally, though, it also suggests limited potential for investing uniquely in reducing these features as a strategy to improve early learning outcomes. Policies need to activate these standards within a broader quality framework and in interaction with other levers, such as improved staff training, to increase their effectiveness.

From a policy perspective, measures with a universal approach concern the adoption of consistent, system-wide standards for child-staff ratios and group sizes, as these regulations support process quality by enabling richer interactions between staff and children. However, variation in these standards can exist between different types of settings (e.g. centre- or home-based) and types of provision for different age groups (i.e. under age 3, or 3-5-year-olds), given the greater need of younger children for responsive interactions and emotional attachments with caring adults.

An important consideration when assessing the moderate effects of improvements in staff-child ratios and group sizes on the quality of interactions and thereby (but less consistently) on child outcomes, is that research in this area has looked, almost exclusively, at contexts where regulations are largely adequate. Therefore, findings of moderate or weak effects do not constitute a basis for relaxing existing standards, which further represent an important condition for children's safety. The evidence is limited with regard to whether findings vary according to the composition of children within settings.

From a targeted angle, and with the explicit goal of promoting equity, policies may selectively improve staff-child ratios and group sizes to provide additional resources for specific settings, for instance those serving large shares of children from disadvantaged backgrounds or children with special education needs. More favourable ratios in these settings would facilitate greater attention to the needs of those children, as a compensatory mechanism. ECEC policies need also to consider the benefits and challenges of allocating staff with specific profiles (e.g. more experienced, with specific training, more diverse themselves) to settings enrolling a higher proportion of children experiencing vulnerabilities. This can also include the possibility of having specialised staff working across multiple settings (see Chapter 7).

However, since many ECEC systems face funding constraints in the context of tight budgetary conditions for governments, careful consideration is needed when exploring the financial implications and expected benefits of actions on this or other policy levers. Regulations on structural quality are directly related to the operational costs of ECEC systems; improving staff-child ratios and group size by making significant changes to existing standards would prove expensive in many countries. As an illustration, a reduction in average group size from 15 to 10 children in some settings would typically require a 50% increase in the number of staff and, thus, a proportionate increase in labour costs. Given the indication that expected benefits would be modest, the cost-effectiveness of this approach to improve process quality and children's early learning outcomes needs to be considered (Bowne et al., 2017[76]). These measures can be quite expensive and also difficult to implement in the context of staff shortages.

Overall, policies on this lever can aim to maintain adequate conditions for process quality across the system and also include targeted reductions of ratios and group sizes in settings serving larger shares of vulnerable children, in both cases in combination with other levers (e.g. staff training), rather than try to lower ratios universally.

Monitoring and improvement frameworks

Within the context of broader quality frameworks, monitoring systems are another instrumental lever to be activated towards ensuring that all children participating in ECEC experience high levels of quality, and that additional quality enhancements are adequately targeted to aspects of provision or groups of children where they can have the largest positive impact on equity. Quality monitoring in ECEC serves multiple purposes, from meeting public accountability requirements to informing actions for improvement by identifying the strengths and weaknesses of the sector and individual services. Monitoring systems can also provide information to help families make choices between a range of local ECEC services, a particularly relevant function in more marketised systems where private providers account for a large share of the places on offer (OECD, 2022[19]).

Monitoring strategies interact transversally with other policy levers (OECD, 2021[17]). Monitoring is essential to determine whether curriculum frameworks are implemented as intended and translate into the expected outcomes. The existence of multiple settings and curricula in many countries poses difficulties but also makes monitoring of curriculum implementation even more important to ensure high-quality services across settings and age groups. A weaker basis for monitoring process quality exists in settings that are not required to follow a particular curriculum. Monitoring and related quality support systems are also key to designing professional development opportunities that address areas of work relevant for a variety of for ECEC professional roles. Further, making monitoring results available and considering users' views and experiences can contribute to family and community engagement in ECEC. Greater attention to these aspects, which drive process quality, is needed to extend the traditional focus of monitoring beyond structural quality factors such as staff qualifications, staff-child ratios and group sizes (OECD, 2015[79]).

For ECEC systems, the major challenge for activating monitoring policies in support of high quality with a universal approach lies in establishing a quality monitoring framework that applies consistently to all types of settings and that considers both structural and process dimensions of quality in ECEC services. More targeted monitoring policies can also be implemented to support equity and inclusion objectives, with a dual focus on collecting and acting upon a richer range of data and on engaging families in the quality monitoring process.

With a universal approach, three main considerations exist. First, the need to establish a shared understanding of quality standards across the sector to ensure clear expectations for all service providers. The risk in this area is the coexistence of a variety of potentially inconsistent frameworks for assessing aspects of quality or compliance with standards. This may result from multiple agencies being involved in quality assurance efforts, as when bodies with different responsibilities develop their own criteria independently and at different points in time. Guidance on quality monitoring criteria needs to be guided by a shared understanding of standards, develop synchronously and be reflected in a unified and coherent set of documents that is readily accessible and consistently deployed across the system. Moreover, these frameworks need to address both structural and process aspects of quality, and fit-for-purpose methods need to be used in monitoring practices, including direct observation for the assessment of process quality within settings (OECD, 2022[19]). Further, the monitoring system needs to maintain a focus on equity outcomes, including how variation in quality relates to the backgrounds of children in different programmes or settings, how subsidies are distributed among families, and whether the cost of some services is excluding some children from participation in ECEC.

The second consideration relates to aligning incentives to reward high quality and equity. This involves setting rewards for providers to aim at higher quality standards, including by recognising multiple levels of quality up to excellent/sector-leading practice, as well as implementing additional support measures for some groups of children. This also implies ensuring that consistent and timely sanctions follow when ECEC settings fall below basic requirements.

Two aspects of the incentive structure are of particular importance in ECEC systems with a strong reliance on market competition. On the one hand, public transparency to increase the efficiency of positive incentives, since knowledge that quality evaluations will be made public can generate pressure for providers to improve the quality of their services. On the other hand, stringent quality requirements for providers to qualify for public funding schemes or other fiscal incentives. These can include implementing national curriculum frameworks, meeting requirements for in-service training and working conditions, or accepting regular external evaluations (see Chapter 9 for more information on conditional funding) (OECD, 2022[19]). For instance, in response to the increasing privatization of ECEC services in several Nordic countries, monitoring tools for performance assessment, incentives and sanctions aligned with politically defined goals have been introduced in the last two decades (Trætteberg et al., 2023[80]).

The third consideration is to make effective tools for improvement an integral part of the quality monitoring system so that all providers, irrespective of their size or type of management, have good access to external guidance and ongoing, practical support in their improvement efforts. Among other measures, this involves providing varying levels of supports, from general development resources for settings that meet requirements but seek improvement, to more intensive and fast-paced supports to assist settings where substantial weaknesses are identified (OECD, 2022[19]).

From a more targeted angle, it is important that monitoring systems gain the capacity to collect and mobilise an extended range of data that can adequately support the design and evaluation of measures to improve equity and inclusion. This should build on more general data collection and data sharing practices, which are expected to provide a balanced and comprehensive coverage of key areas of the system across settings, including both structural and process quality (OECD, 2022[19]). However, targeted policies require not just good outcome indicators of quality at the system or setting levels but also detailed information on the composition of settings (e.g. children's backgrounds and circumstances) and their levels of resources. For example, the Australian Early Development Census (AEDC), a nationwide assessment of early childhood development conducted every three years, provides an opportunity for Australian ECEC authorities to make more informed decisions about the targeting of different programmes, especially tailored supports for vulnerable and disadvantaged communities, as well as to monitor objectives for reducing development gaps for Aboriginal and Torres Strait Islander children (Australian Government, 2024[81]).

The availability of a rich set of contextual and outcome indicators at the individual and setting levels makes it possible to use data for the monitoring of equity in ECEC, for instance analysing how the allocation of resources within the system responds to inequalities, or how developmental outcomes compare and evolve over time for children of different backgrounds, thus providing insights to better target supports to settings or groups of children who need it most (OECD, 2022[19]).

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7 Supporting inclusion in early childhood education and care

This chapter addresses the growing levels of diversity among children participating in early childhood education and care (ECEC) in OECD countries, and how to build more inclusive ECEC systems that respect and respond to their varying needs and strengths. It explores organisational and pedagogical practices to improve inclusion in ECEC settings, building on strength-based and rights-based approaches. These practices relate to curriculum design and implementation, continuous professional development, staff teams and workforce composition, and setting-level monitoring and assessment.

Key messages

- Increasing social and cultural diversity characterise the populations of children participating in ECEC in OECD countries, driven by factors such as the expansion and greater accessibility of ECEC services, as well as global migration and forced displacements.

- On average across 24 OECD member or accession countries with available data, about one in six children (14%) attending ECEC settings in the mid-2010s were multilingual.

- In 2020-21, on average across European countries with available data, 80% of children with special education needs participating in pre-primary education attended mainstream settings alongside normally developing peers.

- Research advocates a shift from deficit- to strength-based approaches to diversity in ECEC, best illustrated by new perspectives on multilingualism. Children's experiences are embedded in cultural contexts, and strengths-based ECEC approaches value and build on this diversity to support children's early learning, development and well-being.

- An inclusive ECEC system ensures quality for all children while respecting their diversity and responding to their varying needs and strengths. Inclusion involves adapting ECEC to fit the child. International treaties and declarations recognise children's rights to inclusive ECEC.

- Inclusive organisational and pedagogical practices in ECEC can strategically combine universal and targeted approaches, in line with tiered models of support for young children. Solid quality foundations for ECEC from which all children can benefit reduce the need and increase the effectiveness of targeted supports for vulnerable children.

- An inclusive ECEC curriculum makes diversity a building block in providing high-quality learning and development experiences for all children. Diversity can be valued and sustained across all settings within an ECEC system, not only in settings with large shares of children from diverse backgrounds. ECEC staff need flexibility to adapt the curriculum to local forms of diversity, including by engaging with families and communities.

- Continuous professional development (CPD) is key to support ECEC staff in developing more inclusive practices. Transversal competencies and attitudes (e.g. addressing biases, valuing diversity) are a foundation for more specific skills (e.g. supporting home languages). Effective CPD favours team-level reflection and practical responses to diversity in local contexts.

- Matching staff with children matters in a context of increasing diversity. Targeted staffing can strengthen supports for children, including by multi-professional teams with complementary areas of expertise. In turn, attracting and retaining a more diverse ECEC workforce can increase awareness of the diverse needs and strengths of children and families, and facilitate more responsive practices within ECEC settings.

- System- and setting-level monitoring and assessment can promote equity and inclusion by helping authorities and staff to better understand and identify variability in children's needs and strengths, including through the early detection of developmental delays, and by helping to assess the quality of supports provided to children. Assessment must, however, address biases in the identification of children's needs.

- The ECEC workforce is at the core of inclusive ECEC policies. Qualified ECEC staff can promote inclusion by engaging in rich interactions with all children adapted to their needs and strengths, by instilling strong values about diversity in all children and by supporting families, including as frontline actors in the co-ordination with other services for children and families.

Introduction

For young children, early childhood education and care (ECEC) settings represent a transitional space providing a first experience of social life beyond the family. These early encounters with the views and behaviours of others matter for how children construct their identities, sense of belonging and perceptions of others. Building respect for diversity and developing inclusive practices in ECEC is therefore essential for ensuring the well-being and positive development of all children.

As the most proximal factors shaping children's experiences in ECEC, setting-level organisational and pedagogical practices are critical to adapting to all children's needs in order to promote inclusion and reduce inequalities in the early years. Building on consistent quality frameworks that set conditions for achieving high levels of quality across ECEC systems (see Chapter 6), setting-level practices with an intentional focus on inclusion constitute a major lever of support for the children who stand to benefit most from ECEC.

The overarching policy questions addressed in this chapter are:

- What organisational and pedagogical practices can promote inclusion in ECEC settings?
- How can ECEC policies support those practices?

The chapter identifies features of curriculum, continuous professional development, team and workforce composition, and monitoring and assessment practices that deliberately seek more inclusive ECEC experiences for all children, as well as strategies to support their implementation. The chapter focuses on factors with a direct influence on process quality, i.e. the quality of interactions that children experience through their ECEC settings, with other children, staff and teachers, and with their families and the wider community. As a preliminary step, it presents evidence on the growing diversity of the populations of children participating in ECEC and reviews strengths-based and right-based rationales for an inclusive approach to diversity in ECEC.

Diversity in ECEC and children's rights and strengths

A sustained expansion of ECEC has taken place in OECD member and accession countries in recent decades. Given the historically stronger uptake of ECEC services by socio-economically advantaged and non-immigrant families, growing enrolment rates have generally translated into greater social and cultural diversity within ECEC settings. This presents challenges for ECEC systems as new organisational and pedagogical models are required to respond to the needs of increasingly diverse populations of children and families, but also creates opportunities to build on their backgrounds and experiences. Addressing diversity with a dual focus on children's rights and strengths is key to ensuring that ECEC acts as an engine of equity and inclusion.

In the context of this report, diversity refers to people's differences as perceived by themselves and/or by others, which may relate to their race, ethnicity, gender, sexual orientation, language, culture, religion, mental and physical ability, socio-economic and immigration status (see Chapter 1). Diversity is multi-dimensional and might relate to individuals' physical characteristics or behaviour, and/or to social and cultural practices. Diversity can, in some cases, be associated with a relative lack of resources while, in other contexts, represents an asset that can lead to greater resilience, more knowledge of and openness to other cultures, and richer interactions with peers and ECEC staff. However, children from diverse backgrounds are generally more vulnerable and at risk of disadvantage in education, hence the target of equitable and inclusive reforms, practices and policies (OECD, 2019[1]); (OECD, 2023[2]); (see Chapter 3).

While acknowledging the multi-dimensional nature of diversity, the report explores inclusion in ECEC with regard to just some of its many facets (see Chapter 1). Inclusive ECEC policies and practices can

nonetheless extend to other aspects of diversity. For instance, it is essential that children and parents in families with different gender identities and sexual orientations (i.e. LGBTQI+) see their family types acknowledged and represented in the design and delivery of ECEC services, or that gifted children (i.e. children identified as having significantly higher than expected intellectual abilities given their age) have their specific educational needs met in ECEC settings. Policies addressing these dimensions fall outside the scope of this report, but have been addressed in related OECD work in education (OECD, 2023[2]).

Growing diversity in ECEC

Multiple policy and demographic developments account for the growing diversity of children participating in ECEC. Among those is the expansion and greater accessibility and affordability of ECEC in most OECD countries over the last two decades, which is reflected in the increasing participation in ECEC of children from disadvantaged socio-economic backgrounds (see Chapter 5). Families of different socio-economic backgrounds represent a central manifestation of social diversity in ECEC settings. In 2022, on average across OECD countries, one in seven children lived in relative income poverty, which can be associated with material deprivation, poor nutrition and unstable housing (OECD, 2024[3]). Many of the policies discussed in this report specifically target low-income families with children, with the objective of promoting their participation and engagement in ECEC.

International migration flows are also shaping the composition of child populations in ECEC. Globally in 2020, the number of international migrants reached 281 million, of which 36 million were children (UNICEF, 2022[4]). Permanent-type migration to OECD countries reached a record level in 2022, with more than 6 million new permanent immigrants (not including Ukrainian refugees); more than one-third of countries registered their highest levels of arrivals in the last 15 years. Family migration remained the primary category of entry, representing 40% of all permanent-type migration (OECD, 2023[5]). These trends result in increasing levels of foreign-born populations living in OECD countries. In 2022, 145 million people in the OECD area lived outside their country of birth, one-quarter more than in 2012. Over that decade, the share of the foreign-born population increased in almost all OECD countries, and by 2022 immigrants accounted for more than 10% of the population in two-thirds of OECD countries; those with the highest shares were Luxembourg (50%), Switzerland (31%), Australia (29%), New Zealand (26%), Canada (22%), Austria (21%), Ireland and Sweden (20% in both) (OECD, 2023[5]). In other countries, large immigration flows are a more recent but also sizable phenomenon. For instance, over the same decade, the share of immigrants multiplied by 10 in Colombia and more than tripled in Chile (OECD, 2023[5]).

Forced population displacements are also growing globally, with children being dramatically over-represented among refugees. Between 2010 and 2022, the global number of forcibly displaced child refugees and asylum seekers more than doubled from 21 million to 43 million, with almost 2 million children estimated to have been born as refugees between 2018 and 2022 (UNICEF, 2024[6]). Following Russia's war of aggression against Ukraine, as of June 2023 there were around 4.7 million displaced Ukrainians in OECD countries, one-third of whom are estimated to be children (OECD, 2023[5]).

International migration and displacement are complex phenomena, but one of their most visible implications for ECEC systems is the increasing share of multilingual children participating in ECEC. Given the centrality of language for early development, growing up with multiple languages represents a distinctly meaningful dimension of diversity, although migration is not only (and necessarily) related to language but also to cultural experiences that may differ from mainstream cultural norms in the country of residence.

Robust comparative indicators on multilingualism in ECEC are, however, scarce. New analyses carried out for this report using data from the Trends in International Mathematics and Science Study (TIMSS) and the Progress in International Reading Literacy Study (PIRLS) provide a trend perspective on the prevalence of multilingualism in ECEC across countries (Figure 7.1). Results suggest that the percentage of children who spoke two or more languages before beginning primary school and who had attended ECEC programmes for two years or more grew in 14 out of the 24 OECD member or accession countries

with available data between the mid-2000s and the mid-2010s. On average across those systems, almost one in six children (14%) attending ECEC settings in the mid-2010s were multilingual. Over that decade, the share of multilingual children increased by four or more percentage points in Austria, Canada, Ireland, Spain and New Zealand. As a result, in most of these systems, over one in five children were reported as being multilingual by the mid-2010s, with similar overall percentages observed also in the French Community of Belgium and Italy (Figure 7.1). In light of international migration trends over the last decade (OECD, 2023[5]), levels of multilingualism among the cohorts of young children attending ECEC in more recent years are likely to be substantially higher in many OECD countries.

Figure 7.1. Trend in linguistic diversity among children in early childhood education and care

Percentage of 10-year-old children reported as being multilingual before primary school and having attended ECEC for more than two years, 2011 and 2019
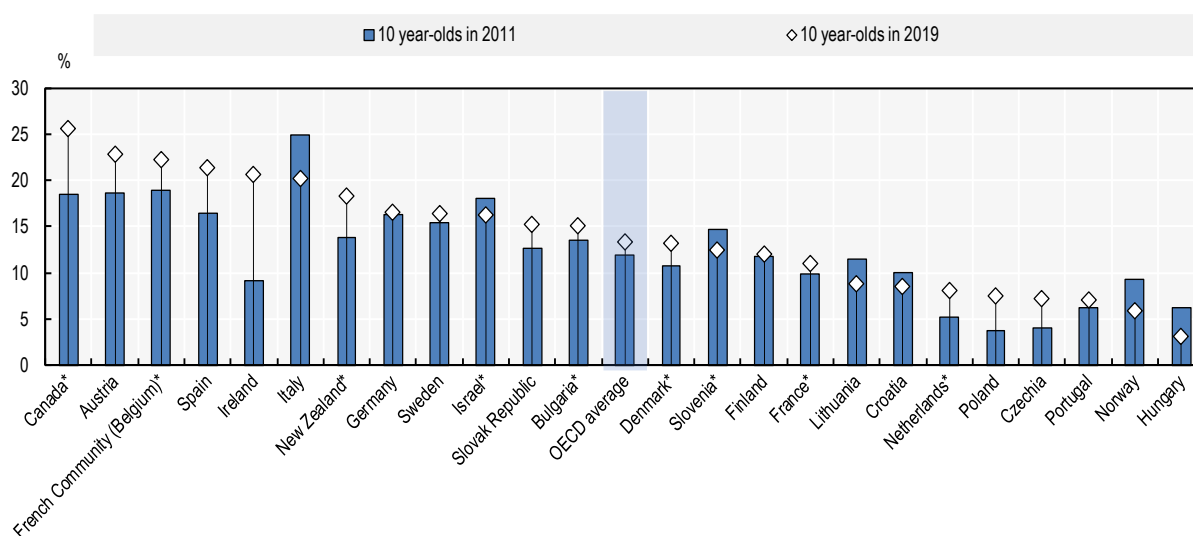
Notes: Based on parental retrospective reports. OECD average refers to the average across available OECD countries, excluding subnational jurisdictions. Children were in 4th grade and 10 years old on average at the time of data collection. Children are considered multilingual when parents reported that their child spoke two or more languages before beginning primary school (see Annex B). Countries are ranked in descending order by the percentage of multilingual children in 2019.
*Estimates from PIRLS 2011/2021 replace missing or unreliable information due to low response rates in TIMSS 2011/2019 (see Annex B).
Source: International Association for the Evaluation of Educational Achievement (n.d.), *TIMSS 2011 and 2019 databases, PIRLS 2011 and 2021 databases*, https://timssandpirls.bc.edu/databases-landing.html (accessed on 13 June 2024).

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A complementary perspective on the concentration of multilingual children within ECEC centres is provided by the OECD Teaching and Learning International Survey (TALIS) Starting Strong. In 2018, at the pre-primary level, the percentage of centres where more than 10% of the children had a first language (i.e. spoken in their family environment) different from the language used in their ECEC centre ranged from more than 40% of centres in Denmark (with low response rates), Germany, Iceland and Norway, to less than 2% in Japan and Korea. High levels of concentration were visible in countries such as Germany, where multilingual children represented between 31% to 60% of the children enrolled in about one in six pre-primary centres, or Türkiye, where they represented more than 60% of the children in one in ten centres (González-Sancho et al., 2023[7]).

Another important dimension of diversity relates to special education needs (SEN). This term is used in many education systems to characterise the broad array of conditions of children with disability and additional needs that affect their learning and development, albeit there is no universal consensus on these conditions, and countries adopt varying classifications. SEN can be grouped into three broad categories: learning disabilities, physical impairments and mental disorders (OECD, 2023[2]). The identification of some categories of SEN is particularly challenging in early childhood, given the rapid and significant cognitive and physical changes that children undergo in this period and the difficulty of interpreting the absence of some developmental markers, especially for children under age 3.

Reliable and internationally comparable indicators of the prevalence and types of SEN in ECEC are also rare. Data from European countries provide important insights, including a lack of consistent definitions of SEN across countries and a variety of strategies to provide education and care services for children with these types of needs. In most of the countries with available data, less than 4% of the children enrolled in pre-primary programmes are identified with an official decision of SEN. However, rates vary due to different identification criteria, as suggested by the disparity in rates in countries like Lithuania (20%) and Sweden (1%) (Figure 7.2: White marker, right axis). Across countries with available data, more boys than girls receive an official decision of SEN, with the gender imbalance being larger at early ages (EASIE, 2024[8]).

An indicator of greater relevance in the context of this report is the rate of placement of children with SEN in ECEC settings where they attend mainstream groups or classes for the largest part (80% or more) of the school week. This operational definition of "inclusive education" is in opposition to situations where children with SEN attend fully separate special settings ("segregation"), attend special classes within mainstream settings ("separation"), or take part in shared activities or lessons with mainstream peers only occasionally ("integration"). In the inclusive model, children with SEN attend a mainstream setting for the majority of the time, while allowing also for their participation in small group or one-to-one withdrawal activities for limited periods of time (maximum one day or 20% of the week) (Ramberg and Watkins, 2020[9]). This aligns with the UN Convention on the Rights of Persons with Disabilities, which states that children with disabilities should not be excluded from the general education system and should have access to inclusive and quality education on the same basis as their peers (United Nations, 2006[10]).

On average across European countries with available data, close to eight in ten children with an official decision of SEN are enrolled in inclusive pre-primary (ISCED 02) settings, i.e. settings where they attend mainstream groups or classes for most of the week (Figure 7.2: Blue bars, left axis). This masks substantial variation, as inclusive enrolment remains, for instance, below 50% in Luxembourg and Switzerland, reflecting the varying degree to which various forms of special education are socially and institutionally rooted in different countries. Importantly, though, in most countries, rates of enrolment in inclusive settings for children with SEN are substantially higher in pre-primary than in primary or secondary levels of education (EASIE, 2024[8]).

TALIS Starting Strong again provides complementary insights at the centre level. In 2018, children with SEN represented more than 10% of the children in a sizable share of mainstream ECEC centres in most participating countries. At the pre-primary level, this applied to 34% of centres in Chile, 30% of centres in Denmark (with low response rates), 24% of centres in Iceland, and between 8% and 15% of centres in Germany, Israel, Japan and Norway (González-Sancho et al., 2023[7]). These figures are consistent with the pattern of high rates of enrolment in inclusive settings in the EASIE data (Figure 7.2).

Figure 7.2. Children with special education needs in mainstream pre-primary settings

Percentage of children with an official decision of special education needs (SEN) enrolled in pre-primary education, and enrolment rate in mainstream settings during at least 80% of the school week, 2020/21
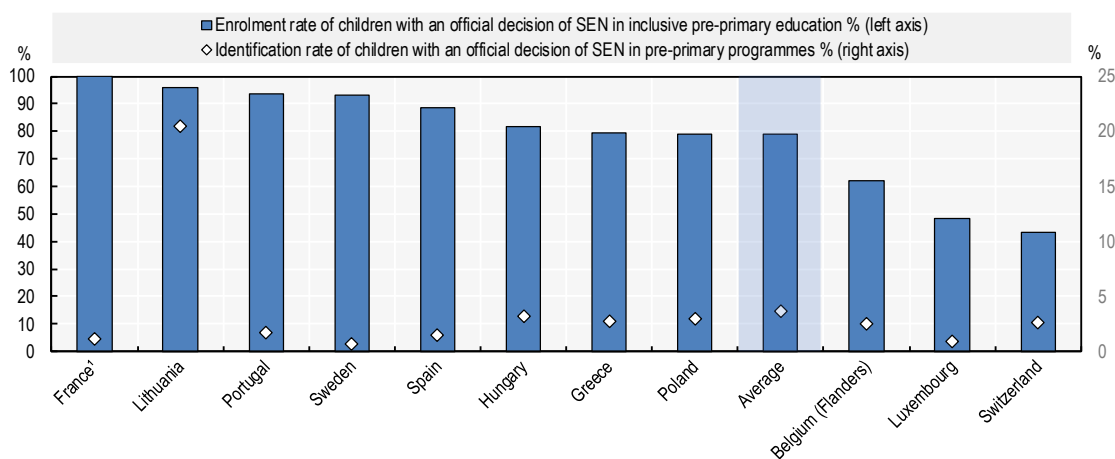
Notes: The enrolment rate is calculated amongst all children with an official decision of SEN (see Annex B). The identification rate is calculated amongst all children enrolled in recognised pre-primary education (see Annex B). Inclusive education refers to being educated with their peers in mainstream groups for 80% or more of the school week (see Annex B). Countries are ranked in descending order by the enrolment rate of children with an official decision of SEN in inclusive settings.
Source: European Agency Statistics on Inclusive Education (2024), *2020/2021 School Year Dataset Cross-Country Report*, Indicators 2A.1 and 2B.2, https://www.european-agency.org/activities/data/cross-country-reports (accessed on 15 November 2024).

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While the circumstances and needs associated with various forms of diversity can elicit different responses from ECEC systems, individuals and settings that embody several dimensions of diversity (intersectionality, see Chapter 3) are receiving increasing attention from researchers and policymakers because they can be, and often are, exposed to multiple types of disadvantages as a result of such combination of identities (OECD, 2023[2]). Intersectionality highlights that, rather than being independent of each other, different aspects of individuals' backgrounds interact to create unique identities and experiences. By questioning traditional group classifications and informing a more nuanced identification of children's needs, an intersectional lens to diversity has the potential to yield more tailored and effective education policies and interventions (Varsik and Gorochovskij, 2023[11]). Reliable indicators to guide intersectional approaches in ECEC are mostly lacking, but TALIS Starting Strong provides an opportunity to examine how various dimensions of diversity accumulate at the centre level (Figure 7.3). However, the survey cannot distinguish between situations where this accumulation applies to the same individual children or to different groups of children within ECEC centres. In 2018, ECEC centres where two dimensions of diversity applied to more than 10% of the children existed in all participating countries, albeit to a varying degree. Most notably, at the pre-primary level, these centres represented 32% of all centres in Chile, 19 % of centres in Iceland, 17% of centres in Germany and 11% of centres in both Norway and Türkiye (González-Sancho et al., 2023[7]). Further, while highly diverse centres where three or four dimensions of diversity apply to more than 10% of children were rare in most countries, they accounted, for instance, for about 8% of centres in Germany (Figure 7.3).

Figure 7.3. Accumulation of dimensions of diversity in early childhood education and care centres

Percentage of ECEC centres by number of dimensions that apply to more than 10% of the children in the centre
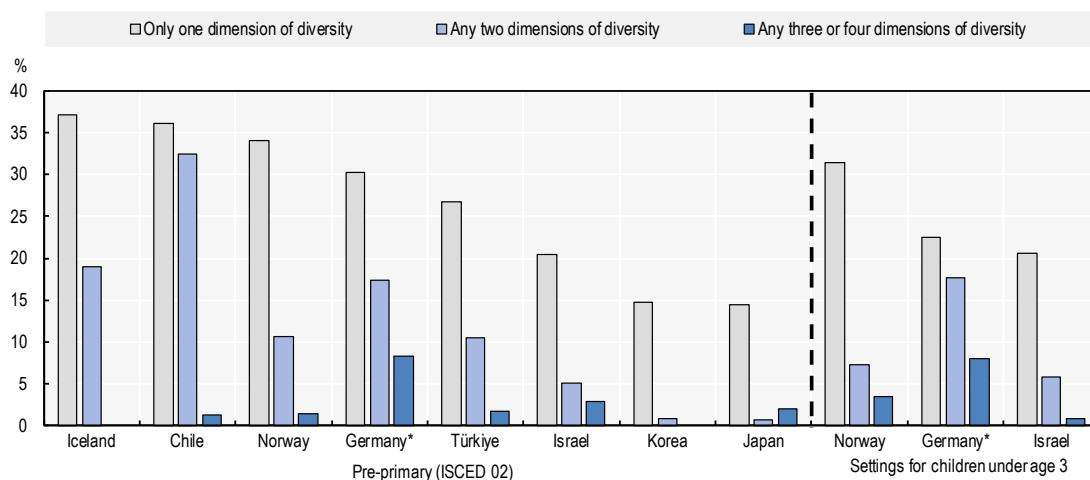
Notes: Based on reports from centre leaders. Dimensions of diversity captured in the survey refer to children from socio-economically disadvantaged homes, children with special education needs, children with a different first language, and children who are refugees. Several dimensions of diversity accumulate within an ECEC centre when each of these dimensions, considered separately, applies to more than 10% of the children in the centre. Data for early learning settings for children under age 3 exclude home-based settings (see Annex B). Countries are ranked in descending order by percentage of centres with more than 10% of children with only one dimension of diversity.

*Estimates for sub-groups and estimated differences between sub-groups need to be interpreted with care.

Source: González-Sancho et al. (2023), *Levelling the playing field in ECEC: Results from TALIS Starting Strong 2018*, https://doi.org/10.1787/757e4fea-en, Table A.5.

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The strengths that come with diversity

With growing levels of social and cultural diversity, the early development of children attending ECEC settings reflects an increasingly diverse range of experiences. For young children in particular, learning is acquired primarily in the social, cultural and linguistic contexts of their families and communities. For instance, opportunities for early language development vary between children growing up in families of high and low socio-economic status in relation to the quantity and quality of conversational inputs from parents (Rowe, 2017[12]), and between monolingual and multilingual children depending on their exposure to the majority language in their home environments (Persici et al., 2022[13]). ECEC settings and staff need to be attuned to these and other differences in children's early experiences and recognise how they can shape their individual needs, behaviours and well-being.

Commonly, though, a deficit model has informed strategies for supporting children from diverse backgrounds in ECEC. This view attributes early group differences in outcomes, such as lower vocabulary size in the majority language among socio-economically disadvantaged or multilingual children, to presumed and often stereotyped weaknesses of these children and their families, rather than to systemic factors related to social inequalities and discrimination. A deficit view of group differences may thus lead to advocating more direct instruction on basic language skills for children from disadvantaged socio-economic backgrounds, or a greater focus on the majority language for multilingual children (NASEM, 2024[14]). While these measures can be guided by equity concerns intending to compensate for what is perceived as a deficit in resources, they can be problematic if focused on a narrow range of learning outcomes to the detriment of other areas of children's development or non-majority languages (see Chapter 8). Targeting and labelling practices with this deficit-based approach can also unintentionally lead

to stigmatisation, as when children receiving remedial supports are regarded as weak learners (OECD, 2023[2]).

The deficit perspective is now contested by a growing body of research which emphasises the cultural nature of learning and supports a strengths-based approach to diversity. This builds on an appreciation of the varied ways in which different cultures afford experiences for early learning, development and well-being, and challenges the assumption that early childhood practices typical of Western societies and middle-class families represent universal and normative conditions for child development, rather than those of specific cultural contexts (Trawick-Smith, 2019[15]). This shift in child development research also calls for a better understanding of how the ecology of everyday lived experiences and its variation across populations and situations influence what children know and how they learn (Rogoff, Dahl and Callanan, 2018[16]). For ECEC, this implies adopting a model in which curriculum and pedagogy support all children in connecting curricular goals to their learning and developmental experiences outside ECEC settings, as well treating those experiences as assets that children bring into the playgroup or classroom, given that young children make sense of new experiences primarily in relation to what they already know (NASEM, 2018[17]).

A strengths-based perspective to diversity in ECEC therefore recognises that all children learn through their immediate experiences, as embedded within cultural contexts, and posits that celebrating and incorporating this variety of experiences and cultures within ECEC settings, including in those with relatively low levels of diversity, is crucial to promoting early learning, development and well-being. Adopting this perspective implies undertaking measures to identify and reject biases, deficit narratives and stereotyped assumptions about children from racial, cultural and linguistic minorities, as well as about children with SEN and children from socio-economically disadvantaged backgrounds (NASEM, 2024[14]). A strengths-based approach that values children's diversity in its multiple dimensions is also aligned with the principle of whole-child development, as it elevates outcomes such as sense of agency and positive identity as developmental goals for all children.

Strengths-based approaches are explicitly embraced in ECEC frameworks in several OECD countries. For example, Australia's Early Years' Strategy 2024-2034 includes a specific focus on the strengths of young children and their families as one of five key principles guiding how the Australian Government will work to support children and families in the early years (Principle 2: Strengths-based). This principle calls for the recognition that all children and families have unique relationships, strengths, capabilities and resources, and seeks to empower them to set their own goals that build on those strengths. A related principle emphasises the importance of valuing all forms of diversity, including in relation to gender, culture, language, place and disability (Principle 4: Equitable, inclusive and respectful of diversity) (Australian Government, 2024[18]).

The case of multilingualism illustrates how advancements in research support a shift from deficit- to strengths-based approaches to diversity in ECEC. The deficit lens about the learning potential and outcomes of multilingual children builds on misconceptions like that early exposure to multiple languages is confusing for young children and leads to language delays. The current scientific consensus disproves these concerns and highlights that, while some aspects of language development can vary between multilingual and monolingual children (e.g. dual-language learners may take longer to master aspects that differ between their two languages), rich exposure to a second language, especially before age 3, tends to be associated with better skills in both the language the child speaks at home and the language the child learns in an early education setting (for reviews, see (Espinosa, 2020[19]) and (LaMarr, 2022[20])). The evidence is less conclusive about the notion of a bilingual advantage in executive function and cognition, which derives from a neuroplasticity framework that links early multilingualism to enhanced cognitive processes (Bialystok, 2017[21]). There is little basis for claims of benefits in either linguistic or non-linguistic outcomes when exposure to multiple languages in the early years is only superficial (Whiting and Marshall, 2023[22]). Overall, however, research provides robust evidence that emergent multilingualism represents

an asset rather than a hindrance to early learning and supports the adoption of a strengths-based model that values diverse language abilities and cultural knowledge in early education settings. This includes supporting multilingual children in maintaining their home languages, through both curriculum design and staff professional development for its implementation (NASEM, 2024[14]).

Research on developmental resilience is also paying increasing attention to children's positive and adaptive responses to early experiences of stress and deprivation, as a complementary perspective to the negative effects of growing up in poverty, which are widely documented in various disciplines (see Chapter 3). An emerging framework explores the "hidden talents" that children can develop to function within high-adversity and unpredictable environments, as well as strategies to leverage stress-adapted skills as building blocks for success in education and other contexts. This approach conceptualises young children living in poverty as capable and adaptive, avoiding stigma and suggesting new avenues to better tailor education and social policy interventions to their needs and potential (Ellis et al., 2020[23]) (DeJoseph et al., 2024[24]). Examples of strategies that capitalise on stress-adapted skills potentially applicable in ECEC include using tasks that require children to shift rather than sustain their attention; bringing into the curriculum concepts that are ecologically relevant in harsh environments; and building on competencies developed for everyday problem-solving (Ellis et al., 2020[23]).

Strengths-based frameworks can also inform approaches for supporting children with SEN in ECEC, even if different types of conditions and disabilities can require specific adaptations. Common vectors are to maintain a whole-child approach when supporting children with SEN, rather than addressing only the disabilities or disorders that affect their learning and development, and to respect and facilitate the voices and experiences of their families to better identify their needs and to support overall well-being at the family level (Elder, Rood and Damiani, 2018[25]).

Research indicates that children with disabilities benefit from having access to engaging early education experiences in mainstream settings alongside typically developing children (Gulboy, Yucesoy-Ozkan and Rakap, 2023[26]). There is less consistent evidence regarding how the presence of children with SEN influences the outcomes of peers without disabilities, but the literature indicates mostly positive or neutral effects on their academic achievement at the pre-primary and primary levels, as well as positive effects on social outcomes such as increased peer acceptance (Kart and Kart, 2021[27]).

Focusing on the strengths and needs of diverse children has the potential to improve the quality of ECEC experiences for all children because all children share the capacity to learn in multiple ways, including through play and exploration, observing others, and intentional and responsive pedagogy, and because all children require some level of individualised support and accommodation. Hence, the conditions and competencies required for ECEC settings and staff to more effectively support children from diverse backgrounds can ultimately benefit all children (NASEM, 2024[14]).

Rights-based inclusion in ECEC

Policies to promote equity and inclusion in education are developed within regulatory frameworks which consist of a range of legal instruments and agreements, and which are often underpinned by commitments at the international level. Most OECD countries are parties to prominent international treaties and declarations containing provisions relating to equity and inclusion in education, and which provide an underlying framework for system-level policy development towards these goals (OECD, 2023[2]).

The right to education for everyone is recognised in Article 13 of the International Covenant on Economic, Social and Cultural Rights, which has been signed or ratified by all OECD countries (UN General Assembly, 1966[28]), and its content and the resulting state obligations have been unpacked in subsequent UN statements (UN Committee on Economic, Social and Cultural Rights, 1999[29]). The right to education comprises four essential and interrelated elements: availability, accessibility, acceptability and adaptability (for the first two, see Chapter 5). Of direct relevance to this chapter, acceptability means that "the form and

substance of education, including curricula and teaching methods, have to be acceptable (e.g. relevant, culturally appropriate and of good quality) to students and, in appropriate cases, parents". Adaptability means that "education has to be flexible so it can adapt to the needs of changing societies and communities and respond to the needs of students within their diverse social and cultural settings" (UN Committee on Economic, Social and Cultural Rights, 1999[29]).

The right to education is restated within the UN Convention on the Rights of the Child (UN OHCHR, 1989[30]), including respect for children's cultural identity, language and values, as well as respect for their views as protagonists of their educational experiences. This right is also reaffirmed regarding Indigenous children specifically in the UN Declaration on the Rights of Indigenous Peoples, which states that Indigenous children have the right to all levels of education without discrimination and that Indigenous peoples have the right to establish and control their educational institutions with education being provided in their own languages and in a manner appropriate to their cultural methods of teaching and learning (UN General Assembly, 2007[31]). Likewise, the UN Convention on the Rights of Persons with Disabilities reaffirms the right in relation to children with disabilities and specifies that education must be inclusive, with the provision of "effective individualised support mechanisms… provided in environments that maximise academic and social development, with the goal of full inclusion" (UN General Assembly, 2006[32]). All OECD countries are also signatories to the (non-binding) Salamanca Statement on Principles, Policy and Practice in Special Needs Education and Framework for Action, which endorses the principle of inclusive education that asserts that education systems should serve all learners, taking into account and responding to the wide diversity of their characteristics and needs (UNESCO, 1994[33]).

Children's rights to equitable and inclusive ECEC inform commitments to action of signatories of the Tashkent Declaration adopted during the UNESCO World Conference on Early Childhood Care and Education (UNESCO, 2022[34]), with a particular focus on disadvantages and vulnerable children. The Declaration urges UNESCO member states to:

> *Ensure further improvements and implementation of policy and legal frameworks to guarantee the right of every child to inclusive quality care and pre-primary education, with special reference to the most disadvantaged children. Recalling the Incheon Declaration commitment to encourage at least one year of free and compulsory quality pre-primary education for all (Sustainable Development Goal Target 4.2), and progressively increase ECCE provision, prioritizing inclusion and gender equality by providing equitable and adaptive support to the most vulnerable and marginalized children (p.7).*

Inclusive organisational and pedagogical practices in ECEC settings

An inclusive ECEC system offers quality for all children while respecting their diversity, which includes their families and communities, and responding to their varying needs and strengths (OECD, 2023[2]). In this chapter, inclusion is explored mainly with regard to children's and families' socio-economic, cultural and linguistic backgrounds, as well as in relation to children's special education needs (SEN). While equity focuses on levelling opportunities (see Chapter 6), inclusion is about adapting the system to fit the child, rather than the other way round, and about recognising and addressing the different experiences, needs and challenges of diverse groups of children and families. Inclusion is therefore closely associated with individual and collective identities, and with fostering a sense of belonging for these identities within the ECEC system (OECD, 2023[2]).

The organisational and pedagogical practices outlined in this section are consistent with the principle of strategically combining universal and targeted approaches to promote equity and inclusion in ECEC (see Chapters 1 and 6). The practices also align with tiered models of support for young children, in which support is tailored to the needs of individual children or designed to support the ECEC setting that is working with an individual child. Tiered models of support for young children in early education and care typically involve a first tier consisting of a high-quality curriculum and other quality standards applicable to

all children or settings, and additional tiers providing more specific supports to small groups of children within settings and, in cases with the highest level of need, personalised support for individual children (Sugai and Horner, 2019[35]) (European Commission, 2021[36]) (Soukakou, Dionne and Palikara, 2024[37]). This chapter proposes a framework for inclusive ECEC practices that combines curriculum and pedagogical practices with considerations on the organisation and competencies of staff teams as well as monitoring and assessment practices (see Figure 7.4). The focus is placed on quality processes within ECEC settings, which represent major inclusive processes related to social interaction, children's engagement in daily activities with peers, and personalised needs assessment and supports, and as such, the core of broader inclusive ecosystems (Bartolo et al., 2019[38]).

Figure 7.4. A framework for effective inclusive practices in early childhood education and care settings
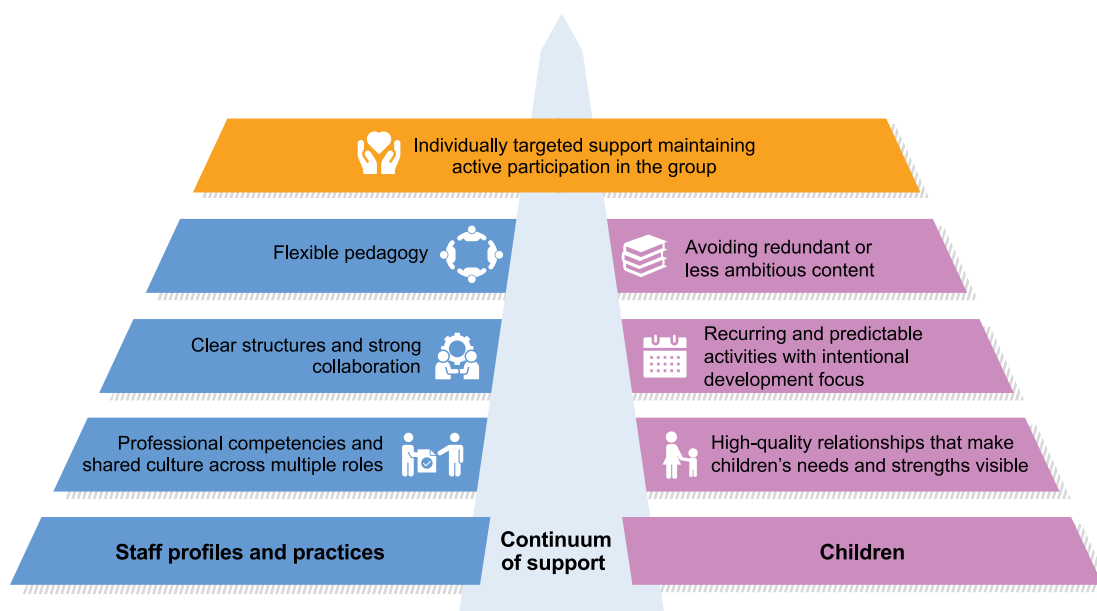
Source: Adapted from presentations by Noora Heiskanen, Stephanie Jones and Elena Soukakou (see Annex A, Workshop 4).

This framework posits that solid quality foundations from which all children can benefit reduce the need for and increase the effectiveness of more targeted supports (see Annex A, Workshop 4 and Workshop 7), and that it is possible to maintain a dual focus on improving the quality of interactions for all children and providing additional supports for some of them. A first step in this direction is to build high-quality relationships (i.e. warm, predictable and accepting of diversity) between staff and all children, as this process can help staff to better identify children's different needs and strengths. Functional teamwork – as reflected in a shared culture, clear structures and strong collaboration within settings – is another precondition for effective inclusive supports to children, as it can facilitate a range of pedagogical practices targeting different needs across developmental areas. Ultimately, inclusion within ECEC settings for the children with the highest levels of need can be best realised through personalised supports that remain embedded in activities in which all or most of the children in the group participate. Informed by this framework, the chapter explores measures across four policy levers, namely curriculum and pedagogy, continuous professional development, team and workforce composition, and setting-level monitoring and assessment, as well as conditions for their implementation.

Curriculum and pedagogy

An equity-centred approach to curriculum is about providing differential support for children based on their individual needs, particularly additional support for children with difficulties, and without lowering expectations on their learning and development outcomes due to their backgrounds. In turn, an inclusion-centred approach to curriculum is about offering all children a high-quality curriculum that allows children to reach their full potential by valuing diversity, that is, by respecting and building on their diverse characteristics, needs and abilities (OECD, 2023[2]).

Curriculum is also an instrument to recognise children's rights to an ECEC system that considers their needs and values. Since ECEC curricula are often value-based, they represent a major building block for fostering an appreciation of diversity by all children and staff (OECD, 2021[39]). Diversity needs to be valued and sustained across all settings within an ECEC system, and not only in settings serving large shares of diverse children.

While curriculum frameworks can recognise these aspects, gaps will inevitably exist between how curricula are designed and how they are implemented. This speaks to the importance of promoting dynamic and flexible pedagogical approaches that respond to the needs and specific characteristics of the groups of children that ECEC professionals are working with. Curricular frameworks and guidelines should thus allow ECEC settings to adapt the curriculum to consider the diversity and resources in the local environment, including by engaging in discussions with families and communities (European Commission, 2014[40]). Curriculum flexibility refers to how adaptable a curriculum can be to changing educational contexts or different student needs. Dimensions of flexibility include learning and development goals, content, pedagogy, assessment and time, while flexibility can vary in degree, from low to high, as well as in nature, depending on the leeway proved to adapt, add, reduce or co-design content (OECD, 2024[41]).

The scope in this chapter is limited to three core areas of high-quality ECEC curricula with a focus on equity and inclusion (OECD, 2023[2]) (NASEM, 2024[14]): responsiveness to cultural and linguistic diversity, adaptations and supports for children with SEN, and engagement with families from diverse backgrounds (see Annex A, Workshop 7).

Culturally sustaining and linguistically affirming curriculum and pedagogies

Culturally Sustaining Pedagogy (CSP) is a concept for teaching that emphasises the need to sustain children's cultural and linguistic backgrounds and diversity in their educational settings. It builds on asset-based pedagogical research that counters deficit views regarding communities of colour and children from diverse backgrounds more generally. CSP pleads that inclusive pedagogies should sustain (i.e. actively promote, rather than ignore or just acknowledge) linguistic and cultural pluralism (Paris, 2012[42]). Language and cultural revival are of particular relevance in the case of Indigenous cultures of OECD countries (Kral et al., 2021[43]).

While there is evidence that ECEC centres across countries provide materials (e.g. books or toys) from cultures other than the ethnic majority as a recognition of the importance of adopting a multicultural diversity approach (OECD, 2019[44]), it is necessary to go beyond the display of cultural diversity towards a more profound transformation of pedagogical practices in ECEC settings. ECEC curriculum can include an explicit recognition of the importance of multilingualism awareness and practical guidance for ECEC staff to include home language(s) in classroom practices (Bergeron-Morin, Peleman and Hulpia, 2023[45]), and programmes can, for instance, invite parents to read to children in their home languages in ECEC centres (Kirsch and Bergeron-Morin, 2023[46]).

Historically, approaches to emerging multilingualism focused on bilingualism, but more recent research emphasises more complex multilingual environments where more than two languages coexist. The concept of "translanguaging" refers to a dynamic process in which multilingual speakers navigate social and cognitive demands through strategic employment of multiple languages (García and Wei, 2014[47])

(Bonacina-Pugh, da Costa Cabral and Huang, 2021[48]). Implications for ECEC curriculum and pedagogy include building on the multilingual competencies of children, using multilingual materials, and working closely with parents to maintain their heritage languages. In highly diverse contexts where many languages are represented within ECEC settings, and where it is not reasonable to expect that ECEC staff speak these languages, this can also involve fostering language awareness and visibility, at least symbolically. Examples of ECEC curriculum frameworks and resources with a focus on linguistic and cultural inclusion exist in several countries (Box 7.1).

Box 7.1. ECEC curriculum frameworks focusing on linguistic and cultural inclusion

Belonging, Being and Becoming: The Early Years Learning Framework (EYLF) in Australia

The latest version of this curriculum framework (v2.0, 2022) highlights respect for diversity, the strengthening of Aboriginal and Torres Strait Islander peoples' perspectives, and equity and inclusion with high expectations among its guiding principles. It also includes a cultural responsiveness practice section that further strengthens the quality and inclusion aspects of Australia's National Quality Framework, for children from culturally and linguistically diverse backgrounds (Australian Government Department of Education, 2022[49]).

The Bridging Diversity curriculum in Berlin, Germany

The ECEC curriculum Bridging Diversity (Senate Department for Education, Youth and Family, 2019[50]) is the statutory early years programme in the city/state of Berlin since 2004, where a large share of children in the ECEC system have an immigrant background. Inclusive practice is a core thread in Bridging Diversity. Respect for diversity is based on a shared responsibility for children's rights and the natural and cultural environments. Pedagogical teams are expected to actively confront stereotypes and stigmatisation, including by reviewing their own perspectives. Staff receive practical suggestions on strengthening each child's identity, enabling children to gain experiences with diversity, and encouraging critical thinking about one-sidedness (see Annex A, Workshop 7).

The Te Whāriki curriculum and Kōwhiti Whakapae tools and guidance in New Zealand

Kōwhiti Whakapae is an online curriculum resource designed to help teachers strengthen planning, formative assessment and teaching practice, and thereby the implementation of New Zealand's early years curriculum, *Te Whāriki* (Ministry of Education, n.d.[51]). The curriculum is grounded in foundations of empowerment, holistic development, inclusion and nurturing children's identity, language and culture. It guides early years educators to focus on affirming the identities, languages and cultures of all children, families and communities, and celebrating diversity within culturally responsive learning environments. This involves intentional activities such as formal greetings to start the day in *Te Ao Māori* tradition or, in the area of supporting diverse languages and cultural differences, partnering with families for home language retention, acknowledging different paces for receptive and expressive language development (see Annex A, Workshop 7).

The ÉLODiL (Éveil au Langage et Ouverture à la Diversité Linguistique) project in Québec, Canada

In Québec, the ÉLODiL project proposes a number of activities that enables both children and teaching staff in early childhood education (ages 4 and 5) and at the primary level to learn about linguistic diversity from an intercultural education perspective. The project aims to raise children's awareness of linguistic diversity, where appropriate, to legitimise the language(s) of origin of students from immigrant backgrounds; to enable children to acquire knowledge of the languages of the world (without, however, learning these languages); and encourage children to develop the ability to make reflective observations

about how these languages work in connection with French as a language of instruction (Université de Montreal, n.d.[52]).

Curricular components of the Menntun, Móttaka, Menning (MEMM) project in Iceland

The *Menntun, Móttaka, Menning* (Education, Reception and Culture) is a collaborative project led by Iceland's Ministry of Education and Culture, the Directorate of Education and School Services and Reykjavík city, launched in May 2024 to respond to rapidly increasing immigration and refugee arrival rates in the country (Digital Iceland, 2024[53]). With social inclusion as an overarching goal, the project seeks to establish a uniform procedure for the reception and education of children with diverse linguistic and cultural backgrounds in Iceland, including at the pre-primary level, and to develop guidance and learning materials and tools for educators.

Some of the MEMM initiatives at the ECEC level have a specific focus on curriculum and pedagogical practices. These include supports to preschools to develop their own curricula building on the revised national curriculum framework, and with a special focus on children with diverse cultural and linguistic backgrounds; the distribution of a Picture Dictionary (*Orð eru ævintýri*) with a 1 000 basic words in Icelandic; and guidance for the support of mother tongues and active plurilingualism in both formal and informal programmes for preschool aged children.

Curriculum and pedagogy for young children with SEN

As noted in previous sections, in most of the countries with available data, the majority of young children with SEN who participate in ECEC are enrolled in the same settings as typically developing peers. However, attendance in mainstream settings does not guarantee that actual practices respond to the needs of young children with SEN and should thus be considered a building block rather than a sufficient condition for effective inclusion.

An important question for developing more inclusive ECEC is whether general ECEC curricula can provide adequate guidance and supports for ECEC staff to individualise and effectively address those needs, complementing other potential supports such as the presence of specialised staff in multi-professional teams. This is a complex problem, as specific conditions tend to be associated with specific needs: for instance, children with autism often require specialised interventions with a focus on language and social skills, while children with Down syndrome require focused support for gross and fine motor development, as well as attention to cognitive development. Importantly, targeted supports on social and emotional development and well-being are critical for all children across the range of special education needs (NASEM, 2024[14]).

Focusing on the needs of children with disabilities has the potential to improve the experiences of all children. All children require some level of individualised support and accommodation, and while these needs may be more pronounced for children with disabilities, the skills that general education teachers develop to teach children with disabilities more effectively will ultimately benefit all children.

Engagement with families from diverse backgrounds

Staff interactions with families are distinct from but deeply intertwined with interactions with children. ECEC curriculum should aim to promote positive engagement with families, given its potential for improving children's experiences in both home environments and ECEC settings (see Chapters 4 and 10). Curriculum can provide explicit guidance on co-operation with parents and promote agreed values within a framework of socio-cultural diversity. However, this requires recognising and respecting a range of values and child-rearing practices of diverse families, and the implementation of ECEC-family partnerships to develop a common understanding of ECEC goals. A mono-cultural arrangement of ECEC services oblivious of

diversity generally fails to gain the trust of minority groups and may have negative consequences for children's participation in ECEC and reinforce discrimination (see Chapter 5) (European Commission, 2014[40]).

Strong connections with families are also essential for ECEC staff to understand when and how to adapt the curriculum and pedagogical practices to address the strengths and needs of individual children. Early childhood staff can collaborate with families to co-construct curricular components that are meaningful and relevant in local contexts. Elevating the role of families in supporting children's development involves honouring their languages, cultures and talents, as well as inviting these assets into ECEC classrooms (NASEM, 2024[14]).

Continuous professional development

High-quality continuous professional development (CPD) for ECEC staff is paramount to promoting more inclusive practices within ECEC settings. Research emphasises that practical training in authentic contexts and peer feedback represent central features of effective CPD (see Chapter 6). Evidence also indicates that staff with both pre- and in-service training in working with children from diverse backgrounds are more likely to adapt their practices to suit different children's interests, abilities and cultural heritages (OECD, 2020[54]). At the same time, working with children with special education needs and with multilingual children are areas where ECEC staff in multiple countries report a strong need for ongoing training (OECD, 2019[44]). This section discusses both the types of competencies and the delivery models that CPD can target to better equip ECEC staff in addressing diversity.

Key competencies

Research has looked at the staff competencies required to respond to increasing diversity in education settings using a wide range of terms and constructs, often under the multi-faceted rubrics of intercultural competence and multicultural education (Council of Europe, 2014[55]) (Romijn, Slot and Leseman, 2021[56]) (OECD, 2023[2]). As an example, Banks (2004[57]) distinguishes five dimensions of multicultural education: cultural content integration, knowledge as social construction process, prejudice reduction, equity pedagogy, and an empowering school culture. Notwithstanding some differences, these frameworks share the stance that enhancing educators' ability to respond to diversity involves addressing both their knowledge and skills as well as promoting a general disposition to value diversity. This means that inclusion-focused professional development can aim to induce both cognitive and attitudinal shifts in ECEC staff. In addition, the ECEC curriculum needs to be clear about how it views multicultural education and what is expected from staff in this respect.

The OECD Strength through Diversity project identified four core competencies for inclusive teaching (OECD, 2023[2]), which in an ECEC context can be reformulated as follows:

*   *Critical reflection*: the process by which staff identify the assumptions behind their actions working in ECEC settings, understand their historical and cultural origins, and question their meaning.
*   *Dismantling unconscious bias*: the process of recognising how one's own biases can affect interactions in the classroom and the impact they can have on children, and the subsequent process of engaging in strategies to mitigate these biases.
*   *Global competence*: the capacity to examine local, global and intercultural issues, to understand and appreciate the perspectives and world views of others, and to engage in open, appropriate and effective interactions with children and families from different backgrounds.
*   *Treating diversity as an asset and a source of growth*: adopting a strength-based approach to diversity as well as helping children to see that abilities and knowledge can be developed through effort, and supporting them to do so.

Similar formulations of these competencies are articulated by other organisations. For instance, among other expectations for ECEC staff, the European Commission highlights the recognition of the different cultural and social backgrounds of children; the capacity to work with all families, including those who may have different values and attitudes; and a respectful treatment of all children and families. Inclusion-related competencies for ECEC professionals can include fostering inclusive attitudes; the development of an open-minded approach towards parents and children; the ability to adapt to new ideas and situations; the ability to put themselves in the position of the parent/child and have a better understanding of their needs; and developing intercultural competencies and awareness of different family arrangements (European Commission, 2021[58]). In the United States, the Zero-to-Three model of critical professional competencies emphasises the cross-cultural skills required to work with diverse populations, with specific considerations for adjusting practices to meet the individual needs of infants and toddlers from populations facing significant risk factors and for ensuring a strength-based approach to supporting multilanguage learners (LeMoine, 2020[59]).

A common feature across these frameworks is to emphasise the importance of professional development to address staff's attitudes towards diversity as a foundation for building skills in more specific areas. This involves focusing on the set of assumptions, beliefs and values that underpin staff's practices, as a target for CPD on an equal footing with more concrete knowledge and skills. This can include, for instance, addressing deficit-oriented views on diversity, and encouraging staff to critically reflect on implicit assumptions in their work with diverse children and families.

Research supports this focus on the attitudinal dimension as a basis for developing more inclusive practices in ECEC settings, and show its links with both work contexts and training experiences. Staff's positive attitudes towards multilingualism have been found to a be a major determinant of development-focused communication between parents and staff in multilingual ECEC centres in Luxembourg (Aleksić, Bebić-Crestany and Kirsch, 2024[60]). A study with ECEC and primary school teachers in England (United Kingdom), Italy, the Netherlands and Poland suggests that diversity-related self-efficacy (i.e. the feeling of preparedness for working with diverse populations) constitutes a specific domain of teachers' sense of efficacy, which tends to be higher among teachers working in more diverse classrooms and having more opportunities to build up diversity-related self-efficacy beliefs. Both classroom composition and this sense of self-efficacy appear positively associated with the use of intercultural practices in classrooms (Romijn et al., 2020[61]). In turn, results from TALIS Starting Strong 2018 show that in six out of nine participating countries, pre-primary staff having received both pre- and in-service training to adapt their work to individual child needs are more likely to report a strong sense of self-efficacy in this area (OECD, 2020[54]). Evidence is less conclusive on the effectiveness of diversity-related CPD in bringing lasting changes to practices, with successful examples being for the most part long and intensive interventions with a strong coaching component (Castro et al., 2017[62]); (Kirsch et al., 2020[63]).

Continuous training specifically targeted at leaders of ECEC settings deserves particular attention. Professionals with leadership roles can play a pivotal role in creating a school or setting-wide culture of respect and appreciation for diversity and in enabling staff to deal more effectively with diverse classrooms. Often the first point of contact for parents, setting leaders can also shape interactions with multilingual parents. Diversity-related competencies for leadership also relate to critical self-reflection on the values and beliefs embedded in professional interactions with children and families from diverse backgrounds, and include intercultural communication as a major element (Cherkowski and Ragoonaden, 2016[64]).

Delivery

Besides targeting competencies in both dispositional and cognitive domains, the success of diversity-related CPD depends on identifying and implementing promising delivery models. Research underscores that theoretical knowledge and traditional training formats often fall short of meaningfully changing staff attitudes and practices, as this generally requires direct and practical exposure to high-diversity contexts.

An inventory of CPD inclusion-related initiatives in 10 European countries suggests that more dynamic forms of CPD, such as team-level reflection, can facilitate addressing value-laden topics more likely to elicit strong feelings from practitioners, as compared to other subjects (e.g. multilingualism) for which a greater focus can be placed on knowledge and skills and training at the individual level (Slot, Romijn and Wyslowska, 2017[65]). A review of 45 studies on teachers' intercultural competencies in both pre-service and in-service professional development interventions stresses the importance of guided reflection on held assumptions for supporting practitioners in developing new appreciations and understandings of the needs and strengths of children and families from diverse backgrounds, and that this type of reflection is more effective when occurring at the team-level rather than individually. The review also highlights the benefits of embedded interventions that align with local contexts (i.e. characteristics of settings and the families and children they serve) and existing policies (Romijn, Slot and Leseman, 2021[56]). Attending to local contexts also implies adapting the content of training to participants' levels of knowledge and experience, which tend to vary with the characteristics of the settings where they work, therefore potentially requiring varying combinations of theoretical and practical components (Buchner, Eberl and Hess, 2023[66]). In the case of multilingualism-focused training, this can involve responding to and taking advantage of the combined language repertoires of staff and families (Bergeron-Morin, Peleman and Hulpia, 2023[45]).

A number of relevant CPD initiatives and broader strategies for promoting inclusive values and practices among ECEC professionals exists internationally (see, for instance (European Commission, 2021[36])). Examples from Ireland and Australia illustrate some recent developments (Box 7.2).

Box 7.2. ECEC professional development initiatives with a focus on inclusion

The training components of the Access and Inclusion Model in Ireland

The Access and Inclusion Model (AIM) is a child-centred programme introduced in Ireland in 2016 to enable access and meaningful participation in ECEC for children with a disability (Government of Ireland, n.d.[67]). The programme offers universal supports to preschool settings as well as targeted supports which focus on the needs of the individual child, without requiring a diagnosis of disability.

Universal supports within the context of AIM are designed to create a more inclusive culture in ECEC settings, primarily through training courses and qualifications for staff (OECD, 2021[68]). The Equality, Diversity and Inclusion training initiative for all ECEC practitioners seeks to foster awareness about the principles reflected in the Irish Diversity, Equality and Inclusion Charter and Guidelines for ECEC (DCYA, 2016[69]) and to encourage advocacy for the inclusion of all children and their families within ECEC settings. Additionally, the Leadership for Inclusion in Early Years is an ISCED 5 training programme to prepare participants for the position of Inclusion Coordinators, which involves a leadership role within ECEC settings in supporting and supervising other staff to plan, implement and review inclusive practices. All staff are also entitled to more specific training modules on topics such as manual sign systems or sensory processing (see Annex A, Workshop 7).

Shaping our Future: The National Children's Education and Care Workforce Strategy in Australia

Shaping Our Future (© Education Services Australia, as the legal entity for the Education Ministers Meeting, 2021) is a co-designed ten-year strategy developed as a joint partnership between all governments, the children's education and care sector, and other key stakeholders to ensure a sustainable, high-quality ECEC workforce, and address challenges in attracting and retaining educators and teachers (ACECQA, n.d.[70]).

Actions implemented of particular relevance to promoting an inclusive culture and inclusive practices in ECEC include the development of an induction programme to the National Quality Framework, and a review of targeted programmes that support training for and placements of Aboriginal and Torres Strait

Islander educators and teachers in regional, rural and remote areas, to inform the development of new programmes. The strategy supports and complements broader national strategies, such as Closing the Gap and the National Aboriginal and Torres Strait Islander Early Childhood Strategy. In 2024, the Productivity Commission's inquiry into Australia's ECEC system recommended opportunities to enhance *Shaping Our Future*. The inquiry highlighted cultural safety as a priority area for publicly funded professional development for the ECEC workforce and called for improved access to CPD to support better cultural safety and inclusion practices (Productivity Commission, 2024[71]).

Team and workforce composition

Besides ensuring that high-quality workforce preparation programmes are available, supporting inclusion in ECEC demands leveraging opportunities for collaborative teamwork involving staff with different profiles, including by recruiting more staff with diverse backgrounds. This can also inform policies addressing the broader challenge of staff shortages in the ECEC sector.

Targeted staffing

ECEC authorities often provide targeted funding to support equity and inclusion efforts in ECEC settings (see Chapter 9). Targeted staffing is one of the main mechanisms to be mobilised for better equipping ECEC settings to serve populations of children with different characteristics. Targeted staffing means allocating human resources where they are needed most. ECEC policies need to consider the benefits and challenges of allocating staff with particular profiles (e.g. more experienced, with certain types of training, with diverse backgrounds) to specific settings, as well as the possibility of having specialised staff work across multiple settings.

Allocating support staff is a common form of targeted staffing. Distinctions between ECEC staff roles and categories vary across countries, but ECEC support staff can be broadly defined as staff whose main function is to assist the work of ECEC teachers (i.e. those with the most responsibility for a group of children). ECEC support staff mainly include assistants, who support the teacher in a group of children, and specialised staff, who may either support education and care for individual children or offer specialised activities for all children (e.g. music or sports) (OECD, 2022[72]). The presence of an additional professional in the classroom can, for instance, facilitate that children receive more individual help and attention during activities, from either the support staff member or the teacher, which in turn means that their needs are more likely to be met. The effective use of support staff may also facilitate a more flexible classroom or setting environment that can contribute to increased engagement and inclusion of children with specific needs in group activities, for example by enabling child groupings in ways that respond to different needs and strengths (OECD, 2023[2]).

The qualifications and experience of individual ECEC staff and setting leaders are important, given that teaching and caring for young children requires specialised knowledge, skills and abilities, especially when children have specific needs related to their backgrounds. Analyses of TALIS Starting Strong 2018 found little evidence of differences in the percentages of staff with high educational qualifications (i.e. a bachelor's degree or higher) or with more than 5 years of experience between ECEC centres with high and low shares of children from diverse backgrounds. At the same time, in several countries, the percentage of specialised staff was larger in centres with more children with special education needs, children from socio-economically disadvantaged backgrounds, and multilingual children, which is consistent with their expected role in supporting these children (González-Sancho et al., 2023[7]). However, this was not observed in all participating countries or regarding all dimensions of diversity, which suggests ample room for developing targeted staffing policies.

Strategic staff allocations can also serve to create multi-professional teams within ECEC settings. Multi-professional teams are attracting growing attention by researchers, given the potential of complementary specialisations and profiles to better accommodate the complex range of supports needed by children and families in increasingly diverse societies (Oberhuemer et al., 2023[73]). Multi-professional work in ECEC may involve collaboration between professionals from different sectors on a shared task or programme (see Chapter 10), or, at the setting ECEC level, differently qualified ECEC professionals working together with the same group of children. ECEC settings can build on the various strengths present in multi-professional teams and allocate tasks according to individual staff competencies to offer more tailored supports to children and families with diverse needs (Box 7.3).

Box 7.3. Multi-professional teams to support inclusion in ECEC

Multi-professional ECEC teamwork in Finland

In Finland, multi-professional teamwork is considered a key component of contemporary ECEC professionalism (Ministry of Education and Culture, 2021[74]). Finnish ECEC policy states the right of children to receive support from regular ECEC staff teams as well as from early childhood special education teachers (ECSETs), who are experts in individualised child supports with particular qualification requirements (e.g. a master's degree in special education) beyond teacher training. While ECSETs can act as special education teachers as part of a team, often ECSETs also participate in planning, implementation and assessment of support in a consulting role for multiple teams, which offers them a privileged perspective into the factors promoting teamwork's success, which they can then bring from one team to another (Ranta et al., 2023[75]); (Karila and Kupila, 2023[76]).

Targeted staffing as part of targeted supports in the Access and Inclusion Model (AIM) in Ireland

Some of the targeted supports available under AIM involve staffing to cater to a wide range of children's abilities and needs (Government of Ireland, n.d.[67]) (see also Box 7.2). The first of these is expert advice through access to early years specialists who can coach and mentor other staff, support parents and ECEC providers when applying for AIM targeted supports, and support children's transitions to primary school. At another level, therapeutic supports such as behaviour support plans or professional advice can be provided though collaboration with health services and local networks of disability services for children who have complex needs. Lastly, additional assistance in preschool rooms can be provided by means of funding for extra staff to reduce the child-to-adult ratio or as a shared resource with other children.

Multi-disciplinary teams to support educational inclusion in Portugal

In Portugal, in each school cluster, there is a multi-disciplinary team to support inclusive education (*Equipa Multidisciplinar de Apoio à Educação Inclusiva* – Decree-Law 54/2018). This team includes permanent and variable members. The permanent members include a teacher who supports the school director, a special education teacher, three members of the pedagogical council and the school psychologist. The variable members are chosen according to each learner's needs. The learners' parents/guardians and the learners themselves are also part of the team (OECD, 2022[77]).

The multi-disciplinary teams can intervene at all levels of education, from preschool education to upper secondary school. Among the responsibilities are to raise awareness of the educational community towards inclusive education; to suggest the learning support measures to be mobilised; to follow up and monitor the implementation of the learning support measures and to provide advice to teachers about the implementation of inclusive pedagogical practices (see Annex A, Workshop 7).

A more diverse workforce

ECEC systems need to consider the benefits of attracting and retaining individuals with more diverse backgrounds to work in the ECEC sector. Staff diversity can be important in terms of awareness and identification of the needs and strengths of children from diverse groups, as well as to expose all children, including those from majority groups, to other cultures and individual backgrounds. At various levels of education, teachers in many OECD countries tend largely to come from the dominant cultural groups, while increasingly teaching to learners from non-dominant cultures and minorities. This is a challenge for inclusive education as individuals from non-minority backgrounds may have only partial and biased understandings of the experiences lived by individuals from non-dominant cultures (OECD, 2023[2]). In contexts where social and cultural diversity grow faster in children's populations than among ECEC professionals, an increasing demographic imbalance within ECEC settings may thus exacerbate cultural misunderstandings and miscommunication between staff and children and families.

Research has explored the consequences of having a more diverse workforce in early levels of education, often under the perspective of staff-child demographic match (i.e. matching based on shared backgrounds). In the United States, studies have found positive effects of teacher-child demographic congruence on children's engagement, motivation, social skills and attendance (but not reading or math competencies) in elementary schools (Rasheed et al., 2019[78]), as well as on parental engagement and child absence (Markowitz, Bassok and Grissom, 2020[79]), and a range of other outcomes (Little, Ansari and Curenton, 2023[80]) in ECEC centres. Evidence further suggests that classroom composition matters too, as the effects of equitable and culturally responsive pedagogies by staff can be stronger in classrooms with greater racial or ethnic diversity of children (Curenton et al., 2022[81]). Researchers have also hypothesised that the lack of significant relationship between teacher educational attainments and process quality in ECEC classrooms that served primarily Latino, Asian, and Indigenous students may be related to the replacement of teachers from the communities being served by more educated teachers who may not understand cultural practices, as calls for heightened qualification requirements have intensified (Manning et al., 2019[82]). This suggests that ECEC systems seeking to attract more highly qualified staff should also consider potential implications for the demographic composition of its workforce.

Particularly in countries where multilingualism is prevalent, a policy of growing priority is to attract and retain multilingual staff who are able to communicate with children and families from cultural and linguistic minority backgrounds and who are more receptive to supporting the maintenance of home languages. This is the case of Luxembourg, which seeks to promote plurilingual staff teams and multilingual practices (Kirsch and Aleksić, 2021[83]). At a subnational scale, examples of initiatives of recruiting ECEC staff with diverse linguistic competences include the German Federal State of Mecklenburg-Vorpommern, and the Belgian city of Brussels (Bergeron-Morin, Peleman and Hulpia, 2023[45]). Also in Germany, recent policy recommendations at the ministerial level emphasise the recruitment of ECEC staff from the under-represented migrant population (BMFSFJ, (2021[84]).

Education systems across the OECD have implemented a variety of workforce recruitment and allocation initiatives of relevance for both targeted staffing and attracting and retaining staff with diverse backgrounds. These include mandatory staff rotation across settings; incentives to attract staff to remote and disadvantaged settings, such as direct financial incentives or seniority premiums towards gaining promotions; and supports for staff working in high-need settings, such as smaller class sizes or reduced instructional time, which may be combined with other incentives. Another initiative is alternative teacher certification programmes, which typically provide non-teaching graduates with the opportunity to earn accredited qualifications while earning an income. Other measures include outreach programmes to candidates from diverse or minority backgrounds, and targeted mentoring programmes (OECD, 2023[2]). However, the implementation of some of these measures has to also consider potential negative consequences of high levels of staff turnover on continuity of attachment and stability of relationships between staff and children. Relatedly, working conditions remain of critical importance for maintaining a

well-trained and more diverse ECEC workforce, and for creating opportunities for targeted staffing policies. These conditions include adequate salaries, contract stability, opportunities for career progression and reasonable workloads (OECD, 2021[85]).

Setting-level monitoring and assessment practices

Within ECEC settings, monitoring and assessment practices can support inclusion in multiple ways. On the one hand, these practices help experts and staff alike to better understand and identify variability in children's needs and strengths, and thereby inform eligibility for targeted supports and facilitate transitions. On the other, they measure the quality of inclusive practices, both generally and particularly when provided to vulnerable children. In both cases, ECEC staff need to be supported to use the resulting information to adapt their interactions with children.

Labelling and potential biases

The labelling of young children through monitoring and assessment requires careful consideration. Labelling children with a particular need, ethnicity or other type of background can have both positive and negative impacts (OECD, 2023[2]). Classifications can be beneficial by explaining the limitations of regular practice and justifying adaptations for some children. Classifications can also bring consistency to research and communication and be useful in the monitoring and placement of children in special programmes or settings. Further, the absence of labels may silence the experiences of children with diverse backgrounds and obscure their needs to some stakeholders, even when individual settings and staff have a good understanding of those needs. Conversely, labelling may result in educators having lower expectations about children belonging to diverse groups due to stereotypes regarding their abilities. Further, labelling may have limited or no value for educational practice without further analysis of individual children's needs (OECD, 2023[2]).

Concerns also exist around recurring biases in the identification of SEN. Evidence of age differentials in early special education placements in the United States shows that children eligible to attend kindergarten at the youngest possible age are about 40% more likely of such placements than peers eligible at the oldest possible age. This effect appears largest in settings with wide variation in age, and persistent into later stages of schooling (Shapiro, 2023[86]). Age differentials have been interpreted as reflecting an overdiagnosis of attention-deficit disorders for the youngest children. Research has consistently documented an over-representation of boys in early identification of SEN. For example, gender differences are visible in the identification of 13 disability categories among children attending state-funded nurseries in England (United Kingdom), with boys accounting for more than two-thirds of children identified with autism spectrum disorder, or with speech, language and communication disabilities in 2022/23 (Daniel and Wang, 2023[87]). Gender differences have been linked to the fact that girls mature at a faster rate and achieve cognitive milestones at a younger age, although the extent to which these differences are due to real variation in needs or to bias remains open to discussion. Similarly, the identification rate of language development delays has been shown to vary between monolingual and multilingual children. Recent evidence on 2-3-year-olds in Sweden suggests that assessing bilingual children directly in both their mother tongue and their second language, rather than on one of the languages only, is the best model to achieve adequate accuracy of language difficulties (Nayeb et al., 2020[88]).

Within a broader paradigm change from special education for children with disabilities to inclusive education for all children, many countries are abandoning the view that clinical labels or a formal special education needs diagnosis are required for the provision of specific support in educational settings. Examples include Portugal, where legislative changes in 2018 removed categorisation systems of students in specific groups and shifted the emphasis to information on categories of support measures (universal, selective and additional) (OECD, 2022[77]), or Ireland, where the AIM programme (Box 7.2 and Box 7.3)

provides a range of supports for children with a disability to access and engage in ECEC focusing on the individual child's needs and without requiring a formal diagnosis of disability (see Annex A, Workshop 7).

Monitoring the inclusiveness of classroom practices

An important step in supporting the implementation of a high-quality and inclusive ECEC curriculum is to generate robust evidence and actionable information about the inclusiveness of classroom practices with young children. This involves monitoring the quality of the targeted supports that ECEC staff provide for children from diverse backgrounds, in addition to measuring process quality more generally in all settings. This can be carried out as part of broader evaluations of process quality by inspectorates or other quality assurance bodies, or as part of research-oriented projects, with a more deliberate focus on specific groups of children as well as on the quality of targeted supports.

In response to the limitations of established quality assessment instruments in the field (Phillips, Johnson and Iruka, 2022[89]); (NASEM, 2024[14]), a number of observational and self-reflection tools have been developed in recent years with a focus on capturing aspects of early childhood classrooms that speak to responsiveness to the needs and strengths of children from diverse backgrounds (Box 7.4). Used in combination with other more general quality assessment measures, these tools hold promise for enabling a richer picture of process quality in contemporary, increasingly diverse ECEC settings. However, given the wide variety of configurations of social and cultural diversity across countries, further testing and adaptation of these tools to a wider range of geographical and cultural contexts is still needed.

Box 7.4. Tools to monitor the inclusiveness of ECEC setting-level practices

This Box discusses tools developed by independent researchers whose use is not official policy in the countries or jurisdictions where they have been put into practice.

The Inclusive Classroom Profile

The Inclusive Classroom Profile (ICP) (Soukakou, 2012[90]) assesses aspects of quality of importance for children with disabilities, in the context of inclusive settings (i.e. attended also by typically developing peers), where the majority of these children participate in ECEC in most countries and where specialised support strategies for them are a regular feature. The ICP includes 12 items which correspond to specific practices on dimensions such as adaptations of space, materials and equipment; support for communication; adaptation of group activities; or family-professional partnerships. Originally developed in the United Kingdom, the ICP has also been validated in the United States and Sweden, including to facilitate professional training (Soukakou et al., 2014[91]); (Lundqvist and Larsdotter Bodin, 2021[92]).

The Classroom Assessment of Supports for Emergent Bilingual Acquisition

The Classroom Assessment of Supports for Emergent Bilingual Acquisition (CASEBA) (Freedson, Figueras and Frede, 2009[93]) is a tool developed by researchers in the United States and specifically designed for measuring the quality of linguistically and culturally sensitive practices with multilingual learners in preschool classrooms, with a dual focus on home language maintenance and foreign (English) language acquisition. The tool measures both structural and process quality elements and captures specific elements of practice to understand the supports that teachers uniquely provide to multilingual children, including by establishing responsive environments that embrace both language and culture. Research using CASEBA indicates that classroom quality scores are associated with language configurations of staff teams, a finding that can inform policies regarding the staffing of

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bilingual teachers and assistants as well as pre-service training and CPD on supporting multilingual children (Figueras-Daniel and Li, 2021[94]).

The Assessing Classroom Sociocultural Equity Scale

With a pedagogical grounding on culturally relevant and responsive education, as well as anti-bias frameworks, the Assessing Classroom Sociocultural Equity Scale (ACSES) (Curenton et al., 2019[95]) is a measurement tool of equitable socio-cultural interactions in early childhood classrooms developed by researchers in the United States. ACSES is organized into two instructional domains (challenging inequity and bridging socio-cultural connections) and five sub-dimensions, and attends to bi-directional interactions between children and teachers and among children. The tool measures, for instance, the frequency with which these interactions challenge the status quo knowledge, apply disciplinary practices equitably, or foster peer collaboration between children belonging to racial/ethnic minority and majority groups. ACSES was also designed as a tool that can be used in professional training towards fostering more equitable learning experiences in ECEC.

The Inclusive Early Childhood Education Environment Self-Reflection Tool of the European Agency

This self-reflection tool stemmed from the Inclusive Early Childhood Education (IECE) project (2015-17) of the European Agency for Special Needs and Inclusive Education. It enables practitioners to reflect on their service's quality in terms of the inclusiveness of the physical, social and learning environments it offers to children and families. Its development involved a validation process with experts, as well as cognitive interviews and focus groups with preschool staff and centre leaders, parents and academics in teacher education institutions. The tool considers eight different dimensions of inclusion within ECEC settings: 1) welcoming atmosphere; 2) social environment; 3) child-centred approach; 4) child-friendly physical environment; 5) materials; 6) opportunities for communication; 7) teaching and learning environment; and 8) family-friendly environment. It is available in 26 languages spoken across Europe (European Agency for Special Needs and Inclusive Education, 2017[96]).

Building on staff's proximity with children

ECEC settings represent privileged environments wherein a range of early childhood professionals with varying areas of expertise can offer services for children and families in a co-ordinated and consistent manner (see Chapter 10). Adequately identifying children's needs and strengths to support them in their development, particularly those in need of enhanced levels of support, is an area where ECEC staff can play a critical role, provided that they are equipped with the necessary training and resources.

There can be benefits to a more systematic monitoring of children's needs at the setting level, including by supporting non-specialised staff in taking greater responsibilities in processes such as the identification of children with developmental difficulties. Building on staff's proximity with children and their recurrent and intentional interactions can improve monitoring with a focus on inclusion. However, monitoring tasks should facilitate work with children and families rather than overburden staff, especially considering the staff shortages and high levels of stress reported in many countries (OECD, 2020[54]). Further, the intervention of specialised staff with specific training will continue to be required in instances such as the identification and care of children with more complex types of disabilities. Tiered models in which regular staff are supported to take on early warning and early responses, including through collaborative assessment and deliberation, and where specialised staff are brought in to provide additional and more targeted supports (again in collaboration with other staff) may hold promise in this respect.

Recent research developments in Australia and Korea provide examples of tools designed to be used by ECEC staff to monitor children's needs, relying on observable behaviours within settings and staff's regular

work with children (Box 7.5). Information gathered with these tools can help staff to improve overall process quality and targeted supports for children with additional needs.

Box 7.5. Monitoring and assessment tools for staff

This Box discusses tools developed by independent researchers whose use is not official policy in the countries or jurisdictions where they have been put into practice.

The Observe, Reflect, Improve Children's Learning (ORICL) tool in Australia

ORICL is a quality measurement digital tool for educators working with children from birth to 2 years-old, with a focus on individual experiences rather than overall experience of groups of children. ORICL was co-designed by a consortium of Australian research organisations and early years professionals and practitioners, with the goals to help educators to attend to the actions and communications of individual children and their interactions within ECEC settings; and to inform planning that is targeted to each child, as a unique individual learner and a participant in a group setting. ORICL stimulus items describe children's behaviour, interactions and interests across several domains (e.g. identity, belonging and culture; connectedness with others), aligned with Australia's Early Years Learning Framework (v2.0), albeit the tool is not currently part of official frameworks, pending a large-scale implementation study.

Pilot studies in centre- and home-based services showed the content and format of ORICL was reliable, valid, meaningful and useful for staff. It supported their observation and documentation of children's learning; enabled a more holistic understanding of the children in their care; and was helpful for difficult conversations with families regarding early intervention (Elwick et al., 2023[97]); (Williams et al., 2023[98]).

The Ages and Stages Questionnaire: Talking about Raising Aboriginal Kids (ASQ-TRAK) in Australia

The ASQ-TRAK is a validated screening tool for observing and monitoring the developmental progress of Australian Aboriginal and Torres Strait Islander children. In 2023, the ASQ-TRAK2 was developed and now includes all 21 age intervals between 2 months and 5 1/2 years. It is derived from the third edition of the Ages and Stages Questionnaires (ASQ-3) (Squires et al., 2009[99]), with questions adapted, in partnership with Aboriginal and Torres Strait community members and in close collaboration with the ASQ-3 authors, to create a more culturally appropriate version of the tool for Aboriginal children (Simpson et al., 2021[100]). The ASQ-TRAK tool is easy-to-use and family-centred. It is designed to be administered by interview, making caregivers co-observers in a process which highlights a child's strengths and enables early identification of developmental delays.

The Teacher Form of the Korean Screening Index for Early Development (K-SIED)

The K-SIED Teacher Form was developed by the Korean Institute of Child Care and Education as part of a project on children at risk for developmental disabilities. Among its goals are to support ECEC teachers in screening children aged 1 to 5 years in kindergartens and childcare centres, and to enhance early teachers' capacity to provide related support and guidance (Kang et al., 2022[101]).

Designed in collaboration with Korean developmental screening professionals, the Teacher Form of K-SIED is routine-based, optimised for on-site support, and aligned with the national curriculum. It consists of 376 items, divided into seven age groups, which measure development in multiple areas (e.g. cognition, language, motor, social-emotional development). Teachers can then use the structured information gathered with the form to prepare for parent-teacher conferences and set individualised support plans. A companion resource guide for teachers addresses child development as well as strategies for providing instructional and behavioural supports for children (Park et al., 2023[102]).

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Part IV Early childhood education and care policies with a lasting impact

8 Mechanisms behind long-lasting effects of early childhood education and care policies

This chapter discusses the mechanisms behind long-lasting effects of early childhood education and care (ECEC) policies on inequalities, and proposes a conceptual framework for understanding these effects. It reviews several research studies that have estimated these effects. The chapter then analyses the main features of ECEC programmes that can contribute to achieving long-lasting effects to mitigate inequalities.

Key messages

- For early childhood education and care policies (ECEC) to mitigate inequalities, two conditions need to be met: i) ECEC has positive effects on some areas of children's development with implications for their education and labour market outcomes, as well on their success in life more generally; and ii) positive effects are greater for vulnerable children than for others.

- Enrolment in high-quality ECEC has been shown to improve children's cognitive and social and emotional skills in the short- to long-term, while also leading to a range of positive education, labour market and social outcomes later in life, with these effects being stronger for more vulnerable children.

- While there is evidence that ECEC can mitigate inequalities, evidence is still limited, and positive effects are not found systematically, as they depend on the context and features of ECEC policies.

- In addition to the quality of ECEC, its quantity also matters for achieving long-term effects on inequalities. Early (below age 2) and intensive (more hours) enrolment in ECEC can have positive effects on children from low socio-economic backgrounds, especially for cognitive development, provided it is of high quality. The curriculum framework and preparation of the ECEC staff, as well as their working conditions need to be adapted to the starting age and intensity of programmes.

- Areas of development targeted by ECEC are central to the achievement of long-term effects. ECEC curricula that are designed to build broad or "unconstrained" cognitive skills (e.g. vocabulary rather than narrow school-readiness skills such as identifying letters) as well as social and emotional skills may produce longer lasting effects for vulnerable children.

- The continuity of pedagogical approaches and gradual exposure to more advanced content, as well as adaptation to children's needs through strong co-ordination within ECEC and between ECEC and primary education, is crucial to sustain the effects of ECEC. Throughout childhood education, vulnerable children should not be exposed to redundant or less ambitious content.

- Investment in ECEC brings dynamic complementarities throughout education pathways, as skills developed in the early years help with the acquisition of skills later on, making investment in higher education levels more cost effective.

- Engaging parents who influence their child's general success in life is an important direction to mitigate inequalities. Evidence on the effects of combined ECEC and household interventions is limited, but suggest finding a good balance between the need to keep parents engaged while not adding to their burden. Policies that build on ECEC to reduce parents' stress or offer low time-consuming practices that integrate well into parents' habits seem promising.

- The co-ordination of ECEC policies with other policies affecting children and families is a condition to permanently change children's trajectories. Evidence suggests focussing on combining policies to provide improved conditions for healthy and rich development while avoiding substitution effects between programmes.

Introduction

With rising income inequalities and poverty within many OECD countries (see Chapter 3), rising immigration and refugee crisis (see Chapter 7), increasing attention is put on early childhood education and care (ECEC) policies as a way to mitigate long-term inequalities and support inclusion, together with other policies later in life. High-quality ECEC available to all children (see Chapters 5, 6 and 7) can provide opportunities for learning and development through rich interactions with ECEC staff and peers. By investing in these policies, countries aim to level the playing field from the early years, get lasting effects throughout childhood and adulthood, and thereby mitigate inequalities in the short-, medium- and long-term. If ECEC policies have long-lasting effects on inequalities, this provides a strong argument for investing in ECEC, as the benefits apply to a long period of time.

The chapter discusses the mechanisms behind long-lasting effects of ECEC policies on inequalities. More specifically, this chapter addresses the following questions:

- To what extent is there some evidence of long-lasting positive effects of ECEC policies on inequalities?
- What are the factors that play a role in the scale of the effects of investment in ECEC, avoiding fading out of effects and leading to long-term mitigation of inequalities? What are the policy implications?

For ECEC to mitigate inequalities in the long run, these policies need to have influence on individual outcomes later in life such as performance in higher levels of education, skills development over life, or various other adulthood outcomes (e.g. health and labour market performance), but also, stronger effects for vulnerable children than for those from advantaged socio-economic and cultural backgrounds. The chapter begins by presenting a conceptual framework that explains what is meant under the concept of reaching long-lasting effects on inequalities. It then discusses some of the main research studies that have estimated the long-lasting effects of ECEC policies on inequalities. Finally, it discusses the main features that explain these effects, and draws broad policy implications for the design of ECEC policies that are discussed more in-depth in other chapters of this report.

This chapter mostly discusses inequalities relating to children's socio-economic background, which are shaped by a broad range of policies. It focusses on ECEC and its connections to other closely related education and social institutions and policies related to families and children, leaving aside broader economic and social policies that play a key role on inequalities, such as taxation, labour market and housing policies.

A framework for understanding the long-lasting effects of ECEC policies on inequalities

Discussions on the effects and returns of ECEC policies have driven the economic approach to ECEC and education more generally and, in many countries, have supported public investment in ECEC. This section proposes a framework to understand the long-lasting effects of ECEC policies on inequalities and explains the methodological challenges that underlie estimates of these effects.

Defining long-lasting effects of ECEC policies on inequalities

From a theoretical perspective, there are two necessary conditions for ECEC to mitigate inequalities in the medium- to long-term:

- **Condition 1**: ECEC has positive long-lasting effects on some areas of children's development with implications for their education and labour market outcomes, as well as on their success in life more generally.

- **Condition 2**: Positive effects are greater for vulnerable children than for others.

Studies have yielded different estimates of the short- to long-term effects of ECEC on inequalities that are discussed later in this chapter. To understand them as well as what is meant by "lasting effects on inequalities", Figure 8.1 proposes a theoretical framework with various hypothetical scenarios of the effects of ECEC on inequalities. In a first hypothetical scenario (A) in Figure 8.1, ECEC increases outcomes for children from both low and high socio-economic backgrounds with the same magnitude. In this scenario, ECEC has no effect on the gap in performance between children from low and high socio-economic backgrounds, which remains the same throughout life. In addition, while the effects for both groups of children remain positive throughout life, they decrease over time. This scenario could, for instance, correspond to universal ECEC leading to similar positive effects for all children. In that case, Condition 1 is met but Condition 2 is not met and ECEC therefore does not mitigate inequalities. An unchanged gap in inequalities is considered as the counterfactual in the other scenarios.

In Scenario B of Figure 8.1, ECEC has positive effects on children's outcomes from both low and high socio-economic backgrounds, but the effect is stronger compared to the counterfactual for children from low socio-economic background in the short, medium and long terms. Effects are diminishing with time but remain. In this scenario, ECEC mitigates inequalities in the short, medium and long terms. In Scenario C, effects are also positive for children from both backgrounds, stronger in the short and medium term for children from low socio-economic background, but diminishes more for those children, which leads to a situation where the long-term gap is equal to the initial gap. In this scenario, ECEC mitigates inequalities in the short and medium terms, but not in the long-term. Finally, in Scenario D, ECEC effects are positive for children from both backgrounds, but they are stronger for children from low socio-economic background only in the medium and long terms. In this scenario, ECEC does not mitigate inequalities in the short-term, but does so in the medium and long terms.

Many other types of configurations of effects are possible, but Figure 8.1 highlights important considerations on how to measure and interpret effects of ECEC policies.

- The timing of the effects is an important policy consideration. Like for most policies, effects are likely to decline over time, although not necessarily in a monotonous way. Ideally, effects should therefore be measured at different points in time. For instance, in the latter three scenarios (B to D) of Figure 8.1, the outcome gap is decreased, but not at the same time. This is an important consideration, as some studies have found no effect of an ECEC intervention in primary school outcomes between children from various backgrounds followed by effects on academic attainment and salary in adulthood that are higher for children from low socio-economic backgrounds (United States Boston programme, discussed later on this chapter) as shown in Scenario D.

- The economic approach to decisions such as investing in different types of ECEC policies or in ECEC policies versus education policies later in life, is based on looking at the present discounted value of effects on the full life cycle, i.e. the full strike-through areas in Scenarios B to D, as indicated in Figure 8.1. Decisions should not be taken by comparing the effect at a given point in time. In Scenario C, the long-term gap equals the initial gap, but the policy might have brought benefits by reducing inequalities before age 30. Overall, this framework highlights that policies on young children can have longer-term effects than those on adults (Heckman, 2006[1]). Their returns are reaped over a longer period of time than interventions later in life, which provides a strong argument for investing in ECEC policies.

Figure 8.1. Possible scenarios of the long-term effects of early childhood education and care on inequalities

(A) Long-term positive effects but no mitigation of inequalities
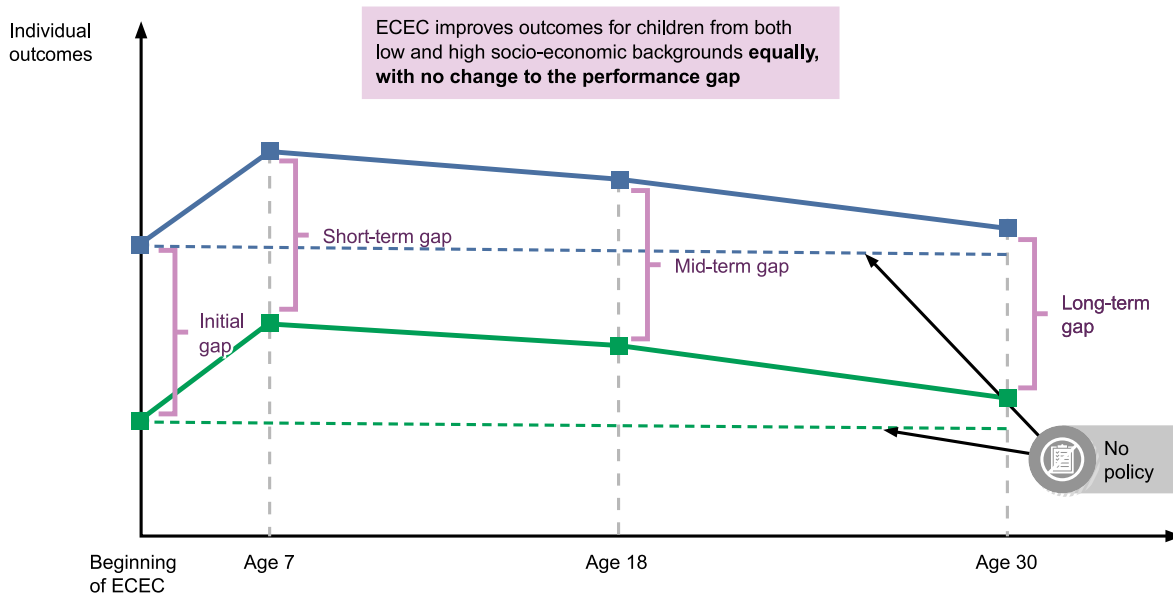
(B) Long-term positive effects and mitigation of inequalities from short- to long-term
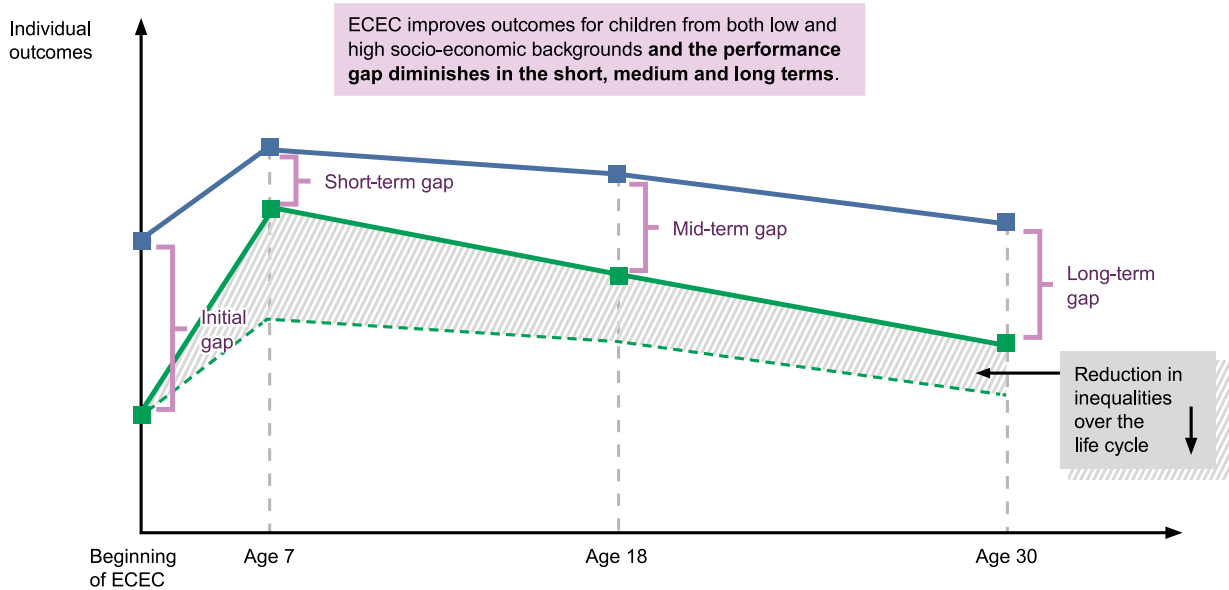
Individual outcomes for children from (relative to no policy):

─■─ low socio-economic background   ─ ─ ─ Counterfactual: no effect on the initial gap
─■─ high socio-economic background

(C) Long-term positive effects and mitigation of short- and mid-term inequalities only
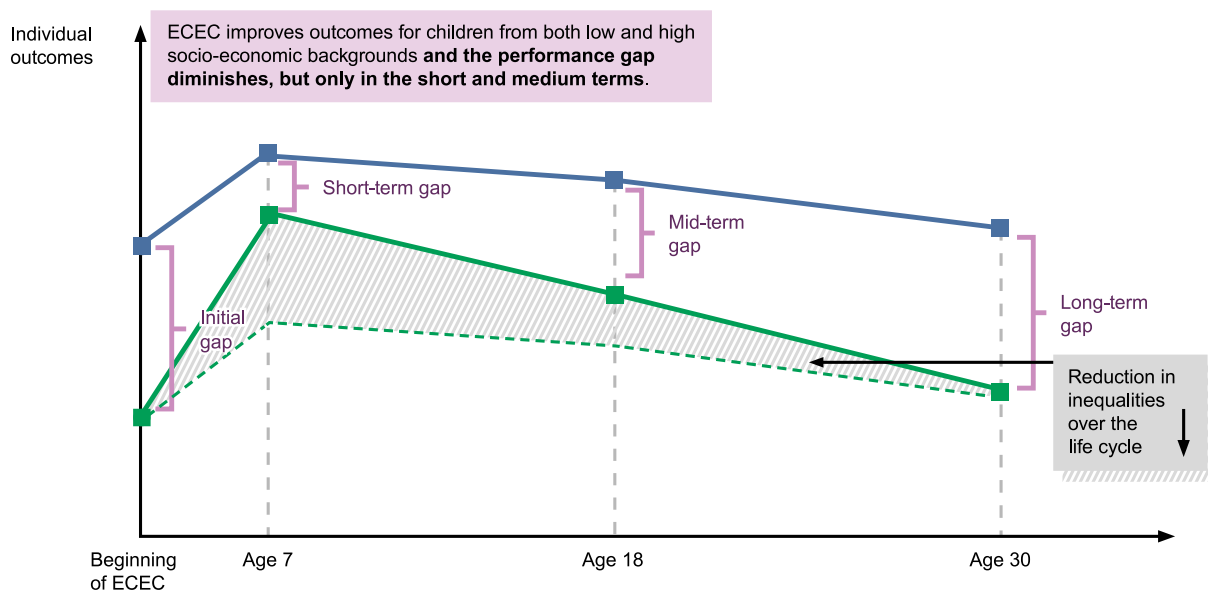
(D) Long-term positive effect and mitigation of mid- and long-term inequalities only
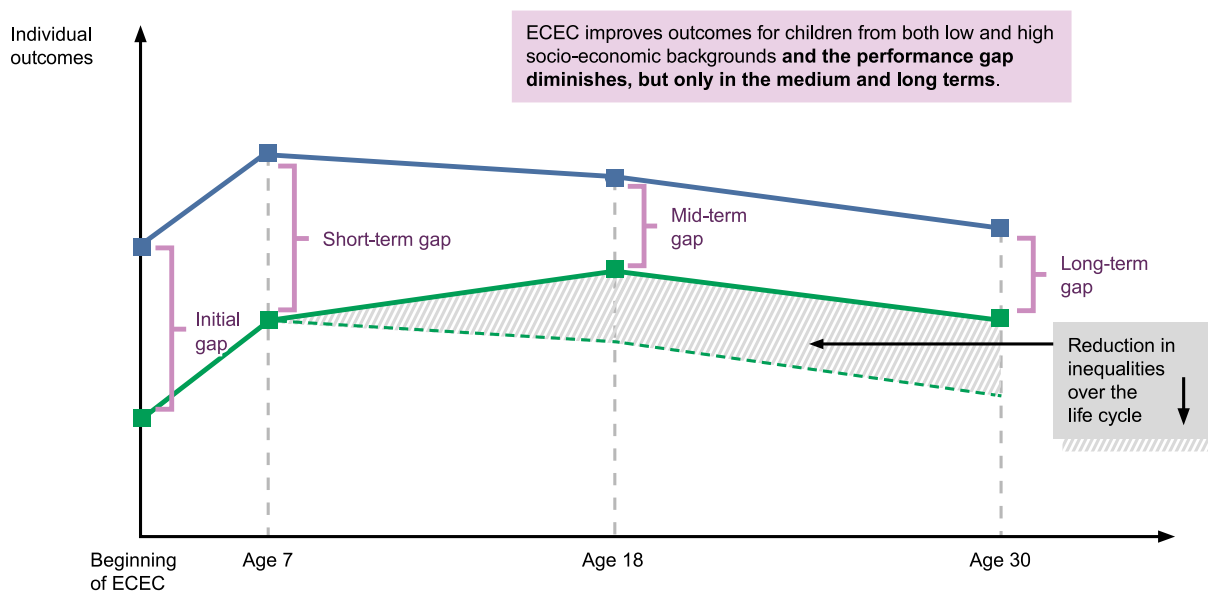
Individual outcomes for children from (relative to no policy):

— low socio-economic background   - - - Counterfactual: no effect on the initial gap
— high socio-economic background

The role of counterfactuals

Findings on the size of the effect of ECEC depend on the counterfactual, i.e. the type of education and care the children would be exposed to without the policy. As children from low socio-economic backgrounds are more at risk of experiencing lower quality of home environment than socio-economically advantaged children (see Chapter 3), the effects of ECEC are expected to be stronger, on average, for children from low socio-economic backgrounds. In addition, the counterfactual mode of education and care for children in low-income families includes informal arrangements such as relatives, friends and neighbours, while high-income parents are more likely to find alternative modes of care or informal care of higher quality (see Chapter 5). By design, ECEC programmes targeted to vulnerable children that have positive effects are more likely than universal ones to mitigate inequalities as other children do not benefit from them, and therefore have their counterfactual unchanged. However, these programmes might not meet Condition 1 if, for instance, they lead to stigmatisation effects that penalise children's education pathways or if more advantaged children enrol in programmes of equal or better quality.

With rising education levels among the population and the development of health and welfare services in many OECD countries, the quality of the home environment, and therefore the counterfactual, has improved in families with relatively low socio-economic status (see Annex A, Workshop 5). This means that ECEC policies have less potential to lead to positive impacts on these children (Bustamante et al., 2021[2]). As highlighted in Chapter 3, families with high socio-economic status also develop a range of strategies to support their children in multiple development areas and are better equipped to take advantage of universal programmes, including ECEC programmes that have developed in many OECD countries (see Chapter 5). Overall, the improvement of the counterfactual for low-income families, the development of universal ECEC and the capacities of socio-economically advantaged families to make the most of these programmes tend to limit the effect that ECEC can have on long-term inequalities.

Measurement difficulties due to the multiplicity of possible effects

Lack or limits of evidence on the long-term effects of ECEC come from the fact that many ECEC policies are not evaluated, and that identification of these effects is difficult. Another reason for difficulty in measuring effects relates to the large variety of possible effects on children and later outcomes. Scenarios presented in Figure 8.1 show effects of ECEC without specifying the types of student or adult outcomes. Studies generally look at early academic cognitive skills in primary schools and possibly broader cognitive outcomes for short-term effects and a variety of medium- to long-term effects such as high school graduation rates and a range of adult outcomes (labour market and others such as incarceration, age of marriage) (Bustamante et al., 2021[2]). Education outcomes are generally measured through cognitive and academic test scores. A smaller number of studies has focussed on social and emotional skills or adopted assessment mechanisms specific to ECEC. Overall, many outcomes are generally not captured. Another reason comes from the difficulty to identify causal effects, especially for universal ECEC as all children are enrolled.

Beyond the direct effect that ECEC policies can have on vulnerable children's cognitive and social and emotional development, ECEC policies can mitigate inequalities through several other important channels that can be difficult to capture:

*   Some interventions later in life (such as in primary schools) achieve good returns because they rely on the strong bases built by ECEC policies (see later in this chapter the discussion on "dynamic complementarities", Heckman, 2006[1]). This mechanism could, for instance, explain Scenario D in Figure 8.1.
*   In the same vein, an important aspect of ECEC policies is that they can act against potentially irreversible effects of unfavourable environments on children's development (see Chapter 3). The very first years therefore offer an opportunity window for effective interventions that in some cases

cannot be reproduced later in life. The possibility for ECEC to reverse detrimental developmental trajectories produced by stress and other factors means that children might need lower levels of support in later years if they have benefited from quality ECEC. This effect is generally not taken into account in studies.

- ECEC supports parents' employment and thereby increases families' income, which leads to a variety of economic benefits (e.g. stronger consumption, higher tax revenues and lower social benefit expenditure) as well as indirect benefits to children by raising the family income and lowering the risk of poverty (see Chapter 3). There is evidence that parents' earnings gains are substantial and persist for several years after the end of ECEC (Humphries et al., 2024[3]). Improved conditions for children are therefore also expected to last.

Policy decisions are often made by looking at which policies are most cost effective. For instance, as discussed as part of the critique of the Heckman curve, there are also many other policies later in life that can mitigate inequalities in the long-term, possibly with stronger effects than ECEC ones. For instance, a policy that starts at age 18 (e.g. training programmes for low-educated youth) might have higher effect at age 30 than ECEC policies but its effect before 18 is null. Determining which policy is most cost-effective entails having information on the full range of effects, but also of costs of these policies, over time, which depends on the features of these policies and is therefore hard to establish internationally.

Finally, while long-term effects of ECEC on inequalities are important, countries might value short-term effects in themselves. In Figure 8.1, this means valuing the strike-through area in the early years, even if this area declines with time. Countries value short-term and long-term effects differently depending on their contexts and priorities. For instance, Nordic countries generally spend more on ECEC policies than other OECD countries do to support children's well-being, independently from effects on school readiness and other impacts of ECEC policies, although they are of course paying attention to these effects. Countries with fertility rate challenges might place more value than others on children's well-being, while countries with dynamic demography might value labour market transitions more and therefore, longer-term effects.

Evidence of the long-lasting effects of ECEC policies on inequalities

A large number of studies have assessed the effect of ECEC participation on children's outcomes, and some of them have focussed on the long-term effects. However, the effect on inequalities or on the differentiated effect between children from different socio-economic backgrounds has not been systematic. This section reviews some of these studies without aiming to be exhaustive, and discusses their long-term effects on inequalities with references to the two conditions (Conditions 1 and 2) mentioned in the beginning of this chapter and to the framework presented in Figure 8.1.

First evidence coming from targeted interventions in the United States

Targeted programmes are common in the United States, and a large strand of the literature relates to these programmes. These include, for instance, the Perry Preschool and the Chicago Parent-Child Partnerships projects in the 1960s, as well as the Carolina Abecedarian programme in the1970s that targeted socio-economically disadvantaged children. Studies have found positive effects of these programmes until adulthood such as on educational attainment, health and earnings (see Annex A, Workshop 5). For instance, a meta-analysis of 22 high-quality experiments of several United States ECEC programmes found that participation leads to reductions in special education placement and grade retention and increases in high school graduation rates (McCoy et al., 2017[4]). These programmes therefore meet Condition 1 (ECEC has positive effects on students' outcomes later in life) as well as Condition 2 (effects are larger for vulnerable children than for other children) as they targeted children from low socio-economic backgrounds.

While promising, these effects cannot be simply generalised to recent ECEC policies in OECD countries. These interventions specifically served low-income children and were of high intensity and long duration. For instance, the Abecedarian intervention was offered for 12 months per year across the first 5 years of children's lives. The costs of these interventions were very high, estimated at around EUR 41 000 per child in 2023 for the Perry Preschool programme and EUR 112 000 for the Abecedarian intervention, while OECD countries spent on average EUR 11 145 per child in 2020 with the highest spending in Luxembourg at EUR 22 702 (Whitaker et al., 2023[5]).

More recent studies on pre-primary programmes giving priority to larger groups of vulnerable children in the United States have led to more mixed results than first targeted interventions (see Annex A, Workshop 5) (Burchinal et al., 2024[6]). A range of positive effects of the Boston programme, assessed through a lottery-based study, have been found in the long-term, such as higher school graduation, better standardised test scores taken for college admission and college enrolment, as well as reductions in disciplinary problems in high school. The programme has therefore met Condition 1 and interestingly, no effect on academic skills were found before high school, suggesting that some effects take time to emerge, as presented in Scenario D of Figure 8.1. A limited number of outcomes were more favourable for children from low socio-economic backgrounds than for those from more advantaged socio-economic backgrounds, meaning that Condition 2 was weakly met. In contrast, a study of the Tennessee Voluntary Pre-K program (TNVPK), a large, state-funded Pre-K programme that annually enrols about one-quarter of the state's 4-year-olds found positive effects in literacy, language and mathematics at the end of the programme, but that these gains quickly disappeared (Condition 1 unmet). Some impacts had become negative at the third year of primary education and even more in lower secondary education. The programme was considered to meet some structural features of quality such as ratios of students to teacher, class size and teachers' education, although its quality and intensity was lower than programmes from the 1960s-70s.

Evidence on the effects of universal ECEC

Research mostly on Europe's ECEC systems brings evidence of the effect of universal ECEC, in contrast to studies from the United States on targeted programmes. For instance, a meta-analysis of 17 longitudinal studies in nine European countries investigates whether process quality in regular ECEC gains is associated with lasting gains on language and literacy as well as mathematics (Ulferts, Wolf and Anders, 2019[7]). It found small but positive lasting effects (Condition 1 met), but since the effect held for children from various family backgrounds, the study is not conclusive on an inequality effect (no evidence for Condition 2). Another meta-analysis looked at the effects of universal ECEC on children's outcomes focussing on studies that identify causal effects (van Huizen and Plantenga, 2018[8]). Countries covered are Australia, Canada, France, Germany, Norway, Spain, the United Kingdom and the United States. The results show that ECEC quality matters critically and do not indicate that effects are fading out in the long run. Furthermore, the gains of ECEC are concentrated within children from lower socio-economic status families, also suggesting that high-quality universal ECEC can mitigate inequalities (both Conditions met, as in Scenario B of Figure 8.1).

Nordic countries have universal systems that start at an early age and therefore provide good cases to examine the effect of universal ECEC on inequalities. Some studies have found that early gaps in language skills, existing between immigrant and non-immigrant children in Denmark at age 2 or 3 and at age 2 between low- and high-SES and immigrant and non-immigrant children in Norway remain rather stable during the pre-primary period, and do not reduce before the introduction into primary school (Leseman and Slot, 2020[9]). However, a study of the expansion of subsidised childcare in Norway in the 1970s found positive adult outcomes (e.g. education, labour market attachment) in individuals' early 30s (Havnes and Mogstad, 2011[10]). Most of the effect on education concerned children with low-educated mothers, whereas most of the effect on labour market attachment and earnings related to girls. The study concludes that subsidised ECEC increases intergenerational mobility and closes the gender-wage gap (both conditions are met). The reason could be that Nordic systems include limited explicit exposure to language

education and therefore lead to effects in line with Scenario D, with small (or no) short-term effects but effects in the longer term. A study comparing intergenerational inequalities in Denmark and the United States and looking at various outcomes found that family influence on many children outcomes is comparable in both countries, despite the generosity of the Danish welfare system (Heckman and Landersø, 2022[11]). The reason is that family influence operates through various channels and might offset the mitigating effect of ECEC on inequalities. Condition 2 is therefore not met because of some compensatory effect outside the strict ECEC sphere (see later section on engaging parents and families).

In the United States, a longitudinal study of children in community-based ECEC programmes found reduced disparities between low- and higher-income children's educational attainment and wages at age 26, and that disparities in college graduation were also reduced (see Annex A, Workshop 5) (both conditions met) (Bustamante et al., 2021[2]). A study in Israel found long-lasting effects of universal ECEC that go beyond educational attainment (DeMalach and Schlosser, 2024[12]). Boys were less likely to have a juvenile criminal record and young women tended to marry later. Effects are stronger for children with parents with relatively low levels of education. The study shows that disadvantaged communities benefit from public pre-primary education even in the absence of a well-targeted education programme. Universal ECEC also has effects on advantaged children but they are generally lower, so inequalities are mitigated (both conditions met) (DeMalach and Schlosser, 2024[12]). Furthermore, large representative cohort studies in the Netherlands and the United Kingdom found substantial reduction of the gaps in language skills, at least for migrant children, as a consequence of participation in ECEC (Leseman and Slot, 2020[9]).

Factors that contribute to long-lasting effects of ECEC policies

As research on the long-lasting effects of ECEC has developed and led to mixed results depending on the context and features of ECEC systems, there has been a growing interest in the factors that generate long-lasting effects. This literature has large potential to inform policies, but at the same time, evidence is still limited and there are several blind spots. The quality of studies varies and identifying causal effects, instead of simple correlations, is challenging and still relatively rare. This section discusses the status of evidence on features of ECEC policies that can contribute to mitigating inequalities in the long-term.

Combining the quantity and quality of ECEC

Both the quantity of participation in ECEC and its quality matter for achieving long-term effects (Dalli et al., 2011[13]). There are two main parameters for the quantity of ECEC: the starting age and the number of hours per week (the intensity). The quality of ECEC is a broad concept that includes several dimensions (see Chapter 6 and (OECD, 2021[14])). The quantity and quality of ECEC are closely related – long and intensive participation in ECEC might lead to positive long-term outcomes, especially for vulnerable children, provided that it is of high quality. This section discusses evidence on the role and relative importance of the quantity and quality of ECEC for reaching lasting effects on children and inequalities.

Starting age of ECEC

Evidence on how children develop and how inequality gaps build up from a very early age as well as the "skills beget skills" theory would argue for early enrolment in ECEC (see Chapter 3). Enrolment in ECEC could help change children's trajectories if done at an early stage, such as at age 2 and below. However, findings on the impact of early start in ECEC vary across countries and are closely related to the quality of ECEC. There is evidence that enrolment in ECEC at age 2 to 3 years is beneficial for children, while evidence is more mixed for younger children.

Concerns about ECEC enrolment at an early age (especially under the age of 1) mainly relate to children's social and emotional development and health (Melhuish et al., 2015[15]). This is particularly the case if

combined with many hours of ECEC attendance (see below), with the risk that this might be "too much too early" for children. Concerning cognitive and language development, ECEC attendance in children's first year can, but does not necessarily, have negative effects. High-quality ECEC between 1 and 3 years old tends to have relatively positive impact on language development, early numeracy and motor skills, although effects are somewhat mixed depending on countries (Carbuccia et al., 2020[16]). For instance, evidence from a large, nationally representative French birth cohort (the *Étude Longitudinale Française depuis l'Enfance* – ELFE) finds that attendance at age 1 has a positive impact on language skills, no impact on motor skills, and a negative impact on behaviour (Berger, Panico and Solaz, 2021[17]). Moreover, the positive impact on language skills is particularly concentrated among disadvantaged children. Overall, studies consistently find effects to be stronger for children from low-educated and low-income families, while the starting age was found to have no impact on the test scores of children from high-income families. These results suggest that early ECEC enrolment could be targeted to low-income families, but that the age of enrolment alone is not a major factor explaining the impact of ECEC.

Number of hours

Evidence on the effect of the number of hours (per week) of ECEC goes in the same direction as that of the starting age. Overall, there is mixed evidence of advantage for children attending full-day ECEC for the early ages while effects are more positive for older children, especially those from socio-economically disadvantaged backgrounds. Some studies have found that intensive participation (around 30 hours and more) in ECEC from an early age has positive impacts on cognitive development and language development especially for vulnerable children, provided it is of high quality (Bigras and Lemay, 2012[18]). Evidence is less conclusive for the impact on pro-social behaviour, especially for children below age 1 for high-intensity ECEC. There is evidence that long hours in ECEC for children under age 2 are linked to more risk-taking behaviours in adolescence (Dalli et al., 2011[13]). High-intensity ECEC is more positive for children from disadvantaged socio-economic backgrounds (Melhuish et al., 2015[15]). A meta-analysis of 250 estimates from 30 studies conducted between 2005 and 2017 indicates that more intensive programmes, if of high quality, produce more favourable outcomes and that the gains of ECEC are concentrated within children from lower socio-economic backgrounds (van Huizen and Plantenga, 2018[8]).

Overall quality of ECEC and its link to quantity

There is a consensus that ECEC needs to be of high quality to lead to positive lasting effects on children (OECD, 2021[14]). For instance, a meta-analysis of the effects of universal ECEC on children's outcomes found that ECEC quality matters critically (van Huizen and Plantenga, 2018[8]). Two indicators of quality were considered in the study, educational levels of ECEC staff and staff-to-child ratios. The evidence does not indicate that effects are fading out in the long run. The gains of ECEC are concentrated within children from lower socio-economic backgrounds, meaning that inequalities might be reduced. Similarly, while not focussing specifically on long-term effects, another literature review found that quality is a key factor that contributes to the positive effect of ECEC on children's development in a broad range of areas, with large evidence for academic skills as well as for social and emotional development, although these are less frequently covered (Carbuccia et al., 2020[16]) (see Annex A, Workshop 2). Reviewing various studies, a Canadian meta-analysis concludes that quality, both through structural factors (staff-to-children ratios and staff qualifications) and process factors (the quality of the interactions children experience with staff members and other children in ECEC settings), plays a core role for positive effects, especially for vulnerable children (Bigras and Lemay, 2012[18]).

A policy implication is that it is important to focus on the combination of intensity and quality. While the effect of the quantity of ECEC on children's outcomes depends on the quality of ECEC, sustaining high-quality ECEC is also closely related to the quantity of ECEC. Because of the cumulative nature of learning, more time spent in ECEC can yield better skill development, but this assumes that ECEC programmes are

able to articulate and implement learning activities that differentiate practices and activities as they develop over time based on children's mastery of skills and content (Li et al., 2020[19]). A study on the United States Head Start programme found no difference on a range of children's outcomes between children enrolled half-days and full-days (Leow and Wen, 2016[20]). An explanation given by the authors is that quality is not sustained during the whole day, for instance with staff becoming more tired.

Quantity and quality of ECEC can be considered together through a range of policy levers. The curriculum framework and preparation of ECEC staff as well as their working conditions (e.g. time in contact with children, and time to prepare activities) need to be adapted to the length and intensity of programmes. When programmes start at an early age and cover several years, they should follow children's development and leverage their duration to develop various skills, balancing between strengthening skills acquisition and developing new ones. When ECEC programmes are intensive and include full days, curriculum framework guidelines as well as the organisation of the time during the ECEC day can help in alternating activities for children following their rhythms. Working conditions for staff are also important to help them sustain the effort throughout the day. For these reasons, the link between the quantity of ECEC and outcomes is not linear: effects of two years of part-time ECEC are unlikely to lead to twice the effect of a year of full-time ECEC.

Features of ECEC programmes that can lead to long-lasting effects

Features of structural and process quality of ECEC that can support equity in and through ECEC have been discussed in Chapters 6 and 7. This section focusses on features that are particularly important for achieving long-term effects on inequalities.

Areas of development targeted by ECEC

Areas of development targeted by ECEC relate to the length of the effect of ECEC and the risk of fading out. A potential reason for observing short-term effects and then fading out is that many of the skills that are supported through ECEC policies are likely to be developed in other levels of education or through other interventions (Duncan et al., 2023[21]) (see Annex A, Workshop 5). To avoid fading out, ECEC needs to boost skills that are foundational or fundamental and unlikely to be as much developed in the absence of ECEC participation. Some authors have qualified these skills as "trifecta" skills, those that meet three conditions: i) being *malleable* so that they can be changed and developed through ECEC; ii) being *fundamental* for later skills development and later success, as well as central for children's capacity to navigate the transition to formal schooling; and iii) *unlikely to develop in the absence of the intervention*.

This third condition is particularly important for ECEC to mitigate inequalities: it needs to boost some skills in vulnerable children that they are unlikely to develop at home and throughout their education pathway, and more so than other children. This is an important but also difficult to fulfil condition, as all children are exposed to learning opportunities throughout their education pathway. The combination of fundamentality and malleability is most apparent in children's early basic literacy and mathematics skills. However, simple academic skills are likely to develop later in education in the absence of ECEC participation. The impacts of interventions that target them may fade out most quickly, as virtually all children will eventually receive this instruction. Overall, broader cognitive skills, which are usually thought of as less sensitive to instruction (e.g. vocabulary) better meet the conditions of "trifecta" skills than narrow school-readiness skills such as identifying letters and numbers.

A study of various ECEC programmes in the United States found that impacts on cognitive measures tended to be smaller at the end of ECEC but persist longer than impacts on achievement measures (Li et al., 2020[19]). This result can be explained by the fact that children receive more and more direct instruction on achievement skills once they enter primary school, and therefore the effect of ECEC on these skills diminishes. Similarly, a potential reason for United States ECEC programmes becoming less

efficient over time is that there has been a shift from using hands-on learning and focussing on promoting health, language and social skills (Abecedarian and Perry programmes) to using didactic large group instruction to teach early reading and mathematics skills (Whitaker et al., 2023[5]). For instance, the Tennessee Voluntary Pre-K programme has been found to have negative impacts on reading, mathematics, and science scores at the end of third grade for children who have been assigned to these programmes, meaning that children who attended the programme were harmed by the experience in terms of their academic skills in elementary school. The reasons for this are not clear, but one speculation is that the programme included practices and learning content similar to those of the first year of primary school.

Another type of distinction in the same vein is between "constrained" and "unconstrained" skills and ability to perform "closed" and "open" tasks (Bailey et al., 2016[22]). Constrained and closed skills require only a limited amount of knowledge and are simple enough for virtually all individuals who practice them to master. Fostering these skills early on leads to no long-term effect because children would have acquired them in any case. Many of the early academic skills fall into the "closed" category (e.g. name writing, alphabet knowledge). In contrast, ability to perform open tasks, such as general mathematics achievement or vocabulary, is always incomplete so that even extensive practice still leaves room for improvement. More sophisticated skills develop at different speeds depending on children's home environment, with the slowest growth occurring for the most complex skills in conditions faced by vulnerable children. Thus, efforts to target more sophisticated skills for vulnerable children are more likely to mitigate inequalities in the long-term.

Following the same logic, ECEC could be thought of as launching vulnerable children on more positive "trajectories", which has been described as bringing a "foot-in-the-door" advantage, by providing some sort of permanent increase in key skills or capacities that offers a lifetime of benefits. It is also somewhat difficult to determine which skills would lead to this outcome. However, the skills-building hypothesis suggests also having curriculum frameworks that do not focus on simple early academic skills, but include more complex early cognitive skills and communication skills, with particular efforts to develop these skills among vulnerable children. Social and emotional skills are areas of development that are important for school readiness and learning but the effect of ECEC on these skills has not been widely documented (Carbuccia et al., 2020[16]). Among these skills, self-regulatory skills have been widely studied.

Finally, rather than focussing on trifecta skills meeting the three conditions, a different approach consists in targeting important but difficult-to-change skills or behaviours with intensive interventions for subgroups of children most in need of help and least likely to develop those skills in the absence of the intervention (Bailey et al., 2016[22]). For instance, in the United States, the Abecedarian programme appears to have successfully boosted the IQ levels of children with low initial IQ scores who are living in families with multiple disadvantages. Combining intensive ECEC and a focus on less malleable skills such as general intelligence and conscientiousness is another policy direction.

Another source of positive long-term effects of broad participation in ECEC, as opposed to targeted ones, comes from the improved class climate in later years of education and possibilities for teachers in primary education to implement a more demanding curriculum (see below). Reaching these positive peer effects would suggest to target academic and social and emotional skills because they would support higher-level instructional content in subsequent years of education (Bailey et al., 2016[22]). In the same vein, a study found that the fade-out effect in education is linked to the share of classroom peers in primary education assigned to pre-primary education – with enough children having attended the same ECEC programme, social interactions among peers are stronger and the fade-out effect is mitigated (List and Uchida, 2024[23]). These positive effects are more likely to benefit children from disadvantaged socio-economic backgrounds who are often clustered into the same schools because of housing segregation.

Engaging parents and families

Since parents influence their child's development, learning and well-being and overall success in education and life more generally (see Chapter 3), supporting rich parenting behaviours in families of low socio-economic status and minority families, and thereby raising the quality of the home environment that children experience, can be a powerful tool to mitigate inequalities. Comparison of intergenerational social mobility in Denmark and the United States shows that family influence operates through multiple channels – direct parental interactions with children in stimulating learning, choices of neighbourhoods and localities, which influence the quality of schooling and the quality of peers, and guidance on important lifetime decisions (Heckman and Landersø, 2022[11]). These effects act throughout childhood and adulthood and operate even in the presence of universal benefits, as is the case in Denmark.

Since both ECEC and parenting programmes aim to support children's development, combining them could be a promising direction to mitigate inequalities (Duncan et al., 2023[21]). Combining ECEC and parenting programmes can take various forms, such as ECEC centres informing and counselling parents through posters about appropriate practices with children, or offering possibilities for parents to talk to staff to the organisation of visits to families through ECEC centres (see Chapter 10).

Evidence on the effects of combined ECEC and household interventions on children's skills is limited. A meta-analysis of United States ECEC services including home interventions in the 1960-70s found that not all parenting education programmes are effective at improving children's cognitive and pre-academic outcomes (Grindal et al., 2016[24]). While the study is restricted to relatively old United States interventions and looks only at short-term effects on early cognitive academic skills, it brings findings on the preferred design of parental interventions. Low quality and frequency of the parental engagement component might explain the lack of effect. Most parenting education was provided through one or two home visits a year, often focused on general topics that parents identified as being of interest. These programmes may need to offer greater frequency to produce meaningful changes in parents' behaviour that are sustained in daily home interactions. The study found that when parenting education was provided through one or more home visits a month, the effect sizes for cognitive outcomes were significantly larger than for programmes that provided lower dosages of home visits. In addition, programmes that engage parents in active learning, through opportunities to observe and practice particular parenting skills, might have greater impacts than those that do not attempt to change parental behaviour in such a systematic way. Similarly, a study on the United States Head Start programme that consists of ECEC provision in addition to a range of medical and nutrition services, and helps parents to foster their child's development, found that centres offering more frequent home visiting (more than three home visits per year) were effective at improving children's behaviours and attention (Walters, 2015[25]).

Limits of programmes aiming to change parental behaviour mostly relate to the challenges of enrolling parents and keeping them engaged when programmes are of high intensity (Duncan et al., 2023[21]). On the other end, low-intensity programmes are less likely to deliver effects. In addition, evidence suggests that low socio-economic status parents tend to spend less time on rich interactions with their children because of higher level of stress and prioritisation of activities involving financial gains and time that provide immediate returns rather than long-term ones, with these two aspects being interrelated (see Chapter 3). As a result, information campaigns alone might not be very effective in changing parental behaviours. Policies that focus on reducing stress or offer less time-consuming practices that integrate well into parents' habits are more likely to be sustained and have long-lasting effects (see Chapters 4 and 10).

Sustaining environments and dynamic complementarities

The landscape of policies that influence children's development, learning and well-being is broad (see Chapter 4). The co-ordination of ECEC policies with other levels of education and other areas that affect children's development is crucial to achieve long-term effects.

Sustaining the effects through smooth transitions within ECEC and from ECEC to primary education and later education

For ECEC participation to have long effects on children, there should be continuity of high-quality experience across different stages of development of children and diverse education settings, which includes a range of features: alignment of learning expectations and curricula and co-ordination to avoid redundant content, pedagogies adapted to children's age and continued rich interactions between teachers and children throughout education experiences, continuity in assessment and learning environments, and co-operation between staff, while co-location can also help (OECD, 2017[26]). Transitions within ECEC (e.g. from under age 3 ECEC settings to pre-primary education) and from ECEC to primary education are sensitive periods for children that can lead to a fade-out of what has been gained through their past experiences.

The focus is generally put on how the lower level of education can prepare children for the higher ones. However, a higher level of education can be designed to ensure the children do not lose and can build on what they have learnt. For instance, focussing on transitions between ECEC and primary education, the research literature highlights the importance of shaping primary education to help sustain the effects of ECEC. Some authors have argued that many primary education programmes in fact sustain or amplify inequalities rather than further mitigating them, which explains why outcomes of ECEC programmes seem to fade out (Allen and Hutton, 2023[27]). The impact of ECEC could be bolstered by modified curricula for the early years of primary education that better build on the gains produced by effective ECEC (Li et al., 2020[19]). A similar recommendation applies to transitions within ECEC.

As discussed in the previous sections, policies that exclusively build on targeting some areas of development in ECEC are unlikely to mitigate inequalities in the long-term, as most of the early skills can be developed later in life. However, a sequence of skill-building interventions across both the early childhood years and the first years of primary education that build on one another and promote dynamic complementarity during a period in which skill-building is particularly rapid can be efficient (Duncan et al., 2023[21]). The concept of dynamic complementarity relates to the fact that children with stronger cognitive and non-cognitive skills will profit more from further education. The focus needs to be on skills that are central to children's capacity to navigate the transitions within ECEC and to formal schooling, including both cognitive and social and emotional skills. In addition, children need to be continuously exposed to learning content that is rigorous, at the upper limit of their skills and understanding, and that challenges them enough to promote new, higher-level skills (Ansari et al., 2023[28]). This requires that practices and instructions are individualised to adapt to all children's needs, lead to experiences in which children are active (rather than being didactic) and avoid situations in which vulnerable children are exposed to redundant or less ambitious content. These dynamic complementarities mean that because of the investment made in the early years, investment made in higher levels of education leads to better outcomes as ECEC sets the ground for more learning later.

Large-scale and universal ECEC programmes translate into larger percentages of children benefiting from ECEC and being better prepared for primary education. This can generate more positive peer effects and allow teachers to push their students through more advanced curricula, thereby increasing the likelihood of sustaining ECEC gains (List and Uchida, 2024[23]). This approach would benefit vulnerable children more than others, but also benefit advantaged children and thereby allow some positive peer effects to develop while limiting risks of stigmatisation.

Sustaining the effects through co-ordination with other services

While ECEC can provide a warm and secure environment to children and support children's development and learning, it is unlikely to provide the conditions for healthy development by itself and therefore needs to be combined with other policies around children and families (see Chapters 4 and 10). Co-ordination of

a range of services around children not only is an efficient policy to support children's development and parents in the early years but also a policy that is most likely to make the effects of ECEC policies last (Bailey et al., 2016[22]).

A key question to effectively co-ordinate is how to combine services and welfare supports throughout childhood to lead to more lasting effects than simple ECEC participation. The existence of critical and sensitive periods of childhood in children's development, learning and well-being means that public investment around families and children needs to accompany these patterns (see Chapter 9).

From a research perspective, how to best combine these services to reach long-term effects has not been investigated much. There are indications that care needs to be paid to avoid the redundancy of services with similar objectives for higher cost-effectiveness. For instance, a Danish study looked at the respective effects of the first Danish public pre-primary programme (by age 3) for poor children in the 1960s and a nurse home-visiting programme that was available at the same time (Rossin-Slater and Wüst, 2020[29]). Both programmes included a health component and the nurse home-visiting programme included education about parent-child interactions. The study found substitution effects between the two programmes – access to the nurse home-visiting programme reduces the positive impact of pre-primary education on the human capital index. The study suggests that when public resources are limited, it may be efficient to design programmes that specifically target populations without prior exposure to other interventions (see Chapter 9). How multiple services around families and children can be combined to give a real boost to children, especially more vulnerable ones, is discussed in Chapter 10.

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9 Allocating resources to foster more equitable opportunities from an early age

This chapter examines how OECD countries can design early childhood education and care (ECEC) funding policies that foster more equitable and inclusive ECEC. It builds on data evidence to analyse overall investments in ECEC and variations within ECEC funding systems, paying attention to the implications of ECEC funding sources for equity and quality. The chapter then explores how funding mechanisms can intensify or mitigate inequalities in participation and quality of ECEC. It concludes with a discussion of strategies to design smarter ECEC funding systems and ensure that early investments have lasting impacts on children.

Key messages

- ECEC systems require sufficient and sustained funding, with an adequate share of public funding to address the compounding sources of inequalities in the early years of children's lives and make early investments last.

- OECD countries currently display large variability in their ECEC investment patterns, and face a risk of public under-investment in their ECEC sectors. Private expenditure represents a much higher share of total expenditure in ECEC for children under age 3 (26%) and in pre-primary education (14%) than in primary education (5%), on average across OECD countries.

- Inadequate public ECEC funding accentuates reliance on family contributions, resulting in higher relative costs for families with low socio-economic status. This may block or disincentivise enrolment among children who have the most to gain from ECEC participation.

- A strategic combination of universal and targeted approaches can help level the playing field in ECEC. These approaches are compatible with different levels of public investment and can provide high-quality ECEC for all, as well as additional supports for children growing up with more limited resources and opportunities.

- With 32% of children aged 3-5 enrolled in private institutions on average across OECD countries (and 50% among children under age 3), a range of policy levers – including quality monitoring, funding conditionality, regulation of private providers and financial measures to limit family costs – are needed to mitigate the risks associated with marketised ECEC systems and ensure the efficiency of public and private investments in ECEC systems with private provision.

- Funding allocation mechanisms, supports and incentives are needed to steer funding recipients towards enhanced quality and equity. ECEC systems are often decentralised, which calls for equalisation systems to reduce disparities in funding between local authorities. How capital investments are distributed in the system also matters for ECEC equity and quality.

- Effective targeting strategies help provide support to children most in need. There are different advantages and disadvantages of various targeting approaches. Effectively targeting children and settings in need depends upon quality data to design adequate allocation mechanisms. Monitoring the impact of funding policies is critical to achieving equity in ECEC systems.

- Workforce wages are a significant component of countries' current ECEC expenditure. Low compensation hampers the ECEC sectors' capacity to attract and retain qualified individuals, especially when other working conditions are also challenging. This calls for the design of general funding mechanisms that ensure wages are aligned with staff roles and responsibilities, and for additional funding to recognise the more challenging working conditions staff face in settings in disadvantaged areas.

- ECEC policies are part of a broader landscape of policies that aim to mitigate inequalities, and need to operate in co-ordination with these other policies and sectors. A shared vision at the government level for children's learning, development and well-being can support better alignment of funding strategies with policy objectives.

Introduction

Effective investments in ECEC participation and quality are critical for child outcomes. Public interest in the early years has increased in recent decades, and ECEC policies in many OECD countries have led to rising participation in ECEC, more attention to combining care and education, enhanced spending, and more regulation to ensure quality. Expanding ECEC participation (see Chapter 5) and ensuring the quality of provision for all children (see Chapters 6 and 7) hinge on making more effective, efficient and equitable early investments. In addition, ECEC policies need to be co-ordinated with other policies and sectors to address the compounding sources of opportunity gaps in early childhood and make early investments last (see Chapters 4 and 10), which requires sufficient and sustained funding, with an adequate share of public financing.

This chapter examines how OECD countries can design ECEC funding policies that support more equitable and inclusive ECEC for sustained benefits over children's life course. The overarching questions addressed in this chapter are:

- How much do countries spend on the early years and how are resources spent?
- What funding mechanisms can support equity and quality in ECEC systems and make ECEC investments last?

The chapter builds on data evidence on ECEC funding to set the stage for discussing how countries can ensure more efficient and equal ECEC investments. It explores how funding mechanisms can intensify or mitigate inequalities in participation and quality of ECEC (Chapter 5 complements this by focusing on policies to ensure affordable ECEC access for families). The analysis in this chapter pays attention to features of ECEC systems that can lead to different challenges and approaches, such as the size of the private sector and the allocation of responsibilities across levels of government. The chapter also discusses strategies to design smarter ECEC systems and make early years investment last.

Gaps in ECEC funding systems

This section examines overall levels of investments in ECEC and variations within ECEC funding systems (e.g. across age groups or types of provision), based on data evidence regarding how much countries spend on the early years and how they spend. It pays attention to the sources of ECEC funding (private and public; central and sub-central) and their implications for equity and quality.

Evidence on countries' investments in ECEC

OECD countries display large variability in total ECEC spending (public and private) (Figure 9.1). Total annual spending per child in pre-primary education ranges from USD 3 930 in Türkiye to over USD 25 300 in Luxembourg. It reflects a range of policy choices related to teachers' salaries and available staff for children, cost of materials, opening hours of ECEC settings and number of hours per child – all of which have implications for the quality of ECEC provision. Early childhood educational development (corresponding to the International Standard Classification of Education (ISCED) Level 01) displays higher expenditure per child than pre-primary in most OECD countries with available data, often due to smaller child-to-staff ratios at this level.

Expenditure on pre-primary education per child has increased on average in OECD countries between 2015 and 2021, but changes are highly variable across countries. Lithuania and Romania experienced the largest increases throughout the period, though in both countries expenditure per child remains below the OECD average. In contrast, expenditure per child decreased in several countries due to a drop in total

expenditure (e.g. Mexico, the United Kingdom) or an insufficient rise relative to the rise in the number of children (e.g. Türkiye).

Figure 9.1. Total expenditure on early childhood education and care per child

Panel A: Annual expenditure per child in USD, converted using PPPs (based on head counts), 2021

Panel B: Average annual change in total expenditure on pre-primary education per child between 2015 and 2021
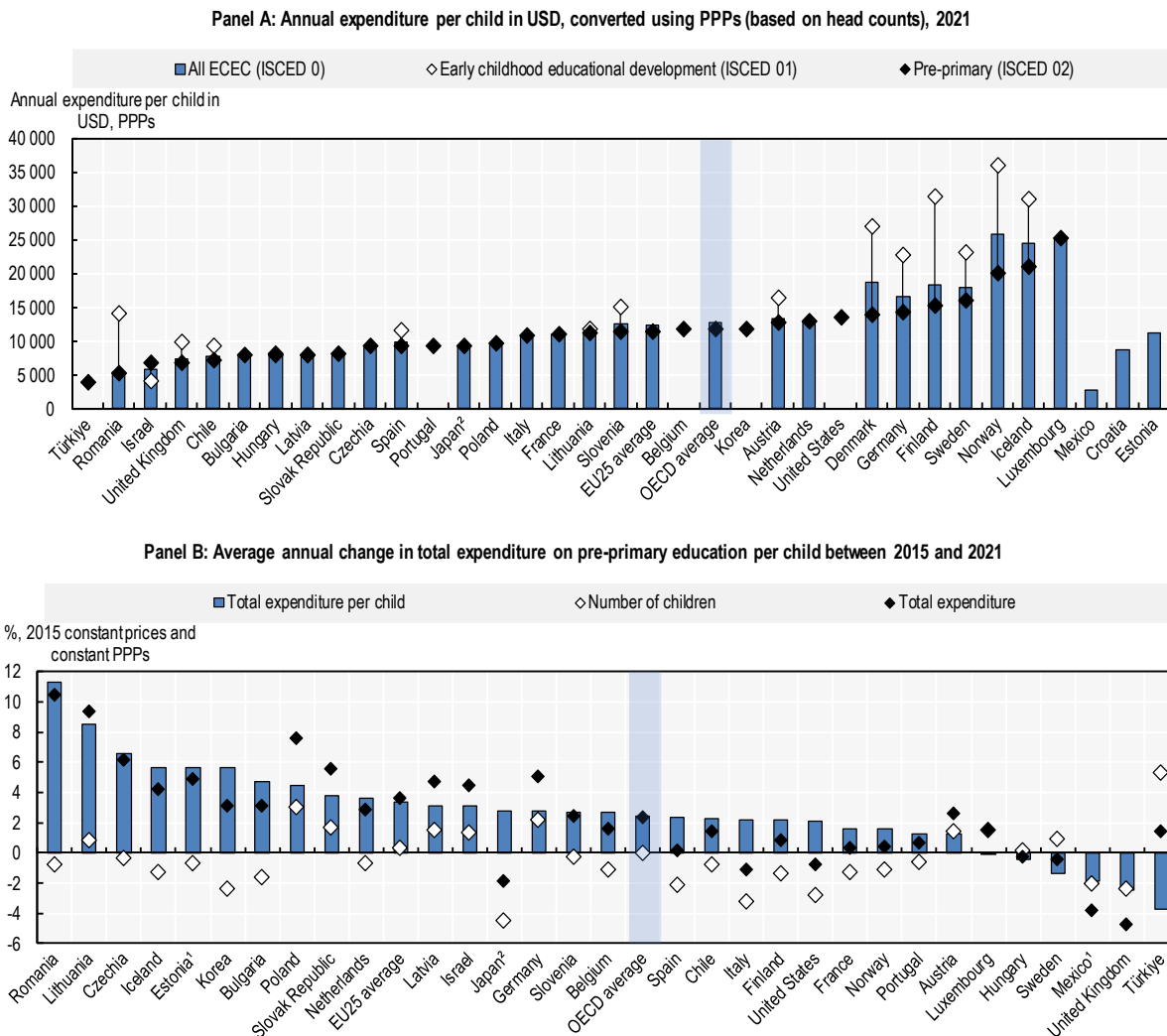
[1]Includes early childhood educational development programmes. [2]Data do not cover day care centres and integrated centres.
Notes: Only OECD member and partner countries with any (Panel A) and complete (Panel B) available data are shown. Countries are ranked in ascending order of pre-primary annual expenditure per child (Panel A), and in descending order of the average annual change in total expenditure per child (Panel B).
Source: OECD (2024), *Education at a Glance 2024*, https://doi.org/10.1787/c00cad36-en,Table C1.1 and database.

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Total expenditure (public and private) on educational institutions presented above includes only spending for children enrolled in educational programmes. However, expenditure on early childhood education and care services is not uniquely devoted to educational programmes, and a range of programmes in OECD countries do not fulfil all ISCED Level 0 criteria to qualify as educational programmes. Data on public spending for both formal programmes targeting children under the age of three and pre-primary education services (whether they include an educational component or not) provide a similar picture of a risk of under-

investment in ECEC systems as do data focused on total expenditure on ECEC educational institutions (OECD, n.d.[1]). OECD countries display significant variation in ECEC spending, with low average public spending on ECEC as a percentage of gross domestic produc (GDP). Only countries with relatively high investment levels in ECEC manage to balance financing across programmes targeting children under the age of three and pre-primary education (Dougherty and Morabito, 2023[2]).

However, these data (like data on educational institutions' expenditure) do not account for investments in early childhood from other sectors. For example, home visiting programmes or parenting interventions may not be funded through ECEC programmes. As such, the data do not reflect a complete picture of investments that may be especially relevant at ISCED Level 01.

The evolution of private expenditure

Private expenditure continues to play a stronger role in funding the early years (26% of total expenditure – ISCED Level 01) relative to pre-primary education (14%) (see Figure 9.2), which are both higher than in primary education (5%). At ISCED Level 01, private expenditure accounts for a large share of funding (more than 70%) in Colombia, Israel and the United Kingdom. When public funding is insufficient, families' contributions shape ECEC participation to a greater extent and can translate into large inequalities in children's access to ECEC and quality of their ECEC experience (OECD, 2017[3]).

The share of public investment in ECEC has evolved only moderately on average across the OECD between 2015 and 2021. At the ISCED 01 Level, in Hungary and particularly in the United Kingdom, the share of private spending on ECEC has increased since 2018 (returning to 2015 levels), while most other countries, and especially Spain and Chile, have witnessed decreases. In pre-primary education, the share of private spending dropped by three percentage points on average across OECD countries between 2018 and 2021. The fall is particularly large in Chile, Japan and the United Kingdom. In Japan, private spending has fallen significantly as a result of free pre-primary education starting in 2019. However, in a few OECD countries (e.g. Hungary, Latvia and the Netherlands), the share of private expenditure has moderately increased in for pre-primary education since 2015.

Low public spending in many countries translates into a need for parents and families to contribute to provision costs. In the early years, affordability of childcare remains a challenge for many disadvantaged families in OECD countries, although their children would tend to gain the most from ECEC participation (see Chapters 5 and 8). Affordability of ECEC tends to be a challenge in several countries that rely extensively on private provision (e.g. New Zealand, the United Kingdom and the United States). Especially for children under age 3, ECEC costs are also a heavy financial burden for families with weak labour market attachment in several EU countries with available data (Rastragina and Pearsall, 2023[4]).

Public spending and family contributions amidst private provision

Rising interest of families in ECEC, partly driven by the rise in female labour market participation and the increasingly recognised economic and social benefits of ECEC, has enhanced demand for ECEC. Some countries have relied on private provision to expand the ECEC sector. Overall, in several countries, a mixed economy of ECEC in which public, private-for-profit and private not-for-profit providers operate together has developed.

Figure 9.2. Trend in the proportion of private expenditure on early childhood education and care

Relative proportions of private expenditure on early childhood education and care (after transfers from public sources), by year

Panel A: ISCED 01

Panel B: ISCED 02
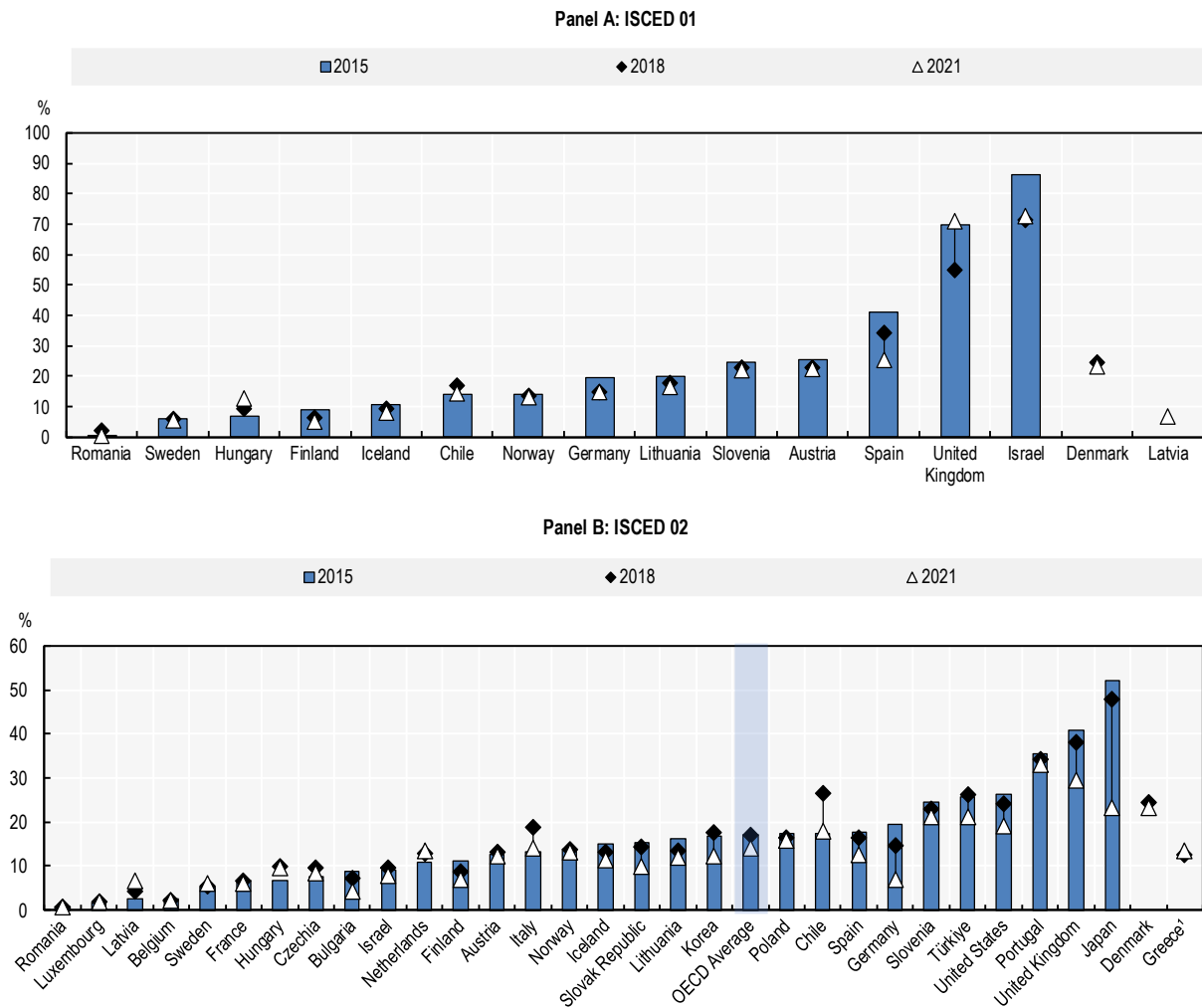
1Year of reference differs from 2021: 2020 for Greece.
Notes: Private expenditure consists of expenditure by households and other private entities (see Annex B). Data on expenditure includes transfers from public sources (see Annex B).
Source: OECD (2024), *Education at a Glance 2024 Database*, https://doi.org/10.1787/c00cad36-en.

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Competition in provision could foster quality and enable faster adaptation to demand. At the same time, for-profit private centres may prioritise profits to the improvement of services or the provision of quality ECEC to children from socio-economically disadvantaged backgrounds, mainly if quality assurance regulations are weak. Evidence from several market-based ECEC systems (e.g. Ireland, the Netherlands, and the United Kingdom) suggests that private provision with private funding has led to high costs to parents and possibly low quality, as funding has partly gone into excessive profits (Brogaard and Helby Petersen, 2022[5]). Fees charged to parents have yet to be reflected in higher salaries or staff professional development for ECEC staff, resulting in high staff turnover and lower pay (for instance, relative to the non-for-profit sector). Private for-profit providers are also likely to face high debt levels and lower solvency

rates, while not-for-profit ones display high levels of trustee participation in ensuring the stability of financial accounts (Van Eijkel et al., 2023[6]; Simon et al., 2022[7]).

Variability in the quality of private services is a concern and disadvantaged families – due to limited financial resources, lack of information or insufficient ECEC coverage in their areas – might be forced to resort to lower-quality ECEC options (see Chapter 6). If private provision is not of high quality, the efficiency of public investment for private programmes might be low, and private investment (particularly from parents) is likely to be made for services that might not bring benefits to their children.

In OECD countries, enrolment in private institutions tends to be higher at lower levels of ECEC. For the early years, private ECEC provision tends to relate positively to private spending on ECEC (Figure 9.3). Israel, the United Kingdom (at ISCED Level 01) and Australia, Chile, Japan, Portugal, Türkiye, the United Kingdom and the United States (at ISCED Level 02) couple above-average shares of private expenditure and enrolment rates in private provision of ECEC. Households primarily fund private ECEC in these countries, with a risk for lower-income families to be excluded from ECEC participation due to low affordability of ECEC (e.g. the United Kingdom and the United States). In contrast, Austria, Germany and Norway combine high enrolment rates in private institutions with high shares of public funding devoted to ECEC in the early years (ISCED Level 01).

Ensuring quality and equal access to ECEC in the presence of private provision requires comprehensive policy levers, strong strategic co-ordination at the government level (see below on the role of central and sub-central authorities) and adequate enforcement. While differences in quality between public and private settings often result from different investment and human resource management choices, a clear monitoring framework aligned with standards and that accounts for structural and process quality aspects can help foster similar quality across the two types of settings (OECD, 2019[8]). Beyond quality monitoring, support for improvement and incentives for quality provision (see Chapter 6), a range of funding mechanisms can help mitigate the risks associated with marketised systems. Prioritising public funds for public provision (e.g. in Germany) and private non-profits (e.g. in Canada, Luxembourg) and regulating large for-profit players recognises the marked differences between how private for-profit and private not-for-profit providers impact the quality and accessibility of ECEC (Center for the Study of Child Care Employment, 2021[9]). Funding conditionality that ties resources to compliance with quality standards and measures to promote equity in access can equally steer funding recipients towards investments that support quality improvements and increased ECEC access for disadvantaged children. Public management and central steering of ECEC sector development can help mitigate inequalities in service coverage in market-based systems, since publicly managed-centres tend to enrol larger shares of children from socio-economically disadvantaged backgrounds or be situated in more rural areas than privately-managed ones (see Chapter 5).

In addition, financial measures (e.g. fee caps, dividend standards and solvency requirements) are effective ways to foster affordability and equitable access to ECEC, although they may limit the diversity of providers (Hoefsloot et al., 2023[10]). However, such measures may lead to protracted tensions between the government and the private-for-profit sector (Carlbaum and Rönnberg, 2024[11]; Trætteberg et al., 2021[12]). OECD countries can utilise a range of policy approaches to contain the effects of increased marketisation of the ECEC sector, as suggested by the example of Ireland (see Box 9.1).

Figure 9.3. Private expenditure and provision of early childhood education and care

Association between relative proportion of private expenditure on ECEC (after transfers from public sources) and enrolment in private institutions by ISCED level, 2021
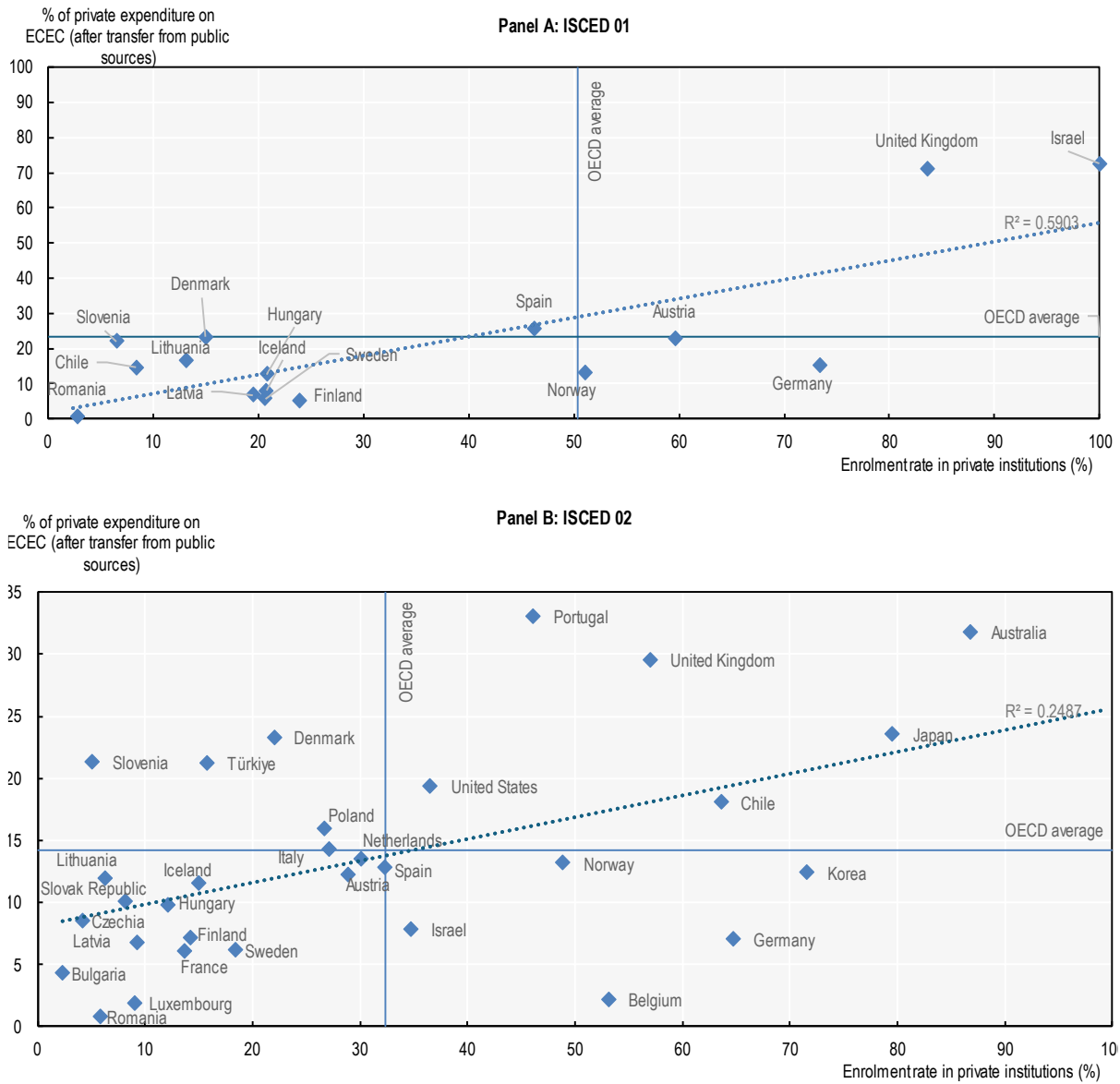
Notes: Private institutions comprise government-dependent and independent institutions (see Annex B). Only OECD member and accession countries with available data for both variables are shown in each panel. OECD average is calculated as the arithmetic mean for all available OECD member countries for each variable (including values not shown). Private expenditure consists of expenditure by households and other private entities (see Annex B). Data on expenditure includes transfers from public sources (see Annex B).
Source: OECD (2024), *Education at a Glance 2024 Database*, https://doi.org/10.1787/c00cad36-en.

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> **Box 9.1. Constructing guardrails against the negative effects of marketisation in ECEC sectors**
>
> **Ireland** enhanced public ECEC funding in recent years, coupled with increased public ECEC management (see Annex A, Workshop 5). After an extensive review of the ECEC funding model, the government introduced Core Funding to complement two supply- and demand-side funding streams. Core Funding is a payment for providers designed to support quality (for example, by enabling providers to attract and retain staff, and particularly graduate staff; introduce or enhance provision features that support higher quality – non-contact time, planning, training) and enhanced public management. The payment is associated with conditions related to fee control and cost transparency (Lloyd, 2023[13]; Together for Better, 2024[14]; First5, 2021[15]). Parents can request fee reviews by reaching out to the local City/County Childcare Committee when their child's ECEC provider changes fee policies with a risk of breaching the Core Funding Partner Service Funding Agreement (DCEDIY, 2024[16]). The establishment of Employment Regulation Orders, collective agreements that support better working conditions for staff in the sector, enabled the Irish government to enforce the conditionality associated with Core funding in respect of workforce remuneration.

The decentralisation of ECEC funding

ECEC systems are often decentralised, with shared responsibilities between national and sub-central authorities (e.g. at the state/regional, local level) in terms of funding, setting standards and monitoring quality (Dougherty and Morabito, 2023[2]). In many OECD countries, public expenditure on ECEC is funded through local or regional revenues, with only a handful of countries relying solely on central funds (Figure 9.4 and Figure 9.5). Some EU-OECD countries have also relied on international funds for their ECEC sector, mainly to support capital investments. While the share of international funding remained relatively limited until 2020 (Eurostat, 2024[17]), several EU countries (such as Italy and Romania) devoted substantial shares of funding from the National Recovery and Resilience Plans to the ECEC sector.

Sub-central governments and authorities' involvement in raising resources for ECEC can support better adaptation of ECEC services to local needs and demands (see Chapter 10). At the same time, strong reliance on sub-central revenues can amplify existing geographic inequalities and gaps in access and quality of ECEC. Wealthier localities are more likely to be able to generate more funding for ECEC or top-up funding received from the central level. Approaches to ECEC funding may also vary across jurisdictions, particularly when sub-central authorities enjoy high autonomy in designing their funding approaches and there is limited sharing of expertise across authorities (OECD, 2017[18]).

Fiscal transfers can mitigate inequalities between sub-central authorities' revenues for ECEC. OECD countries display large variations in the extent of inter-governmental transfers to sub-central authorities for early childhood educational development (ISCED 01) and pre-primary education (ISCED 02) (Figure 9.4 and Figure 9.5). However, data on transfers between government levels capture only earmarked funds for education, and therefore do not account for cases where general central transfers enable the equalisation of revenue levels across sub-central authorities. For instance, Denmark and Norway finance their ECEC sectors through local funds (as shown by these data), but also through general transfers from the central government to mitigate inequalities between municipalities. In Norway, differences in municipalities' income and expenditure are compensated through the General Grant Scheme – a lump sum transfer that is redistributed as a per-capita grant according to localities' expenditure needs, regional and urban policy criteria (Eurydice, 2023[19]). In Denmark, ECEC institutions are financed primarily through subsidies from municipalities, which benefit in turn from state block grants (Eurydice, 2024[20]).

Sub-central authorities play a strong role in executing spending programmes in many OECD countries and in some countries, their spending role is more pronounced than their contribution to funding public

expenditure (Figure 9.4 and Figure 9.5); (Dougherty and Montes, 2023[21]). Yet, spending patterns for ECEC may vary across jurisdictions. The design of funding allocation mechanisms is key for levelling revenues across sub-central authorities, reducing geographic inequalities and steering spending authorities towards specific objectives.

Figure 9.4. Distribution of government expenditure on early childhood educational development

Share of public funding covered by each level of government (initial funds), and local governments' share of expenditure after inter-governmental transfers (final funds), in percentage of total government expenditure, 2021

Panel A: Distribution of government expenditure before inter-governmental transfers

Panel B: Local governments' share of expenditure after inter-governmental transfers

Notes: OECD average calculated as the arithmetic average for OECD member countries. "Inter-governmental transfers" are transfers of funds designated for education from one level of government to another (see Annex B). Countries are ranked in descending order of local governments' share of expenditure after inter-governmental transfers.
Source: OECD (2024), *Education at a Glance 2024 Database*, https://doi.org/10.1787/c00cad36-en.

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Figure 9.5. Distribution of government expenditure on pre-primary education

Share of public funding covered by each level of government (initial funds), and local governments' share of expenditure after inter-governmental transfers (final funds), in percentage of total government expenditure, 2021

Panel A: Distribution of government expenditure before inter-governmental transfers

Panel B: Local governments' share of expenditure after inter-governmental transfers
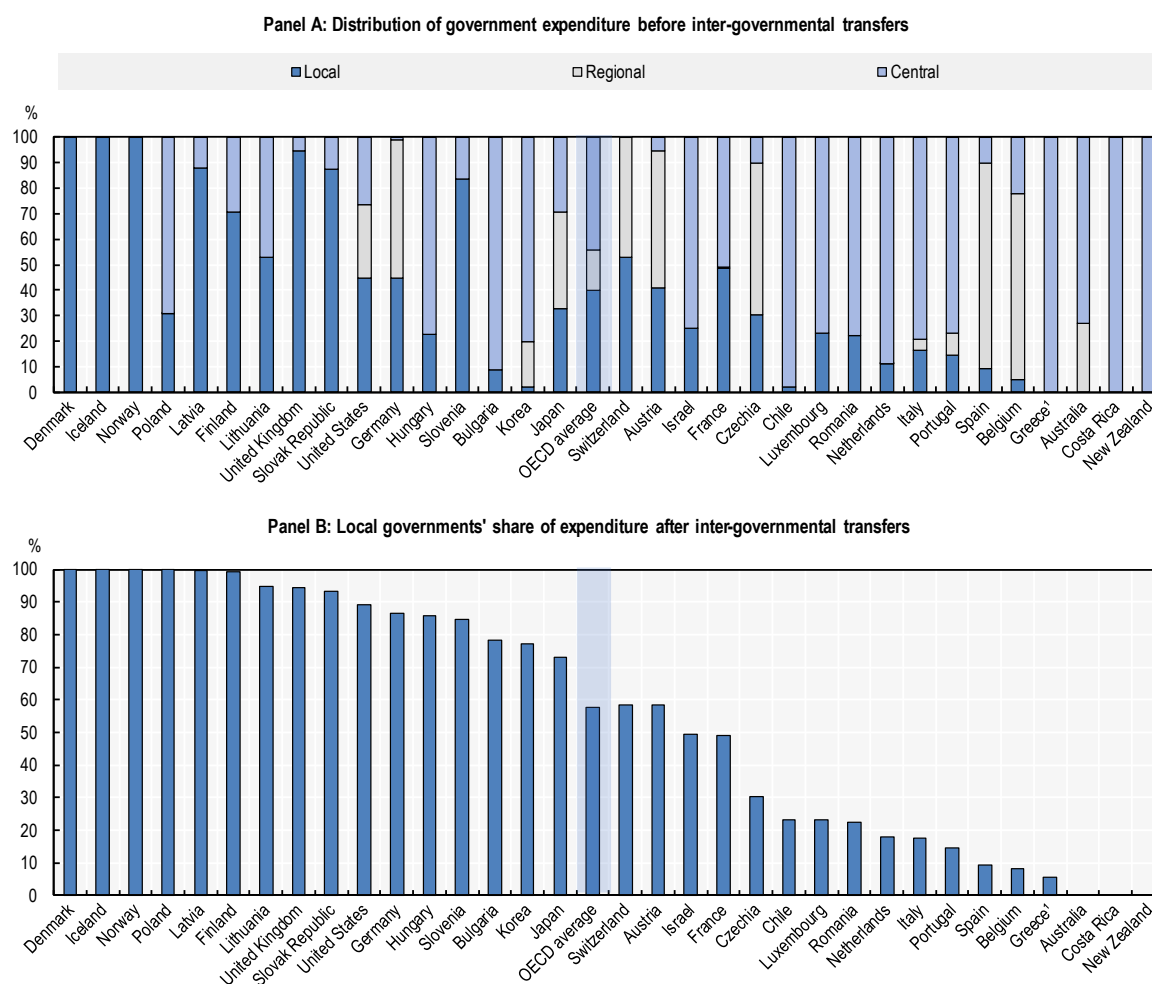
[1]Year of reference differs from 2021: 2020 for Greece.

Notes: OECD average calculated as the arithmetic average for OECD member countries. "Inter-governmental transfers" are transfers of funds designated for education from one level of government to another (see Annex B). Countries are ranked in descending order of local governments' share of expenditure after inter-governmental transfers.

Source: OECD (2024), *Education at a Glance 2024 Database*, https://doi.org/10.1787/c00cad36-en.

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Funding mechanisms to mitigate inequalities in participation and quality of ECEC

Mitigating inequalities in participation and quality of ECEC requires funding allocation mechanisms that ensure resources reach the children most in need. How resources are distributed and to whom matters for providing accessible, affordable and high-quality ECEC to all. OECD countries have recognised children's different needs through targeted programmes (e.g. in the United States) – typically restricted to children from disadvantaged backgrounds, and universal programmes (e.g. in France, Germany, Norway and

Québec (Canada)) (Duncan et al., 2023[22]). This section focuses on mechanisms to ensure that ECEC investments translate into enhanced ECEC participation and quality for all within both types of approaches.

Funding allocation mechanisms to foster quality and equity

Disadvantage can be tackled through a range of funding allocation approaches, depending on the share of funding distributed through main allocations or through targeted funding, on the conditions set for funding allocation, and whether resources are received in kind or through additional funds. How much public funding is distributed via main allocation mechanisms and how much through external ones (e.g. targeted funding) requires a balance between ensuring efficiency, reducing monitoring burden, and underpinning the capacity of governments to set objectives and deliver support (Paull and Wilson, 2021[23]; OECD, 2017[18]). While main allocation mechanisms can ensure efficiency, targeted funding provides flexibility, can enable easier adaptation to local needs and pursuit of more specific equity objectives.

The choice of specific funding allocation mechanisms can enable central governments or sub-central authorities to steer funding recipients towards enhanced quality and equity in ECEC. Conditions can be set when transferring funds from the central level to sub-central authorities or from sub-central authorities to ECEC settings. Earmarked grants for quality enhancements were common in 13 OECD jurisdictions with available data in 2012-2013 (OECD, 2015[24]). Conditional additional funding can be provided for vulnerable children on the condition of meeting a range of quality standards (see Box 9.2). Conditional funding has resulted in improved ECEC quality for disadvantaged children in some OECD countries, though evaluations remain limited (Paull and Wilson, 2021[23]).

Sub-central authorities and ECEC settings can benefit from varying degrees of flexibility in how they spend resources. Apart from earmarked grants that involve more restrictions on their use, OECD countries also rely on block grants. Central authorities provide funding through the latter to lower levels of government, allowing them flexibility in how they distribute these resources (OECD, 2015[24]). Such flexibility may enable better accounting for ECEC settings or local needs, but it can also trigger variation in resource spending. Decisions to invest in ECEC may depend on political priorities and local demand. Local authorities may put different priorities on ECEC depending on the interest in and awareness of ECEC benefits of their populations (see Chapter 5), translating into variations in ECEC spending across jurisdictions. In addition, over-reliance on inter-jurisdictional grants or transfers may disincentive prioritising ECEC spending through local funds instead of other expenditures, or encourage overspending (particularly when there is significant misalignment between financing and spending responsibilities) (OECD, 2017[18]). When local entities have a significant spending role and part of the funding comes from the government without being earmarked, there is a risk of lack of accountability or no mechanisms to link decisions and outcomes to funding. Evidence on the role of flexible additional funding to support quality enhancement for disadvantaged children has thus been mixed. In some OECD countries, ECEC settings that enjoyed discretion in using additional funding for children from socio-economically disadvantaged backgrounds have tended to direct it at covering expenses and enhancing access rather than investing in quality enhancements (Paull and Wilson, 2021[23]). This illustrates the need to guarantee sufficient funding for providers to cover costs and design fee control mechanisms that ensure provision remains financially sustainable without detrimental effects on quality (see Chapter 5).

When sub-central authorities or ECEC settings benefit from considerable discretion in the use of funding, efforts to build their capacity for the optimal use of resources must go hand in hand with efficient accountability mechanisms. Small or less affluent jurisdictions are more likely to face capacity issues in seizing the potential of funding opportunities for ECEC (e.g. applying for central-level additional funding), managing resources effectively and making investment decisions for building or renovating ECEC infrastructure (see Chapter 5). Recipients of additional funding (whether flexible or conditional) require support and guidance on using targeted funding to meet policy objectives. Building the capacity of ECEC settings when they benefit from equity funding (e.g. grants and additional funding) also matters. Providing

guidance and external support to ECEC leaders for budget management, ensuring sufficient administrative staff to support funding management and developing cross-centre collaboration can foster ECEC centres' capacity to make the most of funding opportunities (see Chapter 10). In the case of conditional funding, monitoring mechanisms are equally critical to ensure that funding recipients (whether local authorities or ECEC settings) reach their objectives. A combination of quality standards, financial incentives and capacity-building support can thus steer improvements in programme quality (see Box 9.2).

While multiple funding streams can enable providers to access more resources, information and support to enhance quality, they can also trigger inefficiencies (Duer and Jenkins, 2023[25]). Monitoring resource use and how different funding streams support outcomes and achieve expected results can be challenging when funding originates from various sources, particularly if levels of government or programmes are uncoordinated. Communication between ECEC settings and funding authorities (e.g. to identify and indicate needs, to report on programme outcomes or challenges) may also be more demanding and time-consuming, and increase the administrative burden for centre leaders (Duer and Jenkins, 2023[25]). The mix of central and sub-central funding thus requires coherent standards and co-ordination between different funding sources to ensure quality ECEC across the territory. Besides making public funding conditional on reaching specific quality standards, co-ordination and better alignment between different funding sources can also enhance programme quality.

Box 9.2. Raising ECEC quality through funding mechanisms and incentives

Raising ECEC quality through funding tied to enhanced quality in Singapore

In Singapore, the Anchor Operator (AOP) and Partner Operator (POP) funding schemes provide funding to ECEC operators under the condition that they keep fees within prescribed fee caps and meet specific quality criteria (e.g. attaining the Singapore Pre-school Accreditation Framework (SPARK) certification, ensuring professional development for their ECEC staff) (see Annex A, Workshop 5). AOPs provides additional support to children from socio-economically disadvantaged backgrounds and those with special education needs (see Annex A, Workshop 5). The SPARK certification aims to raise the quality of ECEC, encourage self-monitoring and evaluation through a Quality Rating Scale, enable parents to obtain information on ECEC quality and provide recognition to ECEC centres in their efforts to raise quality. ECEC centres may apply for SPARK assessment through several application windows annually (ECDA, 2024[26]).

Quality Rating and Improvement Systems in the United States

In the United States, Quality Rating and Improvement Systems (QRIS) aim to drive improvement in ECEC quality by establishing quality standards, creating incentives (e.g. financial rewards) and providing support (e.g. technical assistance) to promote enhancements in programme quality. Assignment to a lower rating has been shown to lead programmes to enhance their quality, particularly in areas with high levels of competition between providers (Bassok, Dee and Latham, 2017[27]). In addition, when QRIS is accompanied by wage compensation programmes, increases in childcare supply, compensation and turnover reductions are more substantial than when QRIS operate in isolation (Herbst, 2018[28]).

Distribution of capital investments for quality ECEC infrastructure for all

Beyond current expenditure, how capital investments are allocated in the system also matters for equity. Investment in ECEC infrastructure and material underpins the development of environments that are supportive of children's learning, development and well-being. The configuration, space planning and materials of ECEC settings matter for children's motor skills, language and social development (Chazan-

Cohen et al., 2017[29]). The quality of ECEC facilities can also influence parents' decisions to enrol children in ECEC and staff retention in specific centres or programmes (NASEM, 2018[30]).

A mix of ad hoc grants, investment programmes and international funding (mostly in the case of EU countries) have supported ECEC capital funding in OECD countries. In 2020, on average across OECD countries, 93% of total expenditure on educational institutions in ECEC (ISCED 0) was devoted to current expenditure and the rest to capital expenditure (OECD, 2023[31]). Among OECD countries, Japan devoted the highest proportion of total expenditure to capital investments (13%), reflecting potential expansion efforts of the ECEC sector, whereas Ireland devoted only 0.2% to capital expenditure. On average across OECD countries, public and private ECEC institutions allocate their spending between current and capital expenditure in a similar manner, despite some cross-country variations.

Physical infrastructure improvements require effective financing mechanisms, particularly if countries seek to expand their ECEC sectors. Private providers may need support in gathering funds for developing or rehabilitating facilities when public ECEC funding only covers delivery costs or when the extent to which they can raise private funding is limited (e.g. through fee caps). Accessing loans for such investments requires sufficient financial ability to apply and take on debt, which may limit providers' incentives or capacity (particularly of not-for-profit ones) to unfold major physical infrastructure projects (NASEM, 2018[30]). Grant programmes, state loans and public subsidies can underpin providers' ability to make capital investments, particularly for small providers or in areas with limited ECEC coverage (Sussman and Gillman, 2007[32]). In the EU, the Recovery and Resilience Facility has supported capital investments in the expansion of ECEC infrastructure and some countries (such as Italy) have targeted such investments to areas most in need of increasing ECEC participation (Dougherty and Morabito, 2023[2]). To be effective and ensure that ECEC facilities are operational, capital investments must be complemented with funding that covers current expenditure (e.g. staff costs) for new facilities. Efforts to build providers' or local authorities' capacity to apply for such grants are also needed (see Chapter 5). In addition, when governments support ECEC providers for infrastructure investments, such support should also address the needs of home-based providers and non-profit providers who may face more difficulties accessing standard infrastructure financing options.

Countries also need to consider whether the distribution of ECEC services across their territory meets the needs of the most vulnerable children. Children in more isolated or in low socio-economic areas are less likely to be covered by ECEC provision (see Chapter 5). Infrastructure needs assessment and feasibility studies can back the development and location of new ECEC settings when they are coupled with effective targeting strategies. Regular surveys and innovative uses of government data to analyse geographic inequalities in access (see Chapter 5, (Almeida et al., 2024[33]; Hurley, Tham and Nguyen, 2024[34]) can also inform rehabilitation needs and ensure that new settings reach children or areas most in need of new constructions (OECD, 2018[35]). In addition, co-ordination mechanisms in planning the ECEC network, particularly in decentralised ECEC systems, help address potential misallocations of resources or under-investments across the territory, and better match supply and demand for ECEC provision (see Chapter 5).

Pros and cons of various targeting approaches

OECD countries have relied on a range of support types for families (Chapter 5 includes a more detailed discussion on mechanisms and tools to support the affordability of ECEC). Such measures have included support directed at parents (e.g. tax credits and fee caps), support provided to settings but following the child (e.g. fee control policies based on family income), support provided to settings based on settings' composition (e.g. additional staff for settings with a high concentration of disadvantaged children) or support provided to settings based on their geographic location (Paull and Wilson, 2020[36]).

While targeting is more effective and responsive to children's and families' needs when it focuses on parents or children, support targeting settings can be more beneficial depending on the settings' needs. Administrative burden for settings or parents may also be lower for some forms of targeting, e.g. if

information regarding parents' situation is taken from administrative data rather than collected at the setting level or reported by parents (Paull and Wilson, 2020[36]). Similarly, when carefully designed, geographic-area targeting can be more effective in addressing geographic concentration of disadvantages. In systems where local authorities play a leading role in funding and managing ECEC settings and there are limited or no equalisation mechanisms between authorities, geographic-area targeting can effectively reach most vulnerable children. Geographic-area targeting requires precise needs identification to ensure large shares of vulnerable children are not excluded (e.g. because they are outside the target zone while less vulnerable families within the catchment areas benefit from support), and attention to minimising risks related to stigmatisation and the flight of children from socio-economically advantaged backgrounds.

Effectively targeting children and settings in need depends upon quality data to design effective allocation mechanisms. When support is targeted to children or settings, ECEC settings need the capacity to collect and report data accurately. Limited data literacy of ECEC staff, few administrative staff, or heavy overall administrative burden can reduce ECEC settings' capacity to collect data effectively. Incentives may also exist for settings or institutions to alter data on the concentration of vulnerable children to benefit from more support when the latter is targeted based on setting composition. Conversely, stigmatisation risks may translate into an under-reporting of disadvantage if parents want to avoid any potential stigma when reporting their situation to the ECEC centres. OECD school systems have aimed to strike a balance between the use of census-based data (which reduces the reporting burden for education institutions, reduces risks that education institutions alter numbers, and addresses potentially low capacity at the institution level) and educational institution-based data (OECD, 2021[37]). The type of indicators that define vulnerability and socio-economic disadvantage and their regular update or review matter. Complex indicators may effectively target the settings or children most in need. However, they also entail more administrative work and higher risks of misunderstanding from their users (whether these are administrations or ECEC settings) (OECD, 2021[37]).

Achieving equity in ECEC systems requires effective monitoring of the impact of funding policies, particularly given the decentralised governance of ECEC systems. When sub-central authorities have autonomy in resource decisions, monitoring processes must ensure that equity funding reaches its target groups. Setting objectives for equity and quality at the system level need to be combined with the development of indicators to track the progress and achievement of such objectives (OECD, 2017[18]). At the same time, transparency in funding allocation and use must be balanced with managing the reporting burden on sub-central authorities and ECEC providers. Such efforts also require building the capacity of actors to collect and use sufficiently disaggregated data for decision making. Funding mechanisms need therefore to recognise the cost implications for ECEC settings or funding recipients of collecting and reporting data for targeting and monitoring purposes (see Chapter 5).

Towards smarter ECEC funding systems

This section examines how countries can design smarter ECEC funding systems to ensure investments result in lasting impacts for children (see Chapter 8) and reconcile equity and efficiency. It investigates funding strategies that enable combining universal and targeted approaches given countries' resource constraints and finance policies put forward in other chapters. In particular, the section focuses on approaches to financing workforce quality as critical levers for reducing turnover, addressing staff shortages and raising the quality of professional practices. The section then focuses on strategies to optimise investment profiles across their life cycles to support the co-ordination of ECEC investments with other policies and make early investments last.

Wages and workforce quality

Quality ECEC provision for all children requires a qualified workforce (see Chapters 6 and 7). Sufficient funding for ECEC systems is essential to ensure adequate staff compensation. Expenditure for the compensation of ECEC staff in pre-primary education constituted the largest share of current expenditure on average across OECD countries in 2020 (OECD, 2023[31]). Attracting, training and retaining high-quality ECEC staff is the cornerstone for an ECEC system that delivers quality outcomes for all children. However, many OECD countries experience marked ECEC staff shortages, and evidence from the Teaching and Learning International Survey (TALIS) Starting Strong 2018 shows that human resource shortages are more pronounced in centres with a higher concentration of children from socio-economically disadvantaged families (González-Sancho et al., 2023[38]). The combination of low wages, limited career progression opportunities and high job demands (such as stress from working with children and administrative workload) deter candidates from joining the profession and can push ECEC professionals outside of the sector; they are also unfavourable to quality professional practices (OECD, 2020[39]).

OECD countries tend to hold similar requirements (often a bachelor's degree) for staff qualifications at pre-primary and primary education levels, and requirements have increased both to raise the quality of the ECEC profession and its status. Starting salary levels of pre-primary and primary education teachers are similar in many OECD countries, but actual salaries remain well below those of workers with similar educational attainment in OECD countries with available data (Figure 9.6). At ISCED Level 01, staff's educational attainment tends to remain lower than in pre-primary education and more variable across provision types (e.g. lower in home-based relative to centre-based settings), translating into even lower compensation levels (OECD, 2020[40]; OECD, 2019[41]). Data on salaries of staff working with children under 3 are, however, lacking at the international level.

A range of factors can drive low wages in the ECEC sector. These can include low skill requirements for some ECEC positions associated with low status of the profession, as well as monopsonistic wage setting practices due to the presence of large childcare chains or limited provider competition in some areas (Cunha and Lee, 2023[42]).

Ensuring salaries are in line with ECEC staff's roles and responsibilities can enhance retention and make the profession more attractive. Evidence from a range of OECD ECEC systems shows that wage scale conditions for broader public funding or direct wage enhancements only seem to impact workforce quality if they translate into meaningful pay level increases (Lauderdale and Paull, 2021[43]). In the context of low retention rates in ECEC sectors, incremental changes in compensation appear insufficient to attract and retain a qualified workforce (Cunha and Lee, 2023[42]). In addition, when costs for providers rise, ECEC providers tend to react by reducing or freezing pay, hiring less-skilled staff, or investing less in staff professional development (Lauderdale and Paull, 2021[43]). For instance, evidence from the United States shows that wage increases can translate into higher ECEC staff earnings, increased teacher qualifications and better teacher-child interactions, together with a decline in turnover. However, ECEC providers also reacted to minimum wage reforms by increasing prices, accepting fewer children from disadvantaged families, and increasing child-staff ratios (Brown and Herbst, 2023[44]).

Figure 9.6. Actual salaries of pre-primary teachers relative to earnings of tertiary-educated workers

Ratio of teacher salaries relative to the earnings of full-time, full-year workers aged 25-64, 2023
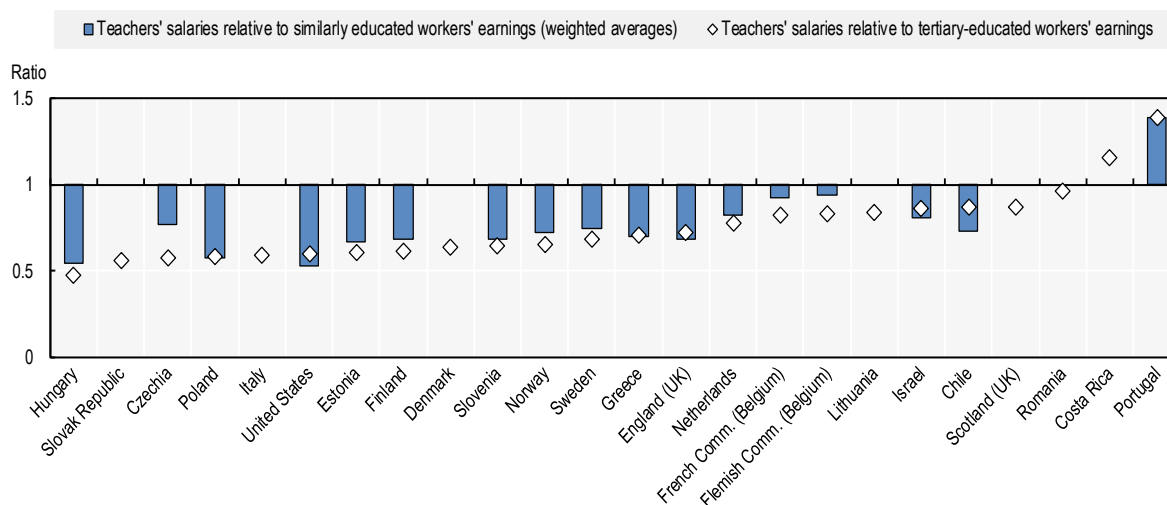
Notes: Data refer to the ratio of annual average salaries of teachers in public institutions relative to full-time, full-year workers with tertiary education (see Annex B). Year of reference for salaries of teachers and school heads differs from 2023: 2022 for Chile, Czechia, Slovenia and Sweden. Data on earnings for full-time, full-year workers with tertiary education refer to the whole country: Belgium for the Flemish and the French Community of Belgium, and the United Kingdom for England and Scotland. Countries and jurisdictions are ranked in descending order of the ratio of teachers' salaries to earnings for tertiary-educated workers.
Source: OECD (2024), *Education at a Glance 2024*, https://doi.org/10.1787/c00cad36-en, Table D.3.2.

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Resource constraints due to overall limited funding for ECEC limit many ECEC systems' capacity to significantly raise staff pay for all ECEC staff. Additional funding could support attracting and retaining staff in more disadvantaged areas, through increased compensation that is better aligned with staff's roles and responsibilities in more challenging settings. Some ECEC systems have relied on financial incentives (e.g. wage supplements, tax credits) to generally stimulate ECEC compensation for staff with specific qualifications or skills and reduce turnover. Additional funding to raise the quality of teaching staff can target ECEC centres (e.g. supporting centres' additional costs involved with hiring more qualified staff) or ECEC staff directly (Box 9.3). Wage supplements have also been used to attract teaching staff to ECEC settings in disadvantaged areas.

The design and size of such financial incentives, together with the general framework for teaching staff employment and career progression shape their effectiveness in reducing turnover and addressing inequities in the distribution of teaching staff (OECD, 2022[45]) (Box 9.3). Compensating staff non-contact time can also better recognise staff responsibilities and more challenging working conditions in disadvantaged areas. Staff working in settings with a high concentration of vulnerable children may devote more time outside direct work with children to prepare activities, engage with parents and carry out administrative work. However, paid non-contact time for staff is not recurrent in many ECEC systems (Paull, Van Der Linden and Wilson, 2020[46]).

Box 9.3. Incentivising workforce quality through increased pay and support for providers

The effects of financial incentives on staff turnover: Evidence from Virginia (United States)

In the United States, the state of Virginia piloted a Teacher Recognition programme providing ECEC educators with a bonus of up to USD 1 500 for staying to teach at their ECEC centre over an 8-month period (Bassok et al., 2021[47]). While quality data to track staff turnover at the national level are not readily available, existing evidence from Virginia suggests staffing challenges (e.g. teachers leaving, unfilled vacancies) are more recurrent in childcare centres serving more children living in poverty (Bassok et al., 2021[47]; Bryant et al., 2023[48]). Experimental evidence shows that the Teacher Recognition programme supported lower staff turnover in participating ECEC centres. Impacts were higher in childcare centres relative to school based ECEC and for assistant teachers relative to lead teachers. These heterogeneous effects resulted from lower average initial compensation in childcare centres and since assistant teachers benefited relatively more from the financial incentive. The beneficial effects of the programme stemmed from increased perception of staff that their work was valued and from alleviating staff's financial burdens. Virginia further expanded and refocused the programme on childcare centres and family day homes (Bassok, Shapiro and Michie, 2023[49]). The incentive amount was also progressively increased.

Supporting providers to hire more qualified staff: Evidence from New Zealand

New Zealand introduced the Pathways to the Future 10-year strategic plan in 2002 to enhance participation and quality in ECEC services. The government has provided Equity Funding since 2002 to help providers in low-income, isolated communities, or service delivery for children in a language or culture other than English, and to enhance quality through higher spending on staffing and curriculum resources (Mitchell et al., 2011[50]). A subsequent stage of the plan involved setting targets to increase the proportion of registered teachers in teacher-led services. Providers hiring more qualified staff could benefit from more resources to be able to compensate for the additional costs. The programme resulted in an increase in the share of qualified teachers in teacher-led centre-based services. Evaluations of the programme showed that in teacher-led services rated as "very good" quality, all teachers were registered teachers whereas centres with lower-quality ratings had lower levels of qualified teachers and had not taken up the professional development opportunities put forward by the plan for their staff (Mitchell et al., 2011[50]; OECD, 2019[41]).

Recognising the importance of quality ECEC staff in disadvantaged areas: Evidence from France

France introduced the priority education areas (*Zones d'Éducation Prioritaire* (ZEP)) in 1981 to direct additional resources to disadvantaged schools, including annual bonuses for teachers working in ZEPs (OECD, 2022[45]). Research evidence based on the first decade of the scheme showed that incentives driven by wage supplements were not sufficient to retain teachers in ZEP schools, suggesting that the size of financial incentives matters (Prost, 2013[51]). The scheme has substantially evolved since its introduction. In the past years, France has embarked on a more comprehensive approach to supporting ECEC settings in disadvantaged areas. At the pre-primary level, the size of the financial bonuses for attracting qualified ECEC staff to disadvantaged schools has progressively increased. Since 2020, class sizes have been split in two, starting with the last year of pre-primary, to enhance child-staff interactions and improve staff's working conditions. Teacher workloads have been adjusted to free up time for teacher training, collective work with other members of the educational community, student monitoring and parental engagement. For children aged under 3, France launched an anti-poverty strategy in 2021 containing proposals for a state-funded continuing professional development

programme for all ECEC professionals working at that level (Flemons et al., 2022[52]). The *Ambition Enfance Egalité* plan aims to strengthen the continuing training of ECEC staff (childminders and staff in ECEC centres) working with children under 3 from disadvantaged families, or at risk of vulnerability. The plan includes actions at the national and local levels.

ECEC settings serving more disadvantaged children can also benefit from additional resources provided in-kind through additional staff positions or hours and training. In a range of OECD countries, central or sub-central authorities provide additional staff to schools in disadvantaged areas or with a high concentration of disadvantaged children (Paull and Wilson, 2021[23]). This is particularly the case in countries where hiring responsibilities lie at the central government level. Providing additional staff is, however, insufficient to raise quality if staff quality is not considered (Box 9.4). Comprehensive policy approaches that bring together the provision of additional staff, financial incentives for staff and enhanced professional development opportunities can be more effective at attracting teaching staff and ensuring quality in ECEC settings in disadvantaged areas.

Central authorities may have more limited leverage over staff compensation and allocation in privately-managed centres if contracts and salaries are negotiated at the provider level. In addition, high staff turnover may also disincentivise providers from investing in workforce professional development. In the absence of regulations or requirements on professional development participation or career progression pathways, ECEC staff may be less likely to engage in professional development activities if they receive no support or incentives from employers. Evidence from TALIS Starting Strong 2018 shows that the cost of professional development is a common barrier to ECEC staff participation in training (OECD, 2019[53]). Funding conditionality can help ensure dedicated grants are used to enhance workforce quality (e.g. by hiring more qualified staff, increasing compensation and providing professional development opportunities). Some OECD countries tie the provision of additional public funding to the establishment of collective agreements between ECEC employers and trade unions that set working conditions (e.g. salaries, in-service training) for the sector (Box 9.1) (OECD, 2021[54]; Ministère du Travail, de la Santé et des Solidarités, 2024[55]). Funding can also be targeted to increase diversity in the workforce by directly supporting staff with a diverse background to enhance their qualifications (NASEM, 2018[30]).

Box 9.4. Providing earmarked funds for additional staff

Earmarked funds provided to preschools in **Colombia** for hiring teaching assistants were used to reduce teachers' time spent on learning activities, and therefore did not enhance child development. In contrast, with a moderate additional cost, an intervention that combined hiring teaching assistants with providing training to existing teachers substantially improved disadvantaged children's cognitive development. Teachers increased their involvement in learning activities, showing that interventions that provide additional human resources need to account for changes in staff time use and perceptions about the usefulness of educational tasks (Andrew et al., 2023[56]).

Public spending profiles over childhood years Expanding ECEC access and providing quality ECEC provision for all children that translates into long-term returns (see Chapter 8) requires adequate ECEC spending. ECEC policies are part of a wider landscape of policies that aim to mitigate inequalities and need to operate in co-ordination with other relevant policies and sectors (see Chapters 4 and 10). This calls for long-term funding efforts and ensuring funding remains stable in the early parts of childhood.

Spending on family benefits and education is still geared toward middle and late childhood in OECD countries. Increases in overall spending for families and children have been associated with limited reallocation across the lifecycle (Figure 9.7). Less than one-third of public expenditure (28%) on family benefits and education is targeted to the early years (0-5), with more than 35% going to children aged 6-

11 and the remainder to children aged 12-17 years old. For children aged 0-5, cash benefits (e.g. maternity, paternity and parental leave), tax breaks and childcare are critical components in per-capita social expenditure (OECD, 2022[57]). On average across OECD countries, spending per child tends to be lowest around the age of 2, coinciding with the end of parental leave benefits (UNICEF, 2023[58]). Starting with middle childhood, education spending dominates public spending allocated to children.

Most OECD countries target investments towards middle and late childhood, with a drop in investment in subsequent years (after children turn 18). The average spending profile in OECD countries – lower average early investments, followed by higher middle and late childhood spending – can propel inequalities (UNICEF, 2023[58]). Spending favours older children, despite evidence that early childhood is a critical development period and that inequalities emerge early between children from different socio-economic backgrounds (see Chapter 3). In 2020, OECD countries allocated the largest share of GDP to secondary education relative to higher education levels (OECD, 2023[31]). Investments in older children and education reward longer participation in the education system, which disproportionately benefits children from higher socio-economic backgrounds (UNICEF, 2023[58]; OECD, 2018[59]). In many OECD countries, spending per child peaks in middle childhood, meaning resources for compulsory education benefit those who succeeded earlier. In countries with high rates of school drop-out, children from socio-economically disadvantaged backgrounds are thus likely to benefit from relatively fewer investments. While governments can design policy interventions to address disadvantage at later ages, these may yield lower returns than early investments or require much higher expenditure to make a difference. Catching up on the lack of early investments requires effective targeting strategies in school education to ensure that resources are invested where they matter most for vulnerable children.

Only a few OECD countries display age-spending profiles geared towards early investments or balancing spending across childhood (Figure 9.7). Iceland, Estonia, Hungary and Lithuania invest more in the early years (0-5) than in middle or late childhood, though only in Iceland is public spending similar for children aged 0-2 and 3-5. In Estonia and Lithuania, cash benefits and tax breaks (including maternity and parental leave benefits) during the first year of the child constitute the largest amount of public spending on children under age 2. France, Luxembourg and Norway maintain balanced spending between the early childhood years (0-5), middle and late childhood, and provide both cash benefits and childcare support beginning at the first year of life. However, these investment patterns are based on 2019 data and hence, may fail to account for possible changes in ECEC and family policies in the past years.

Figure 9.7. Public spending on family benefits and education by children's age

OECD average public spending on family benefits and education (primary and secondary), by age
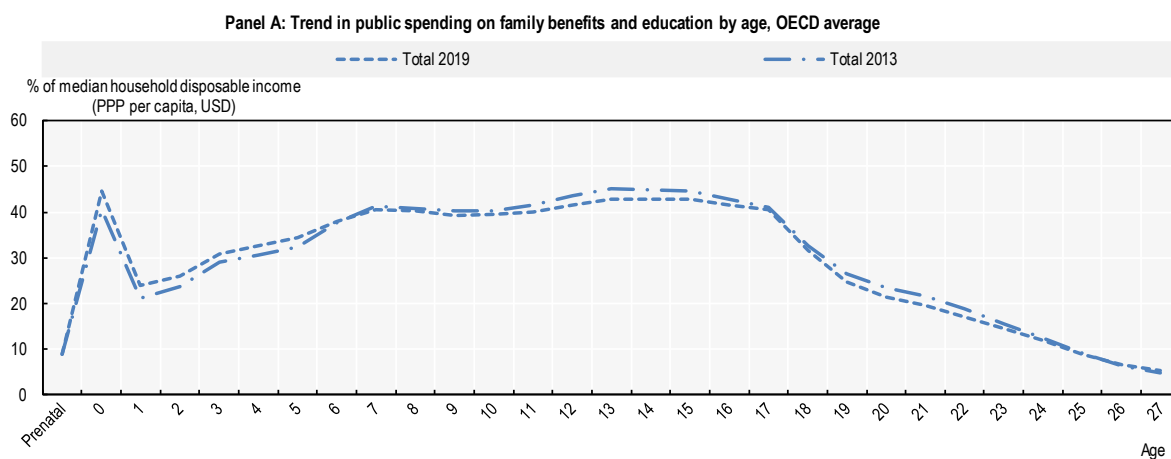
Panel B: Public spending on family benefits and education, by country and by age group, 2019
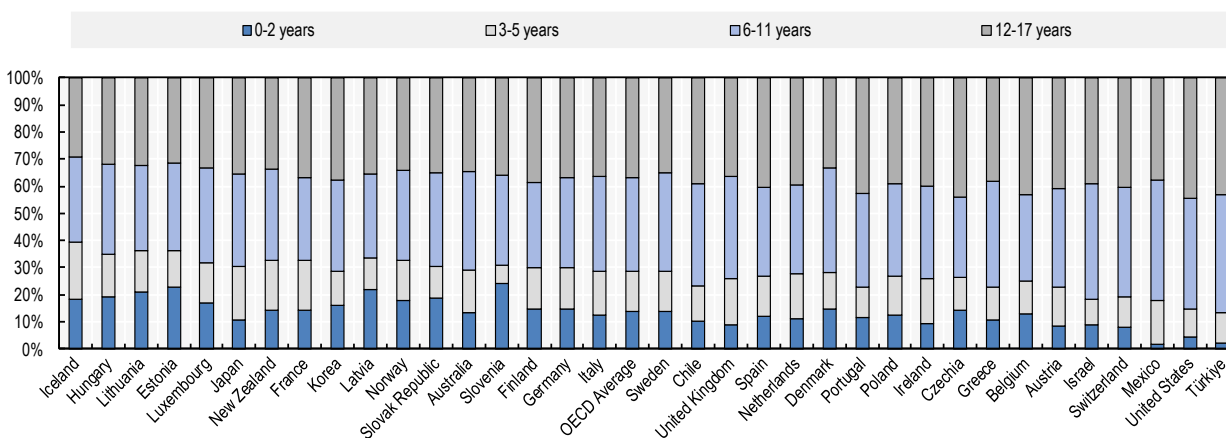
Notes: The data do not include health-related spending due to lack of data by age in a cross-country comparable manner. Family benefits include cash and in-kind benefits (see Annex B). Canada, Colombia and Costa Rica have missing data. Non-central government spending is not always fully captured (see Annex B). Countries are ranked in descending order of public spending for ages 0-5 (Panel B).
Source: OECD (2022), *Family Database, Indicator PF1.6*, https://webfs.oecd.org/Els-com/Family_Database/PF1_6_Public_spending_by_age_of_children.pdf (accessed on 2 January 2025).

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Spending estimates at the international level suggest that closing equity gaps in ECEC participation would require substantial financial investments, but would also translate into large economic and societal gains that extend beyond children's development and long-term outcomes (e.g. job creation in the ECEC and non-care sector, greater gender equality through increased women's employment rates) (Box 9.5). The experience of OECD countries that have substantially raised participation in the sector show that adequate funding and broad political consensus are critical to substantially expand provision. However, increases in funding need associated mechanisms (e.g. conditional funding and monitoring, as discussed previously) to guarantee that investments reach their intended targets.

Box 9.5. Estimating spending needs to raise equity and quality in ECEC systems

The International Labour Organisation (ILO) Care Policy Investment Simulator

The ILO Care Policy Investment Simulator covers 118 countries and four care policies: childcare-related paid leave, breastfeeding breaks, ECEC and long-term care services (see Annex A, Workshop 5); (ILO, n.d.[60]; ILO, 2024[61]). Estimation parameters are country-specific and outcomes focus on public investment requirements, job generation, reduction in gender employment gaps and gender earning gaps, and return on investments. The Simulator enables users to compute the annual investment needed to provide services for children of a specific age depending on the selected enrolment rate. It can also compute ECEC staff needs based on the number of hours of weekly provision and child-staff ratios. Additional investment requirements are computed based on current levels of public investment. Estimates based on the simulator suggest that supporting publicly-funded childcare-related leave and universal and free ECEC would require progressive and considerable annual investments, but would translate into substantial economic benefits. Beyond job generation in the ECEC sector, closing childcare policy gaps would also result in enhanced gender equality in employment and wages (ILO, 2023[62]).

Cost of Preschool Quality & Revenue calculator in the United States

The Cost of Preschool Quality & Revenue (CPQ&R) calculator developed by the National Institute for Early Education Research (NIEER) can help users determine costs and funding sources related to implementing high-quality preschool programmes. The tool accounts for the costs of meeting a range of quality standards benchmark and other drivers of programme quality, as well as administrative costs, estimates for infrastructure, transportation and meals costs, etc. Using the cost of high-quality full-day preschool resulting from the CPQ&R tool, the NIEER calculates the additional costs (on top of current spending) needed to provide high-quality, full-day preschool to children aged 4 in different states (focusing on both enrolled children and children not currently enrolled in preschool) (National Institute for Early Education Research, n.d.[63]; Friedman-Krauss et al., 2024[64]).

While early interventions such as high-quality ECEC can be highly cost effective, this may also apply to later interventions (see Chapter 8, (Rea and Burton, 2020[65])). OECD countries could reallocate spending from higher education levels towards the early years. Yet, sustaining investments in compulsory education is needed to ensure that vulnerable children are not left behind. Sustaining funding over the lifecycle matters thanks to the dynamic complementarity between ECEC and school education funding (Johnson and Jackson, 2019[66]) (see Chapter 8). The long-run benefits of increased ECEC spending for children from disadvantaged socio-economic backgrounds depend on the resources available in school years. Increases in school education spending amplify long-term effects of increases in ECEC spending, particularly for vulnerable children. In fact, the combined effects of ECEC and school spending increases on adult outcomes are more significant than the addition of effects derived from isolated investments (Johnson and Jackson, 2019[66]). Likewise, expansion in ECEC access translates into substantial gains for socio-economically disadvantaged students' academic achievement, and these gains persist longer when per-child spending in primary education is higher (Johnson, 2024[67]).

A shared vision at the government level for children's learning, development and well-being can support better alignment of funding strategies with policy objectives. Spending timing, type and target population matter for making investments last (UNICEF, 2023[58]). Co-ordinating policies and objectives at the government level (see Chapter 10) is necessary to ensure public spending is well targeted and to avoid funding inefficiencies through potentially overlapping or insufficiently funded separate programmes.

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10 Co-ordinating early years policies and services

This chapter describes the conditions that can enable success for different types of co-ordination or integration across early childhood policies and services, as well as the challenges to achieving alignment. The chapter provides examples of different policy approaches that aim to promote co-ordination across sectors, looking at whole-of-government strategies and also efforts to work across traditional government silos. It concludes with ways to rethink the boundaries of early childhood education and care, by considering broadly the role ECEC can play for children, families and communities, to support long-lasting effects and promote equity and inclusion.

Key messages

- Co-ordination and integration of services and policies across sectors recognises the many different needs of young children and their families, as well as the many sources of early inequalities. Despite strong rationale for supporting co-ordinated and integrated efforts, impact research on these approaches remains limited due to methodological and implementation challenges.

- Features that enable good co-ordination at the level of services to families include achieving a balance between supportive high-level governance and oversight and local programme flexibility; having strong programme leadership that clearly articulates shared values and goals for co-ordination; and implementing strong communication strategies, including infrastructure and protocols for data sharing and linking at both the individual and service levels.

- ECEC has the potential to be at the centre of integrated and co-ordinated policy and service efforts, given its close connection to families and its critical role for supporting children's development, learning and well-being in its own right. This role can be further enhanced through intentional connections with complementary policies and services for families.

- Policies can rethink the boundaries of ECEC by considering broadly the role ECEC can play for children of a wide age range, families and communities, rather than focusing on ECEC as a single institution serving only children in their early years.

- Intentionally developing ECEC programmes that support parents to foster children's well-being and early learning can amplify and sustain children's positive experiences in ECEC.

- Co-ordination between ECEC and the next stages of the education sector are critical. Strong investments in ECEC and positive outcomes from participation are unlikely to be sustained in the face of lower-quality primary schools or redundancies in learning content.

- ECEC and climate policies are rarely discussed together, although young children and ECEC systems are highly vulnerable to disruptions caused by climate change. Better co-ordination of these areas can support early learning, family well-being and contribute to building ECEC systems and communities that are more resilient to climate change.

- Integrated national policy plans or structures can support co-ordination with other levels of governance and across sectors and services, although best approaches depend on countries' contexts, goals and existing institutions.

- Integrated service hubs can be a meaningful strategy to promote awareness and use of ECEC, as well as to connect families who already participate in ECEC with a range of other services. Such hubs bring together an array of services to support families with young children, and can be organised with different combinations of programmes and tailored goals to match community needs and interests.

- National quality frameworks that are shared across sectors serving early childhood can provide mechanisms for prioritising co-ordination as well as a common language for programmes to use with each other. Every part of the system should be of high quality to achieve positive results.

Introduction

This final chapter discusses how early childhood policies and services can be better co-ordinated to support all children in their early years. It builds on the models of integrated and co-ordinated policies and services (described in Chapter 4) and on evidence throughout this report highlighting the benefits of effective co-ordination. Successful implementation of integrated or co-ordinated service models can offer a range of benefits for children and their families, as well as for service providers. Yet, rigorous evidence of the impact of these service models is difficult to attain due to the multiple mechanisms through which these programmes work. Nonetheless, findings from around the world suggest that links between educational, health and social services can enhance how quickly and efficiently families receive services, promoting equity and inclusion for young children across a range of outcomes (Barnes et al., 2018[1]); (Morrison et al., 2022[2]; Moore, 2021[3]; Wolfe et al., 2020[4]).

This chapter addresses the following overarching questions:

- What conditions can enable success in different types of alignment, co-ordination and integration of early childhood services?
- What are examples of policy approaches that aim to promote co-ordination across sectors and services relevant to early childhood?
- What can policymakers do to support long-lasting effects of ECEC through better system and service co-ordination?

This chapter draws heavily on discussions through meetings and workshops conducted as part of the project "Translating Research into Policies for Quality and Inclusive Early Childhood Education and Care" (see Chapter 2), and particularly the project's third workshop (see Annex A, Workshop 3). To answer the overarching questions, it first identifies features of co-ordinated services that can promote success for these initiatives, as well as barriers to improving equity of opportunity for all children. Different examples of governments making efforts to improve co-ordination are discussed, looking at whole-of-government approaches and high-level co-ordination across traditional government silos. Finally, ways to rethink the boundaries of ECEC that draw on research and policy exchanges are presented, to identify strategies for supporting long-lasting positive effects of ECEC through co-ordinated efforts. Throughout the chapter, ECEC is considered broadly, including the full range of types of provision (e.g. home-based, centre-based) that countries regulate (see Chapter 4).

Co-ordinating early childhood services through systems and governance

Policy and service co-ordination efforts in the early childhood space aim to address the multiple factors that influence children's development, learning and well-being (see Chapter 3). These efforts thus recognise that there is not a single strategy that, on its own, can reduce opportunity gaps for young children. Another goal of co-ordinating services is to better reach families to make ECEC and complementary supports more accessible to all children, reducing systemic barriers that hinder access to services (see Chapter 5). Co-ordination strategies also aim to improve the efficiency and effectiveness of policy investments, to design services that make the most of available resources, avoiding duplication of efforts while layering interventions (see Chapter 9).

With these broad objectives gaining growing policy attention, several recent reviews and assessments from the field from Australia, Europe and the United States have examined which conditions enable success in different types of alignment, co-ordination and integration of early childhood services (Barnes et al., 2020[5]; Honisett S. et al., 2023[6]; Kirby et al., 2022[7]; Moore, 2021[3]; Morrison et al., 2022[2]; Serapioni, 2023[8]; Social Ventures Australia, 2023[9]). Across contexts, enabling conditions tend to include a combination of both top-down, political support and bottom-up, local input and support. Additional

enabling conditions include shared values, strong leadership, and strong communication channels, including for data sharing and use. In addition, all programme components need to be of high-quality in order to support quality at the level of co-ordinated services (see Annex A, Workshop 3). The rest of this section briefly describes these different enabling conditions for co-ordination at the level of services to families, placing them in the context of some of the challenges of this work as well. While integrated early childhood policies and services are meaningful goals in some contexts (see Chapter 4 for further distinction), this section focuses on co-ordinated services. Co-ordinated services are likely more achievable in the short term, with strong potential for measurable outcomes that can inform strategies for moving systems further towards integration, or for continued investments in support of co-ordination.

Balancing top-down and bottom-up approaches

Finding the right balance of top-down and bottom-up conditions to support alignment at the level of programmes and local governance appears to be especially important. This balance can be especially complicated in systems with multiple layers of sub-national governance, requiring co-ordinated action across these different levels (see Chapter 4). High levels of governance (top-down approach) are important for creating favourable regulatory and funding systems that allow for and encourage co-ordination – essentially providing infrastructure for, instead of barriers to, co-ordinated efforts.

However, allowing local governments or programmes to identify specific needs and respond to them through collaborations with various sectors (bottom-up approach), is central to realising another benefit of service co-ordination: developing programmes that are responsive to the needs and preferences of constituents, as well as making services more agile in addressing evolving community needs. Local input and support can also foster innovative solutions and connections, capitalising on existing community organisations and a range of private or non-governmental partnerships. Importantly, for co-ordinated efforts to succeed, families need to trust the professionals they encounter (see Chapter 5); local initiatives are well-placed to understand which professionals are well-regarded in the community and to build rapport with a broader suite of professionals and services through these connections.

Integrated services can be more efficient than services offered in isolation by reducing the need for separate physical facilities and separate administrative support and oversight across several small organisations while avoiding redundancy between services; this may be particularly advantageous for ECEC providers who lack specific training in administration (OECD, 2020[10]) (see Chapter 9). Public spending at the level of sub-national governments is growing across the OECD (OECD, 2023[11]). With local authorities having key funding responsibilities, it is essential to have clearly delineated responsibilities for services for children and families (i.e. good vertical co-ordination), to avoid fragmentation of services or duplicative efforts from different levels of governance (see Chapters 4 and 9). Uncertainty of funding for inter-agency work is a main barrier to the long-term success of stronger integration between ECEC and other sectors.

In addition, bottom-up support (i.e. grassroots and local support) for co-ordinated programmes can be vital for maintaining political interest in these initiatives within jurisdictions. Yet, bottom-up approaches can risk variation in effectiveness related to shifting funding or political priorities, or lack of consistent implementation of programme components as intended. While local flexibility is an opportunity to provide services adapted to the local context, it is challenging to ensure core components are implemented with fidelity to original models (particularly in cases of evidence-based programmes) alongside substantial local adaptations.

Logic models can identify the ways in which vertical co-ordination is expected to work, clarifying responsibilities at different levels of governance. This can avoid unrealistic expectations and burden for lower levels of government, where capacity may be insufficient to independently support co-ordinated efforts. Having local entities develop logic models to identify the aspects of services they are providing that are mutually reinforcing (i.e. good horizontal co-ordination; see Chapter 4) and outcomes frameworks can

help keep co-ordinated efforts linked to broader policy goals and, where possible, the evidence base for their programmes. Attention is needed to measure these efforts, to identify core components of co-ordinated services that need to be present across different bottom-up approaches. This requires careful use of data (e.g. lead indicators; see Box 10.3), connected to the logic model, to enable rapid measurement for services to engage in continuous quality improvement and deliver intended outcomes (see Annex A, Workshop 3).

Shared values and strong leadership

Staff who understand the value of a holistic approach to service provision are crucial for the success of co-ordinated services. Indeed, it seems that the processes and people at the heart of co-ordinated services are what make them successful, creating a "glue" that binds them together, and should not be discounted when designing holistic efforts (Goldfeld, 2023[12]; Social Ventures Australia, 2023[9]).

The burdens on staff working beyond their traditional professional roles are also not always well understood. Adding responsibilities for co-ordinated work is only realistic when staff are given time and support to make this part of their core job functions. Working across professional backgrounds without prioritising a single aspect of the service over others can be challenging, and requires opportunities for providers to come together, to learn from one another, and to adapt to new methods of working compared to more traditional, siloed work. Recognising that it is key for staff to find common ground across different professional paths, to have time for discussion and opportunities to develop a common understanding is crucial.

Despite its value, time for staff to be together and learn from one another adds expense to programmes. Developing the workforce to effectively work across sectors also requires investment. Accounting for these costs is critical to allowing programmes to function in the long run and reducing the likelihood of staff burnout from excessive demands on their time, beyond their core work of delivering services to families and children.

Strong programme leadership is another common feature of successful co-ordinated efforts. Leaders have responsibility for setting a clear vision and communicating it with their staff, as well as for developing partnerships across sectors and establishing working methods with families. They are also often responsible for navigating funding and monitoring requirements across different areas of governance, with implications for organising bottom-up efforts that can sustain co-ordinated efforts.

Communication and data sharing

Co-locating services helps reduce access issues for families seeking services (see Box 10.1), and can be a strong facilitator of better communication among professionals. Working in the same location offers opportunities for staff from different types of services (e.g. health visitors, family support workers) to learn from one another. In turn, this can improve their work through both informal exchanges and by reducing barriers to formal exchanges. Despite these advantages, shared physical space requires upfront and sustained investments that are difficult to realise without support from high-level policies and integrated budgeting (see Chapter 9).

Interprofessional collaboration can be highly valued among practitioners, whose daily work emphasises the intersecting nature of services and policies for families. Nonetheless, different professionals use different languages and this can be a challenge for building bridges across sectors. In addition, different professional statuses can create barriers to collaboration among staff with different backgrounds. This is particularly the case between care and education sectors, where having staff together can highlight the longer hours and lower pay of the former compared to the latter; disparities like this need to be addressed at a national level in order to successfully bring services together (see Annex A, Workshop 3).

A potential barrier to collaborating across sectors relates to data protection and privacy requirements, e.g. health agencies may face particular challenges around communication and data sharing, as health data often have specific legal protections. For this reason, health professionals may be in privileged positions in collaborative efforts, receiving more data from other sectors than they are able to share (see Annex A, Workshop 3). Data privacy is a vital concern across sectors and requires careful consideration and planning to mitigate risks. At the same time, developing appropriate strategies to support children and ensuring that families receive services to which they are entitled without the burden of providing the same data to multiple programmes is an important goal.

Data sharing has different purposes and can be facilitated by understanding different data needs; mechanisms to de-identify data can enable data to be shared more rapidly and regularly for service planning and evaluation. This is in addition to a need for protocols for sharing data that tracks the progress and needs of individual children and their families, which would typically be available to a smaller set of direct service providers. Just as shared physical space is a cost of offering services in a single location, building data infrastructure and protocols to ensure the right data is shared with the right partners at the right time is another aspect that requires investment and shared budgeting (see Annex A, Workshop 3 and Chapter 9).

At high levels of government, staff can likewise come together to learn from one another and break down traditional silos. Furthermore, regular contact between central government officials and stakeholders at different levels (e.g. unions, municipal authorities) can support vertical integration (see Chapter 4). Engaging families as partners in the design and implementation of ECEC and associated programmes has also been found to be an important enabler of successful co-ordinated efforts (Moore, 2021[3]).

Box 10.1. Location of services and experiences for families

Co-locating services can be beneficial for families, particularly for those at socio-economic disadvantage, by reducing barriers to locate and travel to multiple places for different supports (see Annex A, Workshop 3). As virtual services become more common, and as the availability of online resources for parents has grown tremendously in recent years, questions are arising about the role of virtual service co-ordination (Riding et al., 2021[13]). The success of co-located services, whether in person or virtual, likely stems from the capacity of affiliated programmes to work holistically together, moving beyond co-operation to true co-ordination or integration (see Chapter 4).

From 1999 to 2004, Sure Start Local Programmes were implemented in highly disadvantaged neighbourhoods in **England (United Kingdom)**. These programmes focused on the needs of families with children aged up to five years-old, offering health services, early learning, parenting support and parent employment help. The programme expanded to more communities before facing significant cuts in 2010, leading to the closure of many centres. However, recent analysis suggests that the presence of Sure Start centres in the most disadvantaged communities – where the programme was initially targeted – drives benefits that are visible now in both educational and health outcomes for children who lived in those communities (Cattan et al., 2022[14]; Carneiro, Cattan and Ridpath, 2024[15]).

In **Queensland (Australia)**, Early Years Places (EYPs) are provided in more than 50 rural, remote and high-growth communities across the state to make it easy for families to connect with services to support their child's early development. EYPs deliver a mix of integrated services and activities, including playgroups, ECEC, child and maternal health services, and family and parenting support for families with children aged up to eight years-old. In 2023, 19 434 children and 15 388 parents/carers accessed EYPs. Approximately 87% of these parents reported having improved engagement with their children because of the programmes. Parents/carers also reported an increase in confidence in their parenting

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practice, in their knowledge of early childhood development and access to other support services due to their participation in the programmes (Queensland Government, 2024[16]).

In **South Australia (Australia)**, the government has created the Early Years SA app, which is intended as a one-stop-shop for parents, offering trusted information about child health, learning, development and well-being from birth to 5 years-old (Government of South Australia, 2024[17]). The Early Years SA app allows parents to:

- filter information to what parents need based on a child's age;
- record a child's growth;
- get reminders for when child health and development check-ups, immunisation, dental checks are due;
- find out about preschool and school enrolment and connect with early years service providers.

A case study of a programme from the **United States** that utilised virtual service co-ordination in the context of the COVID-19 pandemic found that a universal virtual service application increased access and administrative efficiency. However, insufficient internet access and technology for virtual engagement on the part of families limited capacity for this work. Inability to connect with families in person and connect them in person to additional services was therefore perceived as a limitation (Morrison et al., 2022[2]).

Early childhood in a whole-of-government approach

Integrated policy plans for child well-being are widespread in OECD countries, and are generally viewed as making positive contributions to policy agendas in this area (Dirwan and Thévenon, 2023[18]). Such integrated policy plans aim to provide a framework for co-ordination across government silos and strengthen collaborative efforts. As child well-being is a broad construct that extends beyond early childhood, these integrated policy plans do not necessarily target ECEC specifically; however, they can serve as a mechanism to support stronger co-ordination across the various policy areas that are connected to ECEC.

Comprehensive service models are shaped by their guiding principles, governance structures, and the degree of co-ordination and integration across services. These key dimensions influence how services are utilised, managed and delivered to families. As part of finding a good balance between bottom-up approaches through local collaborations and top-down governance supports, traditional government silos or the methods of working across these silos may need to be re-designed to support implementation of larger scale intersectoral efforts to address early childhood inequalities.

Figure 10.1 provides three examples of how governments are organised to promote co-ordination across a broad range of policies (see also Chapter 4). The examples include: the integration of policies focused on young children through the creation of a specific agency (left panel); support for co-ordinated early childhood services being provided through a national strategy or legislation (centre panel); and high-level co-ordination across traditional governments silos, with the aim of reducing early childhood inequalities (right panel).

There is not one singular model of integration or co-ordination to address early childhood inequalities through national governance that works best in all contexts. The examples in this section provide different considerations, and many need more implementation time to understand what impacts they may have for children and families. When integration or co-ordination efforts are overwhelming for stakeholders, result in duplication with other high-level initiatives, or are not based in shared goals among those involved, they

are unlikely to add value. Indeed, the Slovak Republic recently decided not to renew its integrated policy plan for child well-being for many of these reasons (Dirwan and Thévenon, 2023[18]).

Figure 10.1. Three examples of integration and co-ordination across government bodies
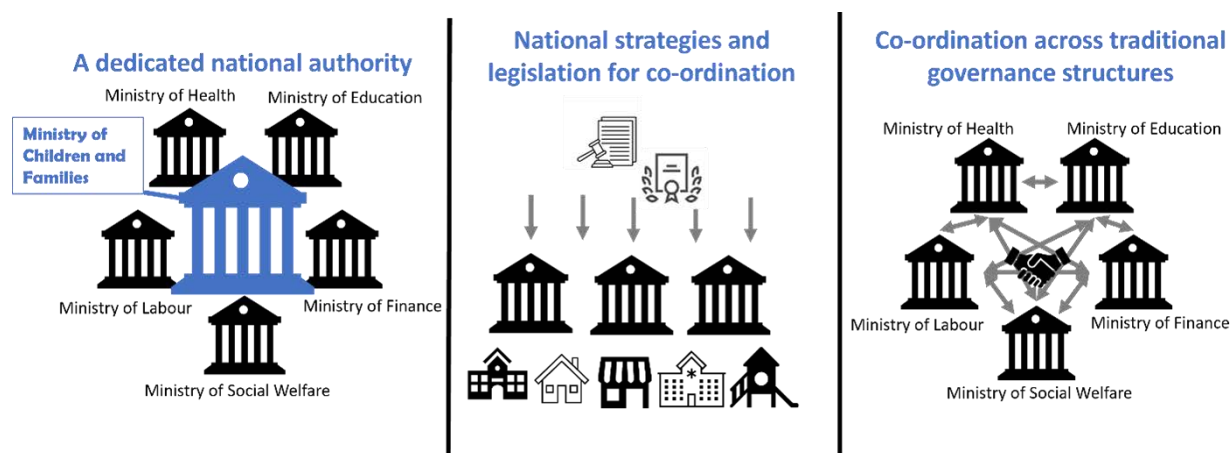
Notes: Ministries named in the figure are representative of those that are often involved in early childhood policy matters, but are not exhaustive of all areas of government that may work on relevant policies. The examples presented here are for illustrative purposes and are not intended to represent any specific countries.

A dedicated national authority for children and families

In April 2023, Japan established the Children and Families Agency. It is unique in the high level of governmental organisation at which it was created – it is an external and independent body of the Cabinet Office, with a dedicated Minister of Children and Families. The Agency has a core value of child-centredness and places the views of children at the centre of its actions, working to reflect them in policymaking at both central and local levels. The Agency is seeking to strengthen active engagement with local authorities and to better connect various child-centred efforts from local governments, organisations and companies, among other actors. Overall, the Agency aims to amplify efforts that shift the societal atmosphere around children, making them a more central focus in general and promoting the idea that children's development can be supported by the entire society.

Breaking silos between ministries to promote this shared vision, focusing especially on children's first 100 months (roughly ages 0 to 8), as well as supporting parents in the prenatal period and children all the way through adolescence, are key strategies to address these overarching goals (Saito, 2023[19]). The Agency can be understood as a type of "control tower" to address issues and challenges faced by children and their families, safeguarding their needs. As such, the scope of work for the Agency is broad and includes areas such as establishing measures to cope with declining birth rates, expanding engagement with ECEC for very young children, child abuse prevention, and support for children with disabilities, among many others.

The Children and Families Agency was established as a result of a report from an advisory committee on the promotion of children's policies, which was tasked to consider the future direction of children's policies and respond to various issues related to children from the perspective of children. Based on the recommendations from the report and following a Cabinet decision, the Japanese Diet (the national legislature) passed legislation establishing the new agency, as well as the Basic Act on Children's Policy, which is intended to comprehensively promote child-related policies. The Basic Act on Children's Policy places responsibility on national and local governments, with efforts from employers and citizens, to ensure children's and families' views are reflected through comprehensive policy and service systems. At their

foundation, these new initiatives that combine legislative and governance reforms are designed to support all children, thereby also reducing opportunity gaps for those who face different types of disadvantage.

Although it is too early to know how the development of the new Children and Families Agency will impact services for children and families, the Basic Act on Children's Policy indicates that after approximately five years of implementation, the government should review progress and identify further steps to promote child-centred initiatives.

National strategies and legislation for co-ordinated early childhood efforts

Australia, Colombia, and Ireland all take the approach of developing a whole-of-government strategy for early childhood, to guide co-ordination across ministries at the national level, rather than assigning responsibility for this co-ordination to a dedicated national authority. Iceland and the United States have implemented national legislation, with a key difference being that Iceland's legislation is intended to take time to implement, and the United States restricted their co-ordinated investment to a limited duration.

Colombia's From Zero to Forever (*De Cero a Siempre*) strategy, launched in 2011, had a primary goal of increasing the quality of ECEC for children ages 0 to 5 from socio-economically disadvantaged homes. The strategy aimed to take an integrated approach to promote holistic child development, providing nutrition, health, care and early education services together (Bernal and Ramírez, 2019[20]). A marked increase in the availability of integrated centre-based care and children's enrolment in these programmes was seen in the years following initial implementation of From Zero to Forever. For children, this seems to have translated into better nutritional outcomes and positive effects on receptive language in the short- to medium-term; however, negative effects in other developmental domains underscore the challenges of ensuring quality of services during rapid expansion and the need for robust research designs to effectively monitor high-level strategies (Bernal et al., 2019[21]; Bernal and Ramírez, 2019[20]).

In Ireland, the First 5 strategy was published in 2018. First 5 is a 10-year strategy (2019-2028) focused on improving systems and supports in the first five years of a child's life, recognising that no single measure can address the full range of child and family needs in this period of the life course (Government of Ireland, 2019[22]). The strategy has a built-in process for review and updates every three years; it is intended to be a living strategy that develops and adapts to the context. The oversight and accountability of First 5 rests with the Cabinet Committee on Social Policy and Public Services, which is comprised of ministers from numerous departments, while national leadership for implementation lies with the Department of Children, Equality, Disability, Integration and Youth. The goals for this strategy include strong and supportive families and communities; optimum physical health and mental health; positive play-based early learning; and an effective early childhood system.

Australia launched its 10-year national Early Years Strategy 2024-2034 in May 2024. Similar to the goals of the Irish strategy, the priority focus areas for Australia are to: value the early years; empower parents, caregivers and families; support and work with communities; and strengthen accountability and co-ordination (Australian Government (Department of Social Services), 2024[23]). The strategy is a 10-year framework to shape how the Australian Government prioritises young children's well-being and delivers strong outcomes for them by creating a more integrated, holistic approach to the early years. The Commonwealth Minister for Social Services and Minister for Early Childhood Education jointly lead implementation of the strategy, in collaboration with other relevant ministers and a senior-level cross-Commonwealth steering committee. A Parents and Carers Reference Group (PCRG) has also been established to inform implementation of the strategy, with a goal of putting the voices of families and children at the centre of policy, programmes and services that affect them.

In Iceland, the Act on the Integration of Services in the Interest of Children's Prosperity (The Prosperity Act) took effect in 2022. This national legislation has a main goal of removing barriers to necessary services for children and families. It does so by considering services in three levels (primary, secondary and tertiary)

to give service providers a better overview of the systems involved and strategies for ensuring all children receive comprehensive and effective services (Government of Iceland, 2023[24]). Primary services include health care, ECEC, primary and secondary school, social services, sports and youth clubs, and extra-curricular activities. By ensuring these services are of high-quality, The Prosperity Act aims to reduce the need for more specific and in-depth services, although it is also a priority to ensure children and families receive the most appropriate level of services.

Implementation of The Prosperity Act is expected to take up to five years and began with creating guiding procedures, regulations and legislative changes (where needed). As of late 2022, many municipalities had already appointed a project manager or steering committee to oversee implementation in their jurisdictions. In some municipalities, improvements were already evident in the speed at which services were available to families, which may be related to the obligation under this new law for service providers to notice and act when children's needs are not being met. In order for service providers to effectively meet this obligation, training is viewed as essential: a one-year diploma programme at the University of Iceland focuses on the legislation and how service providers can implement it in practice. The Quality and Supervisory Authority of Welfare is a special government agency that monitors services to ensure they are provided in accordance with the legislation.

In the United States, the response to the COVID-19 pandemic entailed five pieces of national legislation to mitigate the crisis of growing economic inequality as a result of the health emergency (National Academies of Sciences, Engineering, and Medicine, 2023[25]). This legislation temporarily expanded nutrition assistance programmes, unemployment assistance and child tax credits, and also included economic stimulus payments, help with housing, protection of healthcare benefits, and USD 50 billion in ECEC funding to families, ECEC settings and ECEC staff (Golden and Tseng, 2024[26]), an amount approximately 2.5 times the annual investment in these ECEC programmes (Head Start ECLKC, 2021[27]; Head Start ECLKC, 2021[28]; Office of Child Care, n.d.[29]). This co-ordinated package of policies helped reduce the poverty rate among young children to 6% for the year 2021 compared to 10% in 2020 and 15% in 2019. From 2020 to 2021, levels of hardship and stress reported by families in the United States also fell significantly. The ECEC investments likely prevented this system from shutting down, enabling more families to access these services and more parents to return to the workforce. However, this legislation was designed only to provide short term support to families during the crisis of the pandemic, by allocating one-time supplementary funding to programmes or providing tax relief to households for the year 2021. Data indicate that many of the families helped by these policies are now slipping back into poverty. Stable policies and budgets are needed to achieve lasting impacts (see Chapter 9).

High-level co-ordination across traditional governance structures

This sub-section offers some examples of successful inter-departmental co-ordination at a national level to highlight how it can address specific policy goals. Such approaches have the benefit of being flexible to adapt to immediate needs (e.g. the COVID-19 pandemic) or specific policy priorities, and as such may be of a limited duration, or narrower in scope than whole-of-government strategies.

In France, the First 1 000 Days (*Les 1 000 premiers jours*) programme emerged in 2020 inspired by a report on the topic (Commission des 1000 premiers jours, 2020[30]); the initiative takes a multi-dimensional approach across three pillars of child development (nutrition, physical environment, social and emotional bonds), requiring cross-cutting policies. Its main priorities are to create good conditions for the development of very young children and to fight inequalities. The programme has a strong focus on supporting pregnant people, recognising the importance of prenatal development and the inequalities already present before a child is born (see Chapter 3). The First 1 000 Days is led through the Ministry of Social Affairs and not only works across ministries at the national level, but also across levels of governance, engaging regional and municipal authorities (i.e. both horizontal and vertical co-ordination, see Chapter 4).

Materials from the First 1 000 Days programme were widely disseminated in a short timeframe, with all first-time parents from October 2021 to the end of 2023 receiving an information booklet, and communications surveys showing 60% of target populations were familiar with the campaign (Iron, 2023[31]). In addition, 30 First 1 000 Days centres were established across the country, between 2021 and 2023, to support parents as well as partnerships among professionals working in related services. These quick developments were attributed to the critical role of the report that launched the initiative and that created a set of shared values to motivate co-operation across sectors. The leadership from a single ministry was also viewed as a strength, assuring a high-level political sponsor to support local co-ordination, foster bottom-up strategies and stimulate ongoing interest from other ministries and levels of governance.

In Germany, integration of ECEC and health data permitted early detection of COVID-19 cases during the height of the pandemic, enabling more ECEC settings to stay open throughout the pandemic, even when specific groups were closed within a structure. The data sharing between Germany's Daycare Registry and a collaboration with Federal Ministry of Health allowed careful surveillance of COVID-19 cases and tracking of preventative measures, also yielding key insights to the importance of wearing a mask and vaccines for protecting both children and staff. Regular contact with stakeholders at different levels (e.g. unions, municipal authorities) and good co-ordination between the national agencies made this model successful (Kalicki, 2023[32]).

In addition to the Early Years Strategy in Australia, many other efforts are underway to build bridges across government agencies. Connected Beginnings is a place-based programme that draws upon the strength and knowledge of Indigenous communities to increase Indigenous children and families' engagement with health and ECEC (Australian Government, 2024[33]). It is jointly funded across portfolios and jointly administered by the Department of Education and the Department of Health and Aged Care, who fund Aboriginal Community Controlled Health Services within Connected Beginnings sites. The programme works closely with Indigenous communities to identify early childhood priorities for change, and to increase participation in quality and culturally-appropriate early childhood services and programmes. The programme is delivered in collaboration with Aboriginal and Torres Strait Islander partners and advice. Once expanded to its committed 50 sites by June 2025, it is anticipated that around 20% of Indigenous children in Australia will be living in a community with a Connected Beginnings site available to them.

Available evidence suggests the importance of considering the number of agencies involved in co-ordinated efforts: a study in the United States looked at dispersion of responsibilities for ECEC governance across states and compared this with children's early reading skills in the year before entry to primary school (Jenkins and Henry, 2016[34]). Results show the optimal number of state-level government agencies involved in the ECEC policy space is around four to promote children's reading outcomes; with either fewer or more agencies, children's reading skills were weaker at the state-level. This suggests that highly centralised governance in the early childhood space may not always be ideal, but neither is too much fragmentation across agencies. Once again, the goals of each piece of the system need to be considered to ensure they can be effectively addressed through the governance approach that is applied. Interestingly, there is a parallel in terms of providing multiple services to families at the same time, with benefits plateauing at around four or five services (Goldfeld, 2023[12]) (see Annex A, Workshop 3).

Rethinking the boundaries of ECEC

Drawing from the available evidence on promising strategies for co-ordinating and integrating services, this section identifies ways in which policies can reconsider the boundaries of ECEC to promote stronger alignment across service areas, with the complementary goals of enhancing the quality of ECEC, reducing early inequalities and supporting long-lasting, positive effects of ECEC for children.

Calls for greater co-ordination across early childhood services are longstanding (Black et al., 2017[35]; Thévenon et al., 2018[36]; Kirby et al., 2022[7]). There is a strong rationale for combining services, given the multiple needs of young children and the numerous sources of early inequalities (see Chapter 3). Yet, the degree of co-ordination or integration that is most effective depends on the specific goals set by governments, as well as on the broader social, political and cultural contexts in which policies or programmes are implemented. These additional factors must be considered as part of planning co-ordinated early childhood systems.

Focusing on parenting and parents

ECEC can be a powerful mechanism for supporting child development beyond ECEC settings. Given the importance of the home environment (see Chapter 3), intentionally developing ECEC programmes that can support parents to foster children's well-being and early learning can amplify and sustain children's positive experiences in ECEC, beginning from very early ages (see Chapter 8).

Targeting parenting skills to improve children's social, emotional, academic and behavioural skills has a long and relatively successful history. A review of 46 randomised controlled trials of preventive parenting interventions reported positive effects on a wide range of outcomes from 1-20 years following the intervention (Sandler et al., 2011[37]). Interventions that demonstrate long-term impacts from infancy and early childhood target specific aspects of parenting, particularly warmth and responsiveness, and show success with parents facing multiple forms of disadvantage (Molloy et al., 2020[38]).

The specific ways in which parenting programmes and resources for parents are integrated into the core work of ECEC settings can be different, according to the needs of families and the local context. ECEC can support parents in relatively simple ways. For example, strong links between the home and ECEC settings through regular communication and opportunities for parents to connect with staff and one another has widespread benefits even without more intensive, dedicated parent programming (Small, 2010[39]). Learning about child development and the work of ECEC staff through their children's ECEC settings can help families feel more connected to their children and better understand aspects of their children's development; knowledge of child development is associated with more effective parenting strategies (National Academies of Sciences, Engineering, and Medicine, 2016[40]).

Parents may also feel more connected to their communities when they have opportunities to exchange with one another and with staff at ECEC settings on a regular basis (Sadownik and Višnjić Jevtić, 2023[41]). This can have positive impacts on parental well-being and mental health, with likely spillovers to their interactions with their children. Furthermore, these benefits of exchange and engagement are bidirectional: When ECEC staff engage with parents to learn about children and their family's lives outside of ECEC, they become better equipped to build connections and enhance their practice with all children (McWayne, Melzi and Mistry, 2022[42]). This, in turn, contributes to maintaining or improving the quality of ECEC programmes and can also be a mechanism for encouraging and sustaining participation in ECEC, as it increases familiarity with and trust in these programmes among families (Jose et al., 2020[43]); (see Chapter 5).

Yet, the role of parents in ECEC is often viewed as limited, given the importance of ECEC as a support for parents who are working or furthering their education and training. By considering ECEC as a programme for parents as well, the ECEC sector can play a stronger role in supporting families more holistically and extending participatory benefits beyond the walls of the ECEC setting. Different components and opportunities can be made available that accommodate different goals and needs of parents. Some aspects may fit easily with parental working hours, such as providing opportunities for conversation at drop-off and pick-up times, or including a home visiting component adapted to family availability. Other components may be tailored to parents who are not engaged in employment or education: these parents may benefit from co-ordinated training or employment services, or they may simply have availability to engage in parenting skills programmes or community groups while their children are attending ECEC.

When parents perceive their ECEC centres as a welcoming space, they are also likely to be receptive to other affiliated services, even if these are not necessarily co-located. To capitalise on this, in Iceland, service co-ordinators are based in settings that families already access, such as healthcare and ECEC settings. These service co-ordinators support the implementation of Iceland's Prosperity Act, which states that all children in Iceland are entitled to primary level (preventive) services (see more on Iceland's Prosperity Act above), with a goal of ensuring high-quality across all services to mitigate the need for further interventions. However, more targeted services are available to ensure that more complex needs are addressed. Service co-ordinators help families find the most appropriate set of supports, reducing barriers to accessing additional services. In this model, service co-ordinators can act as "interpreters" across different types of service providers, supporting parents to navigate across the different professional languages used in various service sectors (e.g. health, social services, education; see Chapter 4 and Annex A, Workshop 3).

Building on community-based programming

Integrated service hubs, where families can learn about ECEC options while engaging with other supports, can be a meaningful strategy to promote awareness and use of ECEC. Such service hubs bring together an array of services to support families with young children and can be organised with different combinations of programmes and tailored goals (see Chapter 4). By combining services in ways that are relevant to specific community needs and interests, ECEC can be delivered in a culturally responsive manner and promoted through services that are already well-established and trusted. For these reasons, health services can be a strong central component of hubs – there is widespread availability of healthcare access for children (i.e. access to routine health check-ups) across OECD countries (Riding et al., 2021[13]), giving the system good reach to vulnerable populations, with relatively high levels of trust in communities.

Service hubs can effectively address different barriers to participation in ECEC, particularly by providing a soft entry point to education and care services, with which families facing adversity may not otherwise engage (see Chapter 5). For example, lower-educated parents may have weaker ties to the labour market, creating barriers to accessing paid ECEC programmes as well as supressing demand (Wood, Neels and Maes, 2023[44]). Migrant families may lack social connections in their new communities that can facilitate enrolment processes and encourage trust in ECEC institutions (Shuey and Leventhal, 2018[45]). Ethnic minority families may also lack trust in ECEC institutions and their staff (Mitchell and Meagher-Lundberg, 2017[46]); (see Chapter 5). Combining early childhood programming with refugee and asylum-seeker services is a promising strategy to reach this particular group of vulnerable children (Moore, 2021[3]). Combining health services (for both children and parents) with ECEC programmes or prioritising ECEC access for families involved in the child welfare system are additional strategies to address needs for and barriers to ECEC among populations facing different types of disadvantages. At the same time, hubs need strategies to avoid segregating services according to the different types of child and family needs that are addressed.

Integrated service hubs are uniquely positioned to adapt to the different types of needs in the communities they serve by conducting regular needs assessments and tailoring programmes accordingly, including developing services that can flexibly adapt to the local context. This process of engaging families to understand their needs and their goals for their children is critical for sustaining demand for programming and, ultimately, for ensuring programme quality. Moreover, building these dialogues reduces the risk that programmes reinforce social and cultural inequalities by assuming parents in less advantaged circumstances lack parenting skills, compared to more advantaged parents who may interact with staff and programmes in ways that are more familiar to the service providers (Schmidt and Alasuutari, 2023[47]).

Including a core set of standard services (i.e. ones that are available across all communities) can generate better public understanding of what service hubs are, what they can do and who they serve, which is important to promote broad use among community members (Serapioni, 2023[8]; Carneiro, Cattan and

Ridpath, 2024[15]). Such core services can also help ensure children are meeting developmental milestones and are referred to additional, specialised services as needed, even when families do not participate in ECEC. Within service hubs that provide universal, core services to all families, targeted interventions can significantly improve outcomes for vulnerable populations by providing the right support at the right time (Barnes et al., 2011[48]); (see Chapter 6). The implementation of the Prosperity Act in Iceland accounts for this possibility of targeted intervention by including service co-ordinators in multiple types of service settings.

A single point of contact for services has been shown to facilitate easier access for parents, streamlining enrolment processes and making services more efficient in identifying and addressing multiple needs of children. In many models, this means there are several entry points to linked services, or a "no wrong door" approach that ensures families find an appropriate suite of services, regardless of whether they initially seek healthcare, ECEC or another type of service. These models often operate in designated geographic zones, using co-location of at least some services to promote co-ordination among professionals as well as facilitate families' access. Promise Neighbourhoods in the United States and Sure Start in the United Kingdom are examples of such place-based initiatives; programmes in Germany (*Frühe Hilfen)* and the Flemish Community of Belgium (*Huizen van het Kind*) are similarly designed to co-ordinate an array of services for families with young children, targeted to the local community (Serapioni, 2023[8]). There are also many other ways to co-ordinate ECEC with additional community-based services (see Box 4.3).

In Australia, the National Child and Family Hubs Network is a national, multidisciplinary group that seeks to strengthen service hubs, offering a shared framework that can unite otherwise separate initiatives. This high-level co-ordination aims to strengthen the work of community-based hubs, enhance research on these multidisciplinary efforts and promote health and well-being for children and families (Murdoch Children's Research Institute, 2023[49]). The network was created in response to growing interest in service hubs in jurisdictions across Australia (as of 2024, there are around 460 such hubs in Australia) (Murdoch Children's Research Institute, 2023[50]). It is a forum where these initiatives can benefit from peer learning and knowledge exchange and access supports to continue their work in direct service of children and families.

Extending the age range

As suggested by the previous two sections, ECEC can be thought of as more than a programme serving young children. Focusing on parents and on a broader range of services opens the possibility of considering ECEC for very young infants, as part of a co-ordinated service for new parents that could start even during the prenatal period. Strengthening co-ordination across ECEC for children of different ages, as well as extending the role of ECEC services and goals into the primary school years, recognises the integrated nature of families' needs for support throughout this period. It also recognises that inequalities can be reinforced when more vulnerable children experience more transitions or receive less support around their transitions compared to their peers from more advantaged backgrounds (OECD, 2017[51]).

Countries organise ECEC provision and define its age bounds differently, with some countries separating services for children under age 3 from those for older children. This distinction often aligns provision for children under age 3 more with a health and care perspective (e.g. Bulgaria, France), which can work well if this encourages stronger co-ordination with prenatal, health and broader parenting and family services. In contrast, ECEC systems that are integrated from children's entry into the system until the start of primary school are often the responsibility of a ministry of education (although this is not necessarily the case), and a social welfare ministry oversees the full ECEC system in some countries (e.g. Germany). Moreover, even when the full age range of ECEC is the responsibility of the same ministry, there can still be divides in regulations and oversight for different age groups or purposes (e.g. Luxembourg).

Concern about inefficiencies and inequalities of split ECEC systems (i.e. separate governance for different parts of the ECEC system) has prompted several countries to move towards integration in recent years (e.g. Italy, Korea). An important disadvantage of split systems is that they often reflect a historical view that

children are not learning before age 3 or 4 (a notion strongly dispelled by research, see Chapter 3). Thus, requirements for staff training are generally lower for this youngest age group, as are other aspects of quality (e.g. curriculum frameworks may not exist). In addition to addressing these disparities, integrating across levels of ECEC may support more sustainable funding for services for children under age 3. In systems that have tried to progressively extend the age range of ECEC downward, such as by expanding entitlements or regulations to cover 3-year-olds or 2-year-olds, evidence suggests that services for younger children become more tenuous as funding is redirected towards more education-oriented programmes for older children, potentially to the detriment of access for low-income families in particular (Cohen et al., 2021[52]; Stoney, 2015[53]). However, equitably expanding access within a split ECEC system can be achieved in the context of clear goals (Gonzalez, Sabol and Schanzenbach, 2024[54]).

Thus, goals for integration or shifts in the focal age range for parts of the system require careful consideration of the effects on the broader system of ECEC, as well as implications for additional services and systems. If integration of ECEC systems for children of different ages is done partially or in stages, careful attention is needed to the impact on complementary services and systems. In other words, co-ordinated policy approaches are needed to avoid unintended consequences across the range of sectors that are relevant for early childhood (see Chapter 4). As discussed, the best approaches to co-ordination (or integration) depend on countries' contexts, goals and existing institutions – why and how integration or co-ordination are prioritised and implemented is of central importance (Bennett and Kaga, 2010[55]).

Recognising families' need for care outside of school hours opens the possibility of considering the ECEC sector as having a role to play throughout childhood, including through primary school. Many countries already organise out-of-school time and ECEC services in the same administrative units, often with shared oversight and funding functions. This provides a foundation for also considering how to co-ordinate and align the experiences of children and families who interact with both of these types of programmes. This alignment can be through programme standards, objectives, shared professional learning opportunities or shared curricula, as is the case in Luxembourg's non-formal education sector (OECD, 2022[56]). These types of co-ordination efforts could be particularly beneficial to children's experiences, offering a source of continuity across stages of development.

Co-ordination between ECEC and the next stages of the education sector are also critical. Strong investments in ECEC and positive outcomes from participation are unlikely to be sustained in the face of low-quality primary schools or redundancies in learning content (see Chapter 8). Improving the complementarity of ECEC and primary education can help ensure that the benefits of high-quality ECEC are sustained as children grow. Indeed, findings from the United States suggest that investments in an early childhood programme targeted to low-income families are most efficacious when coupled with access to better-funded public schooling, highlighting the critical interplay of co-ordinated investments in ECEC and primary education for children from socio-economically disadvantaged families (Johnson and Jackson, 2018[57]); (see Chapters 8 and 9).

Programmatic co-ordination, such as through aligned curricula and pedagogical approaches, is likely to improve the coherence and efficacy of both ECEC and primary school for children. Recognising the value of play and child-centred practices for children in primary school – to some degree extending ECEC into later levels of schooling – could be one step towards bolstering connections between these two sectors. ECEC and primary school can have sharp distinctions as a result of the overall organisation and governance of these sectors, with staff or teacher qualifications contributing to many differences. Increasing professional training requirements for ECEC staff and developing the sector to become more similar to the education sector in terms of quality can have benefits for young children, if done with recognition of the ways in which young children learn (i.e. through play and interaction rather than through lectures or worksheets; see Chapter 3). There is also ample room for schools to learn from ECEC approaches to hands-on and active learning that can be lacking particularly in the educational experiences

of school-aged children from socio-economically disadvantaged backgrounds (National Academies of Science, Engineering and Medicine, 2023[58]).

In Japan, the *Kakehashi* (bridge) programme aims to smooth children's transitions between ECEC and primary school (Special Committee on Bridging ECEC and Primary School Education, 2023[59]). Projects under the programme have been carried out in selected municipalities since 2022. Primary school teachers in municipalities that participated in the projects, compared to those that did not, reported a change in mindset that included more attention to building on children's previous learning experiences in ECEC and integrating more play and life experiences into their lessons. In addition, more participating municipalities reported fewer children reluctant to attend primary school compared to reports from non-participating municipalities. Based on these results, Japan plans to further promote the implementation of this programme nationwide.

Schools tend to be well understood as community entities, and therefore offer a logical place for building co-ordinated services and capitalising on institutional trust. However, outreach is needed to families through other venues to ensure beneficial services reach children and their parents before the age of compulsory schooling. One example of centring co-ordinated services in schools is the Our Place model in **Victoria (Australia)**, which is the result of a public-private partnership between a philanthropic organisation and the state government. Our Place identifies its role as "the glue" that facilitates partnerships and enables a primary school to be a central place for accessing support services, ranging from ECEC to child and adult health services, playgroups, adult education, and well-being services.

Building climate resilient, family-centred environments

ECEC policy and climate policy are seldom discussed together, although young children and ECEC systems are highly vulnerable to disruptions caused by climate change (Cuartas et al., 2024[60]). For example, young children are particularly susceptible to diseases that are exacerbated by global climate change (Akachi, Goodman and Parker, 2009[61]). Extreme weather events, such as heat waves, droughts, severe storms and related flooding, as well as air quality concerns, are becoming increasingly prevalent. These types of events pose risks to the health and safety of young children both outdoors and indoors, where built environments have rarely accounted for this evolving reality, as well as posing risks to ECEC systems and infrastructure.

In addition, disadvantaged communities and individuals are disproportionately at risk of being affected by these climate-related adversities (Islam and Winkel, 2017[62]). As such, climate change may contribute to the opportunity gaps for young children from disadvantaged backgrounds by exposing them to less favourable environmental conditions, and even limiting their exposure to ECEC if settings are forced to close more often due to lack of resources for addressing these conditions, such as safe spaces in extreme heat or poor air circulation and filtration in the context of contagious illnesses. ECEC settings are at risk of closures and restrictions (e.g. limiting outdoor play) due to extreme weather and poor air quality (Waters and Chachra, 2023[63]).

Co-ordination of infrastructure and urban planning policies along with ECEC policies would go a long way to improve conditions for young children in the face of climate change. There is growing attention to many aspects of the intersection between early childhood and urban environmental policies, such as the ways in which playground surfaces can limit rain water absorption or the lack of trees for shade in many play environments that can contribute to dangerously high temperatures (Katsavounidou, 2021[64]; Lehnert et al., 2024[65]). Designing public spaces and ECEC settings to be supportive of children, families and ECEC professionals in the context of shifting environmental conditions will be a critical direction for future investments to reduce inequalities and ensure the durability of efforts to build equitable systems.

Another way in which early learning and play can be promoted in the built environment is through creating community spaces that encourage interactions between children and parents, such as with interactive

games or puzzles located in bus stops, grocery stores and libraries (Hadani, Winthrop and Hirsh-Pasek, 2021[66]). Transforming communities to promote children's play and early learning can support developmental outcomes for vulnerable children both within and outside of ECEC facilities. Moreover, designing urban spaces with and for families offers opportunities to achieve key environmental goals, protecting and enhancing children's prospects for outdoor play in the context of climate change.

High-quality ECEC recognises the importance of developing children's gross motor skills, and opportunities for physical movement and engagement with the natural environment. Outdoor play space design criteria developed in the context of ECEC have been adopted for a wider age range of children across countries (Brussoni, 2020[67]). Creating equitable opportunities for young children to learn about and engage with the environment has an important place in ECEC, particularly in the context of declining time for play (see Chapter 3).

Countries have started to incorporate environmental awareness in their ECEC curricula, and education for sustainable development is also compatible with the values of inclusivity and cultural responsiveness that are central to high-quality ECEC (OECD, 2021[68]; Pearson and Degotardi, 2009[69]). Continuing to develop these as areas for exploration and learning in ECEC settings can have an important role in developing children's connections to and interest in caring for the environment. Place-based education refers to pedagogies that are community-based, situating teaching and learning in the real-world contexts of ECEC settings and where children live. It is therefore an approach that is well-situated to building on an appreciation or cognitive knowledge of the natural environment that can be fostered through curricular goals by adding action-oriented and practical skills to children's repertoire (Nusche, Fuster Rabella and Lauterbach, 2024[70]). This approach can also be enhanced by connections between ECEC settings and other community-based programming, drawing on these other programmes and resources to bolster families' connections to local environmental issues and opportunities for action.

Active and engaged learning fostered through place-based approaches is valuable for encouraging agency among young children. This agency is critical to addressing climate anxiety and the mental health impacts of growing up amidst marked climate change (Sanson and Masten, 2024[71]). It requires strong co-ordination efforts at the community level to implement this type of early learning approach. Australia and Canada are both making efforts to develop programmes around early childhood pedagogies and environmental sustainability, including through a particular focus on supporting Indigenous communities and learning (Box 10.2).

Box 10.2. Embedding sustainability learning and outdoor play in early childhood education and care

In **Australia**, *Belonging, Being and Becoming: The Early Years Learning Framework* (EYLF) was refreshed and an updated version released in February 2024 (Australian Government Department of Education, 2022[72]). The updated version includes a new sustainability principle, to support ECEC staff (educators) to provide opportunities for children to learn about all the interconnected dimensions of sustainability. In addition to a new focus on engagement with the natural environment and outdoor spaces, educators are encouraged to foster understanding that sustainability goes beyond learning in nature and being involved in nature conservation. Children are supported to appreciate that sustainability embraces social and economic sustainability as well as environmental sustainability, and to engage with concepts of social justice, fairness, sharing, democracy and citizenship. The update includes exploration of the ties of Aboriginal and Torres Strait Islander cultures to the land and the ways in which the Traditional owners cared for and sustained the land and waterways.

Since 2019, the Government of **Canada** has funded numerous projects designed to explore, test and develop tools, models and programmes to build resiliency in children through outdoor learning and play,

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as well as physical literacy (i.e. the motivation, physical competencies and confidence to be physically active for life) (Physical Literacy, n.d.[73]). These projects were developed with a longer-term strategy of sharing results so that best practices and positive impacts could be maximised after the funding ended. One funded initiative was with the University of Winnipeg Student Association (UWSA) Daycare; this project developed an outdoor play area for Indigenous learning and programming for children (targeted at all children attending the centre) and delivered professional training to staff, to support them in understanding Indigenous culture and transferring this understanding to children in the centre. In consultations with the Indigenous Advisory Circle, the outdoor space was designed to serve children in the UWSA Daycare through weekly activities, as well as the community at large (The University of Winnipeg, 2023[74]).

Developing integrated data systems

Data are vital to inform service needs and plan for expansions and improvements to better and more equitably serve young children and their families. As noted earlier in this chapter, however, access to data and sensitivities or restrictions related to data sharing can be a barrier to successful co-ordination across sectors. Of the 26 countries that responded to the OECD's 2022 ECEC in a Digital World Policy Survey, more than half indicated that improving the integration of data systems for information sharing and co-operation across sectors serving young children and families was of "high" or "very high" importance (OECD, 2023[75]). The consensus around this as a policy priority highlights governments' awareness of the importance of integrated data systems, as well as the fact that developing and implementing these systems is not straightforward.

For some services, sharing of individual-level data on programme beneficiaries is vital to the overall mission of the co-ordinated effort, for example, to facilitate families accessing services to which they are entitled. Yet not all data needs are the same, and at many levels of system co-ordination, aggregate or de-identified data are sufficient for planning and evaluation needs. Carefully considering the goals of data sharing can support the development of integrated data systems that sustainably inform stakeholders while protecting personal data. For example, health data are often governed separately and more strictly than other forms of data. While protecting individual data must be a priority, creating systems that work within the legal and ethical requirements of relevant sectors can reduce perceived barriers to data integration.

The OECD Recommendation on Enhancing Access to and Sharing of Data (2021[76]) is the first internationally agreed-upon set of principles and policy guidance on how governments can maximise the cross-sectoral benefits of all types of data while effectively protecting stakeholders' rights. The Recommendation is relevant for high-level planning and governance around data use and co-ordination across sectors that serve young children and their families; this type of enabling policy environment that facilitates data sharing and prioritises protections can promote better data strategies at lower levels of governance and at the level of programmes themselves. The Recommendation advocates for a whole-of-government approach to data sharing to meet societal, public and legal objectives.

In developing integrated data systems to address early inequalities, it is important that attention is given to the types of data that will be most informative for ongoing service planning. Often, data systems function to satisfy reporting and funding requirements, making them difficult to connect to one another due to specificities of these requirements as well as definitions related to key populations. Future data efforts need to be mindful of the burden associated with data collection and maintenance, identifying strategies to support these processes and mitigate the additional demands placed on service providers.

Box 10.3. Integrated data systems to support early childhood policies and programmes

Different types of data and collaborations can be leveraged to mitigate early childhood inequalities. In **Australia**, the Restacking the Odds initiative focuses on five services that have been shown to support disadvantaged children: prenatal care, sustained nurse home visiting, ECEC, parenting programmes and the early years of primary school (see Annex A, Workshop 2) (Murdoch Children's Research Institute, 2023[77]). Restacking the Odds has developed a set of "lead indicators" that these programmes can use to collect and share better data on their services, with the aim of using data across services to make better-informed policy, funding and programme decisions. The initiative is also working to support capacity for data collection and use across frontline providers and ensuring incentives are in place to continue these data collections and their responses in a sustained and consistent manner. See below for example indicators.

Example indicators from the Restacking the Odds initiative

Service	Example of lead indicator	Potential action	Example of outcome indicators
Home visiting	% of prenatal and early post-partum visits where education and support on breastfeeding is offered	Ensure programme guidelines require nurses to provide early education and support, ideally before birth	% of women who breastfeed
ECEC	% of children attending ECEC 15 hours per week or more in the 2 years before schooling starts	Overcome barriers to ECEC access through outreach to underrepresented families	Proportion of children who are developmentally on track in health, development, learning and well-being at school entry
Primary school	% of early grades classroom teachers who provide parents with strategies to use at home when reading with their children	Ensure teachers are provided with appropriate reading and learning packs to distribute for home reading	% children at expected level of reading

Research from **Denmark** illustrates how administrative datasets can be used to estimate predictive risk models to more efficiently target early childhood interventions (Paul, Bleses and Rosholm, 2023[78]). Aligned with similar literature (see Chapter 3), the authors find that information available at the time of children's birth (children's sex and parent education and income) tends to be highly predictive of adult outcomes (at ages 28 to 33); they find limited additional predictive power by adding information from the early childhood years, which is more costly to collect. The authors suggest using risk scores developed with administrative data in combination with human judgement to effectively target early childhood interventions to children facing the greatest vulnerabilities.

Integrated data systems are being developed to serve different purposes at different levels of governance in the **United States**. Data from one integrated system has been used to help the city of Philadelphia identify areas of the city with a high proportion of young children facing developmental risks (e.g. low birthweight, low maternal education, homelessness) as well as areas lacking supply of high-quality ECEC. It was estimated that expanding high-quality ECEC for universal coverage would cost nearly USD 400 million. As this level of funding was not available, the city prioritised investing approximately USD 60 million to build ECEC capacity in the neighbourhoods identified through the integrated data set as having the highest need and least access to high-quality ECEC (Fantuzzo et al., 2021[79]).

Investments in data infrastructure may be necessary to reduce duplicative efforts and facilitate both data collection and use. Such investments should be guided by data logic models that articulate which data are needed and by whom in order to deliver the desired outcomes, whether these are at the level of service provision to individuals or more aggregate levels for service planning, monitoring and ongoing quality

improvement (see Annex A, Workshop 3). Ultimately, data systems are a tool to track inequalities and to identify strategies for closing gaps between children in the early years.

Implementing national oversight through quality frameworks and funding for co-ordination

As this chapter and report have described, ECEC is just one among many levers in the landscape of policies to address early childhood inequalities, which are multi-dimensional and related to a broad range of factors. The effectiveness and sustainability of ECEC policies is conditioned on their interplay with other support systems for young children and families, and on their alignment with other education policies. Every part of the system should be of high quality to achieve positive results: while co-ordination is important, it can do little to address inequalities if the co-ordinated components are not of adequate quality (see Chapter 6). For these reasons, developing national oversight for ECEC that includes multi-sectoral quality frameworks is an important strategy for supporting co-ordination at lower levels of governance and at the programme level. In addition, dedicated funding for co-ordination is needed to ensure that collaborative efforts do not become an afterthought or low priority for practitioners (see Chapter 9).

National quality frameworks encompassing all sectors serving early childhood – those that involve programmes from different ministries and agencies rather than focusing exclusively on one aspect of ECEC (e.g. pre-primary education) – can provide mechanisms for prioritising co-ordination, as well as a common language for programmes to use with one another. Such frameworks can also offer a common vision for a country's children and families, contributing to better coherence across initiatives and over time. In addition, national oversight can support a consistent level of quality across local areas with different levels of disadvantage (OECD, 2023[11]). These national frameworks can still allow for important levels of local control and flexibility to be responsive to particular community and family needs. Data systems that support monitoring and continuous quality improvement at the programme level can ensure that local flexibility is balanced with national oversight in ways that meet programme goals and quality standards.

In addition to the dedicated funding needed for the ECEC sector described in Chapter 9, national governments can support intersectoral co-ordination through funding. Such funding could be used towards integrated data systems, or for joint training programmes for ECEC staff and professionals from other sectors to learn together and from one another. A common perceived barrier to collaboration is a perception that ECEC staff are not professionals in the same way as teachers, nurses, social workers or other service providers. Thus, in addition to cross-sectoral training opportunities, continuing investments in the ECEC workforce are needed to raise the status of this critical profession (see Chapter 6).

In many ways, these types of investments can be considered the "glue" that holds together co-ordinated services (Goldfeld, 2023[12]). This "glue" refers to the working methods and processes of co-ordinated work behind the services provided to families. These aspects of co-ordination may be part of professional duties in many fields, but must not be overlooked in terms of the staff time, training needs and organisational investments required to achieve successful co-ordination across sectors. While many of the facilitators of co-ordination discussed in this chapter are suggested by research to be important components of this "glue," there is a need for further research on which elements are critical to sustain long-term co-ordination and to make it most effective in addressing early childhood inequalities.

Recognising that a single sector, programme or provider cannot address early childhood inequalities on its own, high-level policies and national commitments to support co-ordinated services are needed to support long-lasting positive effects of ECEC. ECEC remains a critical and central pillar of supporting children's development, learning and well-being in its own right, and one that stands to be further enhanced through intentional connections with complementary policies and services for families.

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Annex A. List of project workshops

The OECD project "Translating Research into Policies for Quality and Inclusive Early Childhood Education and Care (ECEC)" organised a series of workshops throughout 2023-24 to promote regular and structured exchanges between experts from multiple disciplines and members of the OECD Network on ECEC, on the theme of achieving equity and inclusion through ECEC.

As part of a collaborative knowledge mobilisation process, the workshops brought together representatives of the OECD Network on ECEC and the project's expert group, proving opportunities for repeated and structured interactions in hybrid and virtual formats. Besides supporting evidence-informed policy discussions, the workshops served to present relevant policy initiatives across countries and jurisdictions and to discuss their implementation challenges.

Workshops for Stage 1 and Stage 2

First Workshop (30 June 2023): Achieving equity and inclusion through ECEC: What research can bring to policies

Session 1. Achieving equity and inclusion through early childhood education and care (ECEC): What are the main recent research developments and findings from various disciplines that can be relevant for ECEC policy?

- The contribution of economics: *Childhood inequality and adult inequality*. Mr Kjell G. Salvanes, NHH Norwegian School of Economics, Norway.

- The contribution of psychology and developmental science: *Achieving equity and inclusion through early childhood education and care: What research can bring to policies*. Ms Stephanie M. Jones, Harvard University, United States.

- The contribution of neurosciences and paediatrics: *Cognition and education through early childhood*. Ms Ghislaine Dehaene-Lambertz, INSERM-CEA Cognitive Neuroimaging Unit, France.

Session 2. Achieving equity and inclusion through early childhood education and care: What are countries' priorities? Roundtable among the OECD ECEC Network.

Session 3. Achieving equity and inclusion through early childhood education and care: How research can inform policies. Roundtable among experts.

Second Workshop (5 October 2023): Understanding and addressing gaps in participation and quality of ECEC

Session 1. Gaps in participation in ECEC.

- *The Matthew Effect in childcare: How modern family policies may amplify social inequality*. Mr Wim van Lancker, Katholieke Universiteit Leuven, Belgium.

- *The knowing and doing of addressing equity gaps in* ECEC. Ms Sharon Goldfeld, Royal Children's Hospital and Murdoch Children's Research Institute, Australia.

- *Socio-economic gaps in access to childcare: Causal evidence on determinants and consequences*. Mr Henning Hermes, ifo Institute Munich, Germany.
- *Determinants of the socio-economic status gap in early childcare enrolment in France*. Ms Laudine Carbuccia, LIEPP Sciences Po, France.

Session 2. Differential impacts of ECEC. Gaps in quality and features of ECEC that matter (most) for children from disadvantaged backgrounds.

- *ECEC quality and its impact on the cognitive and socio-emotional development of children*. Mr Carlo Barone, LIEPP Sciences Po, France.
- *Access to quality ECEC depending on socio-economic background in Chile*. Ms Marigen Narea, Pontificia Universidad Católica, Chile.
- *ECEC and child development for children varying in disadvantage*. Mr Edward Melhuish, University of Oxford, United Kingdom.
- *Diverse ECEC settings and variation in indicators of* quality. Mr Carlos González-Sancho, OECD.

Third Workshop (6 December 2023): Co-ordinating services and organising ECEC provision

Session 1. Research perspectives.

- *The successes and challenges of evaluating multi-sector universal* systems. Ms Sharon Goldfeld, Royal Children's Hospital and Murdoch Children's Research Institute, Australia.
- *Inter-agency working to reduce inequality: evidence from* Europe. Ms Jacqueline Barnes, Birkbeck, University of London, United Kingdom.
- *Research and evaluation of co-ordinated services for children and families in the United States*. Ms Kathleen Dwyer, Senior Research Analyst, Office of Planning, Research, and Evaluation, Administration for Children and Families, Department of Health and Human Services, United States.

Session 2. Recent policy developments.

- *Iceland's Prosperity* Act. Ms Björk Óttarsdóttir, Senior Adviser, Ministry of Education and Children, Iceland.
- *Japan's Children and Families Agency*. Mr Kiyoshi Saito, Director, Policy Planning on Early Child Growth Division, Growth Bureau, Children and Families Agency, Japan.
- *France's 1 000 premiers jours de l'enfant*. Ms Mayalen Iron, Project Director, General Secretariat of Ministries Responsible for Social Affairs, France.
- *Germany's Daycare Registry*. Mr Bernhard Kalicki, Professor, Children and Childcare Department, German Youth Institute, Germany.

Fourth Workshop (8 April 2024): Supporting inclusion in ECEC settings: Addressing children's needs through pedagogical and organisational practices

Session 1. Approaches to identifying children's needs and monitoring their well-being, development and learning.

- *Observe, Reflect and Improve Children's Learning (ORICL): A new tool for educators working with children from birth to two years*. Ms Linda Harrison, Macquarie University and Charles Sturt University, Australia.

- *Empowering ECEC teachers working with young children at-risk for developmental disability: Development of a teacher form of the Korean Screening Index for Early Development (K-SIED)*. Ms Eun Jin Kang, Korea Institute of Child Care and Education, Ms Hyewon Park, University of Ulsan, and Ms Kyung Ok Lee, Duksung Women's University, Korea.

Session 2. Professional competencies and staff teams to address diverse children's needs.

- *Supporting ECEC professionals' competences in dealing with* diversity. Mr Paul Leseman, Utrecht University, Netherlands.

- *Inclusive practices for supporting the implementation of quality inclusion in ECEC*. Ms Elena Soukakou, University of Roehampton, United Kingdom.

- *Teamwork and collaboration in developing inclusive practices in early childhood education communities*. Ms Noora Heiskanen, University of Eastern Finland, Finland.

Session 3. Curriculum and pedagogical practices to address diversity and promote inclusion.

- *The science and practice of social and emotional learning in early childhood*. Ms Stephanie Jones, Harvard University, United States.

- *Multilingual curriculum and pedagogies in* ECEC. Ms Claudine Kirsch, University of Luxembourg, Luxembourg.

- *Reggio Emilia: a child-led curriculum to develop dialogue in early childhood education*. Mr Cristian Fabbi, Reggio Children and Loris Malaguzzi International Centre, Italy.

Fifth Workshop (22 May 2024): Long-term equity and inclusion through ECEC

Session 1: Research perspectives (I): Long-lasting effects of ECEC: evidence, mechanisms and policy implications.

- *Using evidence of long-terms ECEC effects for policymaking*. Mr Henrik Daae Zachrisson, University of Oslo, Norway.

- *Unsettled science on longer-run effects of early education in the United States*. Mr Greg Duncan, University of California at Irvine, United States.

Session 2: Research perspectives (II): Sustainable funding for equitable and inclusive ECEC.

- *Investing in care policies and decent care jobs for a more gender equal world of work*. Ms Laura Addati, International Labour Organisation.

- *The growth of private market mechanisms in ECEC systems: equity challenges and resistance*. Ms Eva Lloyd, University of East London, United Kingdom.

Session 3: Recent policy developments: Allocating funding for enhanced equity and quality.

- *Building equity and quality: A collaborative approach to funding ECEC in Canada*. Mr Christian Paradis, Federal Secretariat on Early Learning and Child Care, Employment and Social Development, Canada, and Ms Nicole Gervais, Department of Education and Early Childhood Development, New Brunswick, Canada.

- *Raising Preschool Quality through the Singapore Preschool Accreditation Framework (SPARK)*. Ms Tan Gim Hoon, Early Childhood Development Agency, Singapore.

- *(Long-lasting) Funding mechanisms for equity and development of quality and data systems in Finnish* ECEC. Ms Kirsi Alila, Finnish Government.

Workshops for Stage 3

Sixth Workshop (18 June 2024): Organising and funding ECEC systems and services for equal opportunities

Session 1. Integrated ECEC Services.

- *Obstacles and levers to get to a more integrated system in a split context. Thoughts from the Flemish ECEC-system*. Mr Jan De Mets, VBJK (Centre for Innovation in the Early Years), Flemish Community of Belgium.

- *An integrated approach to the ECEC sector in Italy*. Ms Cristina Stringher, National Institute for the Evaluation of the Education and Training System, Italy.

Session 2: Funding models for equity in early childhood education participation.

- *Funding models to support equity and inclusion within ECEC systems: some reflections*. Ms Eva Lloyd, University of East London, United Kingdom.

- *Understanding the financing model for education and childcare services in Luxembourg*. Mr Marco Deepen, Ministry of Education, Children and Youth, Luxembourg.

Session 3: Inter-governmental collaboration and co-ordinated services for equity in early childhood.

- *Everything everywhere all at once: the challenges of integrating services for equitable early childhood development*. Ms Sharon Goldfeld, Royal Children's Hospital and Murdoch Children's Research Institute, Australia.

- *Co-ordinated services and cooperation – Early Childhood Education and Care (ECEC) in Norway*. Ms Tove Mogstad Slinde, Ministry of Education and Research, Norway.

Seventh Workshop (14 October 2024): Supporting inclusion and diversity in ECEC services through policies that are most proximal to children

Session 1: Policies to ensure that ECEC systems support children with special educational needs through inclusive practices.

- *Overview of key challenges and policy responses*. Ms Eva Björck-Åkesson, Jönköping University, Sweden.

- *Inclusion in ECEC settings in Ireland: Access and Inclusion Model (AIM)*. Ms Aoife Collier, Department of Children, Equality, Disability, Integration and Youth, Ireland.

- *Policies to ensure that ECEC systems support children with special educational needs through inclusive practices*. Ms Maria José Saragoça, Ministry of Education, Portugal.

Session 2: Policies to support social, cultural, and linguistic diversity across ECEC settings through inclusive practices.

- *Overview of key challenges and policy responses*. Mr Michel Vandenbroeck, Ghent University, Flanders, Belgium.

- *Kōwhiti Whakapae - Supporting home languages and culture in Early Childhood Education*. Ms Esa Samami, Ministry of Education, New Zealand.

- *Policies to support social, cultural and linguistic diversity across ECEC settings through inclusive practices*. Ms Milena Lauer, Berlin Early Years Institute, Germany.

Annex B. Technical annex

Data informing the *Starting Strong VIII* report and its supplementary outputs (country notes) were derived from various sources:

1. project workshops (see Annex A);
2. secondary analysis of various international datasets.

Country notes

Country notes were produced for the five countries that engaged in the policy review in greater depth: Australia, Bulgaria, Ireland, Japan and Korea. These country notes follow a standardised format and address a common set of issues but vary in focus, as they explore questions deemed of particular relevance to these countries. The notes were prepared by the OECD Secretariat and reviewed by the countries. The preparation of the notes followed the same methodological procedures implemented for the main report.

Technical notes on statistical analyses

Statistically significant differences

Figures 1.5, 3.5, 3.6, 5.1, 5.2, 5.3 and 6.1, and Table 1.2 present results from tests for statistically significant differences between estimates to understand whether observed differences in sampled data are likely to represent actual differences within the population. Consequently, for each sample estimate, there is an associated degree of uncertainty expressed in a standard error.

In this report, differences among sample estimates are labelled as statistically significant when a difference would be observed less than 5% of the time if there were no difference in corresponding population values (statistical significance at the 95% level). In other words, the risk of reporting a difference as significant when such difference, in fact, does not exist, is contained at 5%.

Reported standard errors and differences between estimates were calculated in line with the methodology of each of the source databases; and considering independence between groups or lack thereof.

Associations between variables

Figures 1.5, 5.6 and 9.3, and Table 1.1 present an association between two variables. For each pair of variables, the association is calculated as a linear regression, and coefficients are estimated using Ordinary Least Squares. When controlling for another variable, this variable is added as an independent variable in the regression, and its results are not presented.

In Figure 1.5 and Table 1.1, the estimates shown correspond to the linear regression coefficients. In Figures 5.6 and 9.3, the fitted line represents the regression coefficient graphically, while the value shown corresponds to the r-squared value associated with the linear regression. Since the regression is bivariate, the r-squared value corresponds to the squared value of the correlation between the two variables.

Secondary data sources

OECD Teaching and Learning International Survey (TALIS) Starting Strong 2018

Figure 7.3 relies on data from TALIS Starting Strong 2018, a large-scale international survey that focuses on the ECEC workforce. Questionnaires were administered to staff and leaders to collect data on their characteristics, practices at work and views on the ECEC sector, with an emphasis on aspects that promote conditions for children's learning, development and well-being.

Nine countries participated in TALIS Starting Strong 2018: Chile, Denmark, Germany, Iceland, Israel, Japan, Korea, Norway and Türkiye. All of these countries collected data from staff and leaders in pre-primary education (ISCED Level 02) settings. In addition, four of the nine countries (Denmark, Germany, Israel and Norway) collected data from staff and leaders in settings serving children under age 3. For each level of ECEC in which these countries participated, the study aimed to survey a representative sample of ECEC staff and centre leaders.

Data in Figure 7.3 refer to data on diversity of children within ECEC centres. Presented data show the percentage of centres whose leaders reported 10% or more of the children in the setting each having one of the following characteristics: children from socio-economically disadvantaged homes, children with special education needs, children with a different first language, and children who are refugees. Several dimensions of diversity can accumulate within a given ECEC centre. Data for ECEC settings for children under age 3 are limited to centre-based settings to ensure comparability with ISCED 02 (home-based settings are excluded). Denmark did not meet the technical standards on response rates; its results are therefore not shown in Figure 7.3.

For more information, see the *TALIS Starting Strong 2018 Technical Report* (OECD, 2019[1]).

OECD International Early Learning and Child Well-being Study (IELS)

Figure 3.2 relies on data from IELS, an international survey that assessed the skills of children at age 5 attending early childhood education centres or schools in Estonia, the United Kingdom (England) and the United States in 2018. The study aimed to identify key factors that drive or hinder the development of early learning.

IELS data in Figure 3.2 are disaggregated by various measures of children's social and economic backgrounds. Information on parental/guardian's education comes from the parent questionnaire, with levels of parental education classified following ISCED. The measure of socio-economic status (SES index score) was derived nationally, based on three indices: i) highest parental occupational status of parents; ii) highest educational level of parents (in years of education according to ISCED); and iii) household income. The number of books in the home refers to the number of children's books that parents reported as present in the home environment. Disadvantaged refers to families in the bottom quartile of the national distribution of the socio-economic status (SES) index, whereas advantaged refers to families in the top SES quartile nationally.

For more information, see the *IELS Technical Report* (OECD, 2021[2]) and the *Improving Early Equity* report (OECD, 2022[3]).

OECD Programme for International Student Assessment (PISA) 2015 and 2022

Figures 1.4, 1.5 and 3.5, and Tables 1.1 and 1.2 rely on data from the PISA 2015 and 2022 assessments. PISA is a triennial test and survey of 15-year-old students that assesses the extent to which they have acquired key knowledge and skills in mathematics, reading and science that are essential for full participation in social and economic life. In addition, PISA uses student questionnaires to collect

information from students on various aspects of their home, family and school background, and school questionnaires to collect information from schools about various aspects of organisation and educational provision in schools. PISA 2015 was conducted in the current 38 OECD member countries (members have increased since 2015: Lithuania joined in 2018, Colombia in 2020, and Costa Rica in 2021) and 34 partner countries and economies, whereas PISA 2022 was conducted in 37 OECD member countries (all but Luxembourg), and 44 non-OECD member countries and economies.

Results in these Figures and Tables refer to students' socio-economic background, measured through the PISA index of economic, social and cultural status (ESCS). This index is based on three variables related to family background: i) parents' highest level of education (PAREDINT); ii) parents' highest occupational status (HISEI); and iii) home possessions, including books in the home (HOMEPOS). Data for these Figures and Tables refer to students as "advantaged" or "disadvantaged". A socio-economically disadvantaged (or advantaged) student is a student in the bottom (or top) quarter of the ESCS index in their own country. The socio-economic gap for a variable refers to the difference in value for that variable between advantaged and disadvantaged students. To make PAREDINT scores for PISA 2015 comparable to PAREDINT scores for PISA 2022, new PAREDINT scores were created for each student who participated in previous cycles using the coding scheme used in PISA 2022. These new PAREDINT scores were used in the computation of trend ESCS scores. Estimates obtained with this methodology may deviate slightly from estimates in international PISA reports published before 2022 or in national reports.

Results in Figures 1.4 and 1.5, and in Table 1.1 refer to students' participation in ECEC. Students were asked about their participation in ECEC and the amount of time they participated. In Figure 1.4 and Table 1.1, the socio-economic gap is calculated for 2015 and 2022, and countries are classified as "increased gap" where the difference grew more than 3 percentage points between 2015 and 2022, "no change" where the difference was between -3 and 3 percentage points, and "narrowed gap" where the difference changed by a number less than -3 percentage points (equivalent to narrowing by more than 3 percentage points). Data from PISA and the European Union Statistics on Income and Living Conditions (EU-SILC) in Figure 1.4 and Table 1.1 are not directly comparable, as questions on participation in ECEC in the two surveys are different and target different respondents (students versus parents), and the surveys follow different methodologies.

For more information, see the *PISA 2015 Technical Report* (OECD, 2017[4]) and the *PISA 2022 Technical Report* (OECD, 2024[5]).

OECD Family Database

Figures 1.1, 4.4, 5.6 and 9.7 rely on data from the OECD Family Database. The database contains cross-national indicators on family outcomes and policies across OECD countries, partners, and EU member states. It includes indicators on the structure of families, families' labour market position, public policies for families and child outcomes.

Data in Figure 1.1 show poverty rates, which are defined as in the OECD Income Distribution Database: the percentage of the national population living under the poverty threshold, excluding lump-sum payments. The poverty threshold is set at 50% of the median disposable income in each country (relative threshold). Child poverty is defined as the percentage of families with 0-17-year-olds with an equivalised household disposable income below the poverty threshold.

Figure 5.6 refers to data from the OECD Family Database, Indicator PF3.2, on ECEC enrolment for 0-2-year-olds. Data for 0-2-year-olds generally include children enrolled in early childhood education services (ISCED 2011 Level 0) and other registered ECEC services (outside the scope of ISCED 0, because they are not in adherence with all ISCED-2011 criteria), except for

- Denmark, Finland and Spain (enrolment in ECEC only for ISCED 0 services).

- Belgium, Czechia, France, Hungary, Greece, Ireland, Italy, Latvia, Luxembourg, the Netherlands, Poland, the Slovak Republic, Switzerland, the United Kingdom, Bulgaria, Croatia, Cyprus, Malta and Romania (enrolment in ECEC regardless of whether services are ISCED 0 or recognised).
- The United States (enrolment in ECEC regardless of whether the services are paid, registered or ISCED 0).

Data for Bulgaria, Croatia, Czechia, Denmark, Greece, Iceland, the Netherlands, Poland, the Slovak Republic, Slovenia, Spain and Sweden refer to 2017; data for Argentina, Australia, Austria, Brazil, Chile, Colombia, Estonia, France, Germany, Hungary, Italy, Korea, Lithuania, Mexico, Norway, Romania, Türkiye and the United Kingdom refer to 2018; data for Japan refer to 2019; data for New Zealand and Portugal refer to 2020; and data for Latvia refer to 2021.

Figures 4.4 and 9.7 refer to data on social expenditure per child. The data do not always fully capture non-central government spending. Cash benefits are adjusted for direct tax, but in-kind benefits and spending on education are not. Health-related spending by age is omitted since it lacks comparability across countries. Data for family benefits include cash benefits (family allowances, maternity and parental leave, and other cash benefits), and benefits in kind (ECEC, home help/accommodation, and other benefits in kind).

See the *OECD Family Database* Indicator PF3.2 (OECD, 2024[6]) and *Social Expenditure Database Manual* (OECD, 2019[7]) for more information.

OECD Net Childcare Costs Indicator and Tax-Benefit Model

Figure 5.5 relies on data from the OECD Net Childcare Costs Indicator and Tax-Benefit model. Data reflect the gross childcare fees and net costs of full-time care in a typical childcare centre for a two-earner two-child family, where both parents are aged 40, in full-time employment and the children are aged 2 and 3. The components of the cost are shown separately, even when they are deducted in practice, and they are all considered in the calculation of the net childcare costs. The data are based on the following definitions and assumptions:

- Gross earnings for the two earners in the family are set equal to 100% of average earnings for the first earner, and 67% of average earnings for the second earner. Both parents are assumed to be working full-time. Average earnings/the average wage (AW) refers to the gross wage earnings paid to average workers, before deductions of any kind (e.g. withholding tax, income tax, private or social security contributions and union dues).
- Families are assumed to use full-time centre-based care.
- Gross childcare costs are the fees charged to parents after any public subsidies received by the provider but before any fee reductions or discounts provided to users based on their characteristics.
- Childcare benefits are childcare allowances or fee rebates that are explicitly designed to reduce the financial costs of childcare.
- Impacts in taxes include tax concessions conditional on childcare use or childcare expenses, as well as other changes in taxes resulting from childcare use.
- Impacts in other benefits show the changes in all other benefits (except childcare benefits) resulting from childcare use, notably the loss of homecare allowances, which usually require recipients to not use formal childcare services, thus increasing the net childcare costs.
- Where benefit entitlements change over time, calculations refer to the second month of benefit receipt. If housing benefits are included in the calculations, these are calculated assuming a household renting in the private market paying rent equal to 20% of the average wage. Rent levels are the same for all family types.

- Net childcare costs are calculated as the difference in "family net income" between a family that uses centre-based childcare services and an otherwise identical family that does not. Family net income is the sum of gross family earnings plus cash benefits, minus income taxes and social contributions paid by workers. The methodology takes into account gross childcare fees, childcare-specific supports designed to reduce the costs faced by parents, and the interaction between childcare-specific policies and any other tax and benefit policies. Results are then presented in percentage of average earnings.

Where benefit rules are not determined on a national level but vary by region or municipality, results refer to a "typical" case. Concerned countries have data based on a region or municipality instead of the whole country: Australia (New South Wales), Austria (Vienna), Belgium (French Speaking Community), Croatia (Zagreb), Czech Republic (Prague), Estonia (Tallinn), Germany (Berlin), Greece (Athens), Hungary (Budapest), Iceland (Reykjavik), Italy (Rome), Latvia (Riga), Lithuania (Vilnius), Norway (Oslo), Poland (Warsaw), Slovak Republic (Bratislava), Spain (Madrid), Sweden (Stockholm), Switzerland (Zurich), United Kingdom (England), United States (Michigan).

For more information, see OECD Net Childcare Cost Indicator and the OECD *TaxBEN: Tax and Benefit simulation model: Methodology, user guide and policy applications* (OECD, 2024[8]), and the OECD calculator of taxes and benefits.

OECD Education at a Glance (EAG)

Figures 1.3, 1.4, 4.2, 6.2, 9.1, 9.2, 9.3, 9.4, 9.5 and 9.6, and Table 1.1 rely on data from the OECD EAG. EAG is a source of data on the state of education for OECD member, partner and accession and countries. It is produced annually since 1997, and covers indicators on the output of educational institutions, the impact of learning, access, participation and progression in education, investment in education, and teachers, the learning environment, and the organisation of schools. Data from EAG used in Starting Strong VIII were taken from the 2012, 2014, 2017, 2018, 2022, 2023 and 2024 editions of EAG.

Figure 1.3 refers to the enrolment rates in education by age for 0-5-year-olds in 2022. This indicator is taken from the OECD EAG 2024 report, table B1.1, for all countries except Bulgaria. Data for Bulgaria are taken from the EAG 2024 database, updated on 25 November 2024, due to an update of population data.

Figure 1.4 and Table 1.1 show enrolment levels in both ECEC (ISCED 0) and primary education (ISCED 1) at age 4 by country from EAG 2018 Table B2.1b, the latest data available for this indicator. However, the data source, indicator or year of reference differ for some countries:

- For Brazil, Denmark, New Zealand and the United Kingdom, data for 2005 comes from EAG 2017, Table C2.1.
- For Australia, Greece, Korea and Sweden, data from 2005 comes from EAG 2014, Table C2.1.
- For Argentina and Ireland, the year of reference differs from 2005: 2010; and comes from EAG 2012, Table C2.1.
- For Bulgaria and Croatia, the year of reference 2015 differs: 2013; the age group of 4 differs: 3 to 5; and the education level differs from ISCED 0 and ISCED 1: only ISCED 0. The data source is EAG 2022, Table B2.1.

In Figures 9.1 and 9.2, related to trends on expenditure, Australia was omitted due to a number of changes in data sources and methodology in 2019 that caused a significant break in the series.

Figures 9.2 and 9.3 refer to data on private expenditure on education. Private expenditure can be categorised according to sources of education funds: expenditure by households and expenditure by other private entities. Expenditure by households includes transfers to households and students used for tuition fee payments to educational institutions, payments for ancillary services provided by educational institutions, and costs borne by private households for the purchase of educational goods and services

outside of educational institutions. It excludes the living expenses of students. Expenditure by other private entities consists of direct payments to educational institutions and subsidies to students or households. Data are shown after public transfers, which includes household subsidies and subsidies to other private entities.

Figures 6.2 and 9.3 show data referring to private institutions, that comprise government-dependent and independent institutions. A government-dependent private institution is one that receives 50% or more of its core funding from government agencies or whose teaching personnel are paid by a government agency. An independent private institution is one that receives less than 50% of its core funding from government agencies and whose teaching personnel are not paid by a government agency.

Figures 9.4 and 9.5 show data on public expenditure on education. Public expenditure is defined as spending by public authorities at all levels, excluding expenditure not directly related to education, unless the activities/services are provided as ancillary services by educational institutions. It includes expenditure on education by other ministries or equivalent institutions, as well as subsidies provided to households and other financial entities which can be attributable to educational institutions or not. It can come from central (national) government, regional governments or local governments. Inter-governmental transfers of funds are transfers of funds specifically designated for education from one level of government to another. They are defined as net transfers from a higher level to a lower level of government.

Figure 9.6 shows data on salaries of pre-primary teachers relative to earnings of tertiary-educated workers. Data refer to the ratio of salary, using annual average salaries (including bonuses and allowances) of full-time teachers in public institutions relative to the earnings of workers with similar educational attainment (weighted average) and to the earnings of full-time, full-year workers with tertiary education, for pre-primary education. Where the year of reference for the earnings of tertiary-educated workers and the salaries of teachers differ, the earnings of tertiary-educated workers have been adjusted to the reference year used for salaries of teachers using deflators for private final consumption expenditure. Annual salaries are provided in national currencies and converted into USD using purchasing power parity for private consumption.

For more information, see *Education at a Glance 2012* (OECD, 2012[9]), *Education at a Glance 2014* (OECD, 2014[10]), *Education at a Glance 2017* (OECD, 2017[11]), *Education at a Glance 2018* (OECD, 2018[12]), *Education at a Glance 2022* (OECD, 2022[13]), and *Education at a Glance 2024* (OECD, 2024[14]); as well as the *Sources, Methodologies and Technical Notes* (OECD, 2024[15]), and the *Handbook for Internationally Comparative Education Statistics* (OECD, 2018[16]) for definitions.

OECD Income Distribution Database

Figures 3.3 and 3.4 rely on data from the OECD Income Distribution Database (IDD). The IDD contains data on levels and trends in income inequality and poverty. It is updated on a bi- or tri-annual basis. The latest available version, used for Starting Strong VIII, was the July 2024 update.

These Figures are based on equivalised household disposable income, measured as the income after taxes and transfers, adjusted for household size. Data in Figure 3.3 refer to income inequality, which is measured through the Gini coefficient on household disposable income. The Gini coefficient expresses the difference between the cumulative share of households and the cumulative share of disposable income. The coefficient varies between 0 (where all the population has the same income) and 1 (where all income goes to one individual). Data in Figure 3.4 show poverty rates, which are defined as the percentage of the national population living under the poverty threshold, excluding lump-sum payments. The poverty threshold is set at 50% of the median disposable income in each country (relative threshold).

The data shown in each Figure correspond to the following years:

- Data shown for 2022 refer to 2022 for all countries except: Costa Rica and United States (2023), Japan, Switzerland (2021), Australia and Germany (2020); Denmark, (2019); Iceland (2017). 2022 data for the Netherlands and 2023 data for the United States are provisional.

  - Survey estimates for 2020 are subject to additional uncertainty and are to be treated with extra caution, as in most countries the survey fieldwork was affected by the Coronavirus (COVID-19) pandemic.

- Data shown for 2019 refer to 2019 for all countries except Australia, Japan and Mexico (2018); Chile (2015 and 2017); Iceland (2016).
- Data shown for 2007 refer to 2007 for all countries except Chile (2009); Australia, France, Germany, Israel, Mexico, Norway, Sweden and the United States (2008); Brazil and Japan (2006).
- Additionally, for Romania, the value of goods produced for own consumption was excluded from the income definition due to methodological issues.

For more information, see the *OECD Framework for Statistics on the Distribution of Household Income, Consumption and Wealth* (OECD, 2013[17]), and the *OECD Income Distribution Database* (OECD, 2024[18]).

European Agency Statistics on Inclusive Education (EASIE)

The EASIE database is the data collection activity of the European Agency for Special Needs and Inclusive Education, an independent organisation that facilitates collaboration between education ministries of its 31 member countries and jurisdictions across Europe. The Agency provides an international report with indicators on access and placement in inclusive education for levels from pre-primary to upper secondary, based on the International Standard Classification of Education (ISCED). Data from EASIE in Starting Strong VIII is taken from the 2020/2021 cross-country report.

Figure 7.2 is based on data from EASIE on children with an official decision of special education needs (SEN) and their enrolment in mainstream ECEC. The enrolment rate (in percentage) of children with an official decision of SEN in inclusive education is calculated as the number of children with an official decision of SEN educated with their peers in mainstream groups for 80% or more of the time, divided by the overall number of children with an official decision of SEN at the pre-primary level. The identification rate (in percentage) of children with an official decision of SEN is calculated as the overall number of children with an official decision of SEN, divided by the number of children enrolled in any form of recognised education at the pre-primary level (ISCED 02).

For more information, see the *European Agency Statistics on Inclusive Education: 2021/2022 School Year Dataset Cross-Country Report* (European Agency for Special Needs and Inclusive Education (EASIE), 2024[19]).

Eurostat – European Union Statistics on Income and Living Conditions (EU-SILC)

Figures 1.3, 5.1, 5.2, 5.3, 5.7 and 6.1, and Table 1.1 rely on data from Eurostat's EU-SILC, an instrument that collects comparable cross-sectional and longitudinal microdata on income distribution, poverty and social exclusion, as well as policies on poverty and living conditions. The data used in Starting Strong VIII referring to 2023 correspond to EU-SILC 2023 for all countries, except for Germany (2022) and Switzerland (2021); data referring to 2010 correspond to EU-SILC 2010 for all countries.

These Figures and Tables show data on inequalities in ECEC participation by income tertile. Income based on EU-SILC data is measured as equivalised disposable household income (variable: EQ_INC): the disposable (post tax and transfer) income of the household divided by the number of household members in equivalised adults (using the OECD equivalence scale). Disadvantaged children refer to children who are in a household in the lowest tertile of income; advantaged children are children who are in a household

in the highest tertile of income. The socio-economic gap is the difference in value for advantaged and disadvantaged children.

Figure 1.4 and Table 1.1 present data from EU-SILC on gaps in participation in ECEC based on EU-SILC household data on children's current participation in ECEC (variable: RL010). Participation is reported as a weighted average for 3-5-year-olds. The socio-economic gap is classified as "narrowed" if its reduction over time is of at least 3 percentage points; "increased" when the gap widens by at least 3 percentage points; and "no change" when it is between -3 and 3 percentage points. When EU-SILC data are not available, they are replaced by data from PISA. Data from EU-SILC and PISA in Figure 1.4 and Table 1.1 are not directly comparable, as questions on participation in ECEC in the two surveys are different and target different respondents (students versus parents), and the surveys follow different methodologies.

Figures 5.1, 5.2, 5.3, 5.7 and 6.1 rely on data on participation in one or several of the different types of ECEC and informal care. The types are:

- Regulated centre-based and home-based ECEC (variables: RL010, RL020, RL040): refers to children using regulated centre-based services (e.g. nurseries or day care centres and preschools, both public and private), organised family day care, and care services provided by (paid) qualified childminders organised and controlled by a structure, regardless of whether the service is registered or ISCED-recognised.
- Unregulated childminder care (variable: RL050): refers to children using care services provided by childminders who are not organised and controlled by a structure (e.g. babysitters, au pairs).
- Informal care (variable: RL060): refers to children benefitting from unpaid care provided by grandparents, household members other than parents, other relatives, friends or neighbours.
- After-school care (variable: RL030): refers to children benefitting from care in centre-based services outside preschool hours – only the hours of care before and after preschool are reported (cultural and sport activities outside preschool hours, such as a club, music lessons, etc. are not included as far as they are not used as a childcare service but rather for the child's leisure).

For more information, see the variable descriptions in the scientific use files of the EU-SILC 2024 data release (Eurostat, 2024[20]). The responsibility for all conclusions drawn from the data lies entirely with the authors.

International Association for the Evaluation of Educational Achievement's (IEA) Progress in Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS)

Figures 3.6 and 7.1, and Tables 1.1 and 1.2 rely on data from TIMSS 2011 and 2019. TIMSS is an international assessment of student achievement in mathematics and science at the fourth and eighth grade levels, conducted every four years since 1995. In TIMSS 2011 at the fourth-grade level, 52 countries and 7 benchmarking entities (jurisdictions) participated in the assessment. In TIMSS 2019, 58 countries and 6 benchmarking entities (jurisdictions) participated in the fourth-grade assessment. Where TIMSS was not available, data were taken from PIRLS 2011 and 2021. PIRLS is an international survey on students' reading achievement in fourth grade, conducted every five years since 2001. PIRLS 2011 had 48 participating countries and 9 benchmarking entities (jurisdictions), while PIRLS 2021 had 57 participating countries and 8 benchmarking entities (jurisdictions). For both TIMSS and PIRLS, data used in Starting Strong VIII refer to fourth-grade students (approximately 10-year-old students, depending on countries' education institutions). The only country referring to data from both TIMSS (2011) and PIRLS (2021) is Canada for participation in ECEC.

Both surveys comprise five context questionnaires, which collect information about the students' lives and the home and school context in which students learn. All Figures based on TIMSS and PIRLS in Starting

Strong VIII use data from the context questionnaires (for socio-economic background, ECEC attendance, multilingualism, and early literacy and numeracy activities), and Table 1.2 uses data on assessment scores as well. Some countries do not have available data for one or more of these context questionnaires, even when they participated in the assessments, and are therefore not shown in the Figures. Standard errors on all surveys were calculated according to the methodologies described in the user guides and used 150 replicate weights for their calculation to make estimates comparable across trends.

Data in Table 1.1 and in Figure 7.1 refer to participation in ECEC for more than two years. ECEC attendance is derived from the early learning survey questionnaire, answered by parents. Data from TIMSS/PIRLS, EU-SILC and PISA in Table 1.1 are not directly comparable, as questions on participation in ECEC in the three surveys are different and target different respondents (students versus parents), and the surveys follow different methodologies.

Results in Figure 3.6 and Table 1.2 refer to students' socio-economic background, measured with the Home Resources for Learning scale (variable: ASBGHRL). The scale is built from the responses to five items: i) number of books at home; ii) number of home study supports (taken from student responses in the student context questionnaire); iii) number of children's books at home; iv) highest level of education of either parent; v) highest level of occupation of either parent (taken from parent responses in the early learning survey questionnaire). A socio-economically disadvantaged (or advantaged) student is a student in the bottom (or top) quarter of the ESCS index in his or her own country. The socio-economic gap for a variable refers to the difference in value for that variable between advantaged and disadvantaged students.

Data in Table 1.1 refer to the association between attendance of ECEC for more than two years and mathematics scores. The association is classified as having increased when the increase over time was of at least 5 score points, as having decreased when the decrease over time was of at least 5 score points, and as not having changed when the change over time was between +5 and -5 score points.

Results in Figure 3.6 refer to high frequency of early literacy and numeracy activities. This frequency is measured using the early literacy and numeracy activities scale (variable: ASDHLNT). This scale is built from parent responses in the home questionnaire to 18 items on the frequency of activities they conducted with their children before primary school at home. Students were classified as "often" on this scale if their parents report conducting 9 of the 18 activities often and the other 9 "sometimes", on average.

Data in Figure 7.1 refer to multilingual children. This variable is built from parent responses in the early learning survey. Parents were asked which languages their children spoke before beginning primary school (variable: ASBH03, items 1-6), and the variables were recoded to produce the number of languages children spoke before beginning primary school. Multilingual children are those whose parents indicated they spoke any two or more languages before beginning primary school. In most countries, "non-native speakers" of the TIMSS mathematics and science test language were excluded from the test. Non-native speakers are students who are unable to read or write in the language of the test and would be unable to overcome the language barrier and, typically, are students who have received instruction in the test language for less than one year.

For more information, see *TIMSS 2011 User Guide for the International Database* (Foy, Arora and Stanco, 2013[21]), *PIRLS 2011 User Guide for the International Database* (Foy and Drucker, 2013[22]), *TIMSS 2019 User Guide for the International Database* (Fishbein, Foy and Yin, 2021[23]) and *PIRLS 2021 User Guide for the International Database* (Fishbein, Yin and Foy, 2024[24]); as well as *Methods and procedures in PIRLS and TIMSS 2011* (Martin and Mullis, 2012[25]), *Methods and procedures: TIMSS 2019 Technical Report* (Martin, von Davier and Mullis, 2020[26]) and *Methods and procedures: PIRLS 2021 Technical Report* (von Davier et al., 2023[27]).

World Values Survey (WVS)

Data in Figure 5.6 on social norms on working mothers comes from the World Values Survey (WVS) Wave 7: 2017-2022. The WVS (www.worldvaluessurvey.org) is a global research initiative studying shifts in human beliefs and values, and their influence on social and political dynamics. It has been operating in cycles since 1981, gathering nationally representative and comparable data in more than 120 countries.

For Figure 5.6, only data on the item "when a mother works for pay, the children suffer", available for OECD member and accession countries, was used. The percentage shown corresponds to the percentage of people who reported they agree or strongly agree with this belief by country. The statement was presented in the questionnaire as stated above.

Data for Argentina, Bulgaria, Croatia, Czechia, Denmark, Greece, Iceland, the Netherlands, Poland, the Slovak Republic, Slovenia, Spain, and Sweden refer to 2017; for Australia, Austria, Brazil, Chile, Colombia, Estonia, France, Germany, Hungary, Italy, Korea, Lithuania, Mexico, Norway, Romania, Türkiye and the United Kingdom to 2018; for Japan to 2019; for New Zealand and Portugal to 2020; and for Latvia to 2021.

For more information, see the *World Values Survey Wave 7 (2017 – 2022), WVS Database* (Haerpfer, 2022[28]).

Glossary of key terms

Assistants (or ECEC assistants): Refers to ECEC staff whose role is to provide support to the teachers or lead staff member with a group of children. Assistants usually have lower qualification requirements than teachers, ranging from no formal requirements to, for instance, vocational education and training. This role does not exist in every country.

Centre leader (or ECEC centre leader): Refers to the person in an ECEC centre with the most responsibility for administrative, managerial and/or pedagogical leadership. They may also be called the Head or Principal of the ECEC centre. Centre leaders may be responsible for the monitoring of children; the supervision of other staff; contact with parents and guardians; and/or the planning, preparation and carrying out of the pedagogical work in the centre. Leaders may also spend part of their time working with children.

Child-centred (beliefs, attitudes and practices): Refers to staff approaches and views which assume that learning is an active and co-operative process where children develop their own solutions to given problems.

Children's development and learning: Refers to children's academic and socio-emotional development, including children's cognitive and non-cognitive development, which helps in the acquisition of skills, abilities, competencies, values and attitudes necessary for children to know themselves, build and maintain relationships with others, engage with life's joys and complexities, and meet challenges in everyday life. Sometimes referred to as outcomes.

Curriculum/curriculum framework: Curriculum frameworks are overarching documents setting out the principles, standards, guidelines and approaches that could be used by ECEC staff to foster children's development, learning and well-being. Curriculum frameworks may be broad, aiming to achieve several goals, embracing varied pedagogical approaches, covering several age groups or addressing only a particular age group. The implementation of curriculum frameworks is tightly linked with pedagogy, which can denote the theoretical foundation of a curricular approach.

ECEC: Refers to early childhood education and care. It includes all arrangements providing care and education for children under compulsory school age, regardless of setting, funding, opening hours or programme content (see also ECEC setting).

ECEC provider: Refers to the organisation that provides early childhood education and care services as its main objective. This can be a public institution as well as a private company, or a non-profit organisation.

ECEC quality: A multidimensional concept covering structural characteristics and process quality. Conceptualisations cover global aspects (such as warm climate), and domain-specific stimulation in learning areas such as literacy, emerging mathematics and science (see definitions for structural quality and process quality).

ECEC setting: Refers to the place where early childhood education and care (ISCED Level 0) is delivered. Most settings typically fall into one of the following categories:

- Home-based ECEC: Home-based settings refer to early childhood education and care that is provided in a home setting rather than a centre. These settings may or may not have an educational function and be part of the regular ECEC system. The minimum requirements defined for home-based settings vary widely across countries. Registered home-based setting providers are generally accredited to take care of children in their own homes.

- Regular centre-based ECEC: More formalised ECEC centres typically belong to one of these three sub-categories:

  o Age-integrated centre-based ECEC for children from birth or 1-year-old, up to the beginning of primary school: Can be called kindergarten, preschool, or pre-primary, and offers a holistic pedagogical provision of education and care (often full-day). To an increasing degree, these settings are linked to the educational system.

  o Centre-based ECEC for children aged 0-2: Often called "crèches", these settings may have an educational function, but are typically attached to the social or welfare sector and are associated with an emphasis on care.

  o Centre-based ECEC for children aged 3+: Often called kindergarten or preschool, these settings tend to be more formalised and linked to the education system. Many of them are part-time and provided in schools, but they can also be provided in designated ECEC centres.

ISCED: The International Standard Classification of Education (ISCED) is the reference classification for organising education programmes and related qualifications by education levels and fields. The classification was revised in 2011 and is referred to as ISCED 2011 (see OECD/European Union/UNESCO-UIS, 2015, http://dx.doi.org/10.1787/9789264228368-en).

- ISCED 0 (or early childhood education and care): Refers to early childhood programmes that have an intentional education component and aim to develop cognitive, physical and socio-emotional skills necessary for participation in school and society. Programmes at this level target children below the age of entry into ISCED levels and are often differentiated by age.

- ISCED 01 – Early childhood educational development: Provides educational content designed for younger children (in the age range of 0 to 2 years). The learning environment is visually stimulating and language-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 – Pre-primary education: Designed for children from age 3 to the start of primary education. 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.

- ISCED 1 (or primary education): Designed to provide a sound basic education in reading, writing and mathematics and a basic understanding of some other subjects. Primary education usually begins between the ages of 5 and 7 and has a typical duration of six years.

Teachers (or ECEC teachers): Refers to individuals with the most responsibility for a group of children at the class- or playroom-level. They may also be called core practitioners, pedagogues, educators, pedagogical staff, preschool, pre-primary, kindergarten or early childhood teachers. In small settings, teachers may also be head of the setting while still working with children.

Private setting: Refers to a setting administered/owned directly or indirectly by a non-governmental organisation or private person/organisation (church, trade union, business or other concern). Private settings may be publicly subsidised or not. Private non-publicly-subsidised settings receive no funding from the public authorities and are independent in their finances and governance. Private publicly-subsidised settings operate completely privately but receive some or all their funding from public authorities – if more than 50% of their core funding comes from government agencies, they can be considered government-dependent private ECEC settings.

Process quality: Refers to the nature of the daily classroom and centre experiences of children in ECEC and concerns the more proximal processes of children's experiences in their programme. Process quality includes all the proximal processes of children's everyday experience – in addition to the interactions between children and ECEC staff, process quality concerns the interactions among children and the interactions of children with parents, the community and space and materials. While written curricula are considered a structural aspect, the actual activities provided in the ECEC centre are an aspect of process quality. The implementation of written curriculum is a central factor in the configuration of the child's daily experience at the ECEC centre. Interactions between adults (staff-to-staff, parents and community) are also relevant factors influencing ECEC process quality.

Public settings: Refers to an ECEC centre managed by a public education authority, government agency, or municipality.

Staff (or ECEC staff): Refers to individuals whose professional activity involves the care and transmission of knowledge, attitudes and skills to children enrolled in an ECEC setting. This definition does not depend on the qualification held by the ECEC staff or on the delivery mechanism. ECEC staff may include teachers, educators, assistants or staff working with individual children, among other categories (see the definitions for teacher and assistant).

Staff-child ratio: Refers to the number of children per full-time member of staff. This can be a maximum (regulated) number, which indicates the maximum number of children that one full-time member of staff is allowed to be responsible for; or it can be an average: the average number of children a full-time staff member can be responsible for. Ratios can be either for main staff only (such as teachers or caregivers), commonly reported as teacher-child or teacher-student ratios, but can also include auxiliary staff, such as assistants.

Structural quality in ECEC: Refers to the distal factors that are typically regulated, such as children-to-staff ratio, group size and staff training/education, and create the framework for the experiences of children in ECEC. These characteristics are not only part of the ECEC location in which children participate, but also part of the environment that surrounds the ECEC setting, e.g. the community. Structural factors are an important precursor to the overall domain of process quality and to its subdomains. Additionally,

structural features generally have indirect effects on children's development, learning and well-being (through its influence on process quality). Structural quality is partly determined by legislation, policy and funding and is a major factor in the macroeconomic costs of ECEC. See also the definition for process quality.

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Starting Strong

Reducing Inequalities by Investing in Early Childhood Education and Care

The early years set the foundations for children's development and learning trajectories in life. Early inequalities can put children on divergent paths, but Early Childhood Education and Care (ECEC) policies can level opportunities from the start, with lasting economic and social benefits. Addressing gaps in participation in ECEC and strengthening its quality and inclusivity represent essential steps to support young children and families and reduce inequalities.

Leveraging insights from recent research, this report discusses the drivers of inequalities in early childhood and the place of ECEC within the landscape of mitigating policies. It develops a policy roadmap for ECEC to better support equity and inclusion.

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