



Briefing note: Why should we invest in Early Childhood Education and Care?

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Summary

- There are significant skills gaps between children from different backgrounds by the time they start school, driven in part by differential access to high-quality early childhood education and care (ECEC), which has significant benefits for children's development in both the short- and longer-term. In general, higher income is associated with improved child outcomes in the short (higher school attainment, better behaviour) and long term (higher probability of attending university, higher wages).
- While the early education entitlements for all 3-4-year-olds and disadvantaged 2-year-olds in England provide access to some formal early education, not all children take-up their full entitlement. There is also evidence that children – particularly those from disadvantaged backgrounds – may benefit from having access to some formal education at younger ages.
- It is challenging for parents, especially those from lower-middle income backgrounds (those just above entitlement to Universal Credit), to pay for additional hours of care because fees are high and the available subsidies are limited, particularly for 1-2-year-olds.
- This has knock-on implications for parents' ability and incentive to work, as it reduces the net benefit of work (the amount taken home after paying for childcare and other expenses). When this falls, parents – particularly mothers – may decide it is not worth working as much, or at all.
- This hampers productivity in the short-term, particularly at a time of high labour demand, because it limits labour force participation and hours of work. It also hampers productivity in the medium-term, because parents' skills depreciate outside the workforce, and will also hamper productivity in the long-term, by limiting children's development.
- Investing in high-quality ECEC is likely to provide a triple whammy of benefits: improving children's development; increasing family income; and boosting productivity. The long-run benefits for children, families and the economy are highly likely to outweigh the costs.

Recommendations

We recommend that the government invests more in high-quality early education and care. Specifically, we recommend that:

- The funding rate paid to cover the free early education entitlements for 3-4-year-olds and disadvantaged 2-year-olds in England should be increased to cover cost rises that are largely out of providers' hands and reduce the incentive for providers to charge more for privately paid-for hours of care, enabling them to reduce fees and/or raise quality.
- A more generous childcare subsidy should be introduced for families of 0-2-year-olds, to reduce the financial barriers to work, particularly for mothers, and support children's development. The subsidy should be progressive – higher (potentially 100%) for families with lower income – to minimise the risk of these reforms widening inequalities.

¹ Our specific recommendations are based on the early childhood education and care system in England. ECEC is a devolved issue, with variation in the policy environment across UK nations.

The Issue

There are large gaps in skills between children from different backgrounds by the time they start school. For example, nationally representative data from the Millennium Cohort Study shows that less than one in ten individuals from the poorest 20% of families are identified as being in the top quintile of cognitive development at age 3 compared to around a third of individuals from the richest 20% of families. There are similarly large gaps in socio-emotional development as well (Cattan et al., 2022).

One reason for this is the different environments they experience in their pre-school years, with children from disadvantaged backgrounds less likely to access high-quality early childhood education and care (ECEC) provision and less likely to be exposed to rich home learning environments, both of which contribute to children's development (Cattan et al., 2022; Cornelissen et al., 2018).¹ For example, less than three quarters of disadvantaged 2-year-olds take up their entitlement to 15 hours of free early education per week during term-time, and even amongst those who access some of their entitlement, not all children access the full 15 hours available each week (DfE, 2022).

At the same time, accessing high-quality ECEC provision is challenging for some families, especially before age 3, because fees are high and financial support is limited. This may hinder children's development, particularly for those from disadvantaged backgrounds, but is also likely to limit parents' – especially mothers' – ability and incentive to work, holding back productivity at a time of high labour demand and skills shortages.

¹ While not the focus of this briefing note, recent systematic review evidence suggests that parenting interventions during the early years have both short- and longer-term benefits, with improvements in children's academic, cognitive, and socio-emotional development, as well as improved parenting knowledge and practice, and parent-child interactions (Jeong et al., 2021), and evidence of long-run economic benefits from health and criminal justice savings (Duncan et al., 2017).

This briefing note summarises the evidence underlying the case for investment in high-quality ECEC provision. It also explores the more limited evidence on the amount and type of investment that could provide the greatest return.

Benefits of ECEC for Children

A large body of international evidence demonstrates that attending high-quality ECEC provision at age 3 or older has benefits for children's development in both the short- and longer-term.¹ For example, in the short-term, experimental evidence from the US – comparing children randomly allocated to attend the Head Start pre-school programme – suggests that attending high-quality ECEC provision positively affects a range of cognitive and socio-emotional outcomes (Puma et al., 2010).

This is backed up by evidence from natural experiments, again mainly from the US (e.g., Fitzpatrick, 2008; Bai et al., 2020; Pendola et al., 2022) and by observational evidence from England (e.g., POST, 2021). For example, children in England who attended high-quality ECEC provision in the 1990s had higher maths, language, reading and some types of socio-emotional skills when they started school compared to those who did not attend any formal ECEC provision (Sylva et al., 2004).²

There is much less evidence on the effectiveness of attending ECEC provision for children under 3. What evidence there is, however, suggests that a limited number of hours per week at these ages could be beneficial for children's development, especially for those from

¹ There is no standard definition of 'high quality', but programmes regarded as such might use highly qualified staff and have lower staff-to-child ratios, offer continued professional development for practitioners, have a developmentally appropriate curriculum with a focus on school readiness skills, and access to appropriate facilities, as well as promote parenting skills and focus on enhancing the home learning environment (Barnett & Jung, 2021).

² There were also smaller benefits to attending high-quality ECEC amongst a later cohort in England for whom the counterfactual environment – the alternative care received if they were not attending a high-quality ECEC setting – was more likely to be other types of (lower-quality) ECEC, rather than home care (Melhuish & Gardiner, 2020).

disadvantaged backgrounds, as long as the settings they attend are of high-quality (Sylva et al., 2005; Del Boca et al., 2018; Felfe & Lalive, 2018; Drange & Havnes, 2019). Attending low quality settings at these ages, however, risks negative effects on children's socio-emotional development and wellbeing, as well as later test scores, especially when attending for higher numbers of hours per week (Baker et al., 2008; Herbst, 2013; POST, 2021).

While some studies suggest that the test score benefits of attending ECEC may fade over time (Blanden et al., 2016; Del Boca et al., 2018; Puma et al., 2010), others suggest that the positive impacts are sustained, especially when children attend high-quality ECEC settings (van Huizen & Plantenga, 2018) and go on to attend high-quality school environments (Carr et al., 2021) with strong instructional alignment across each phase (Wu et al., 2022).

Moreover, even if test score effects fade out, studies considering a wider range of outcomes (e.g., health – Ludwig & Miller, 2007; Cattan et al., 2021) and over a longer period, suggest that attending high-quality ECEC can continue to have significant positive effects on a range of outcomes beyond high school. For example, evidence from the US suggests that attending early education increases the likelihood of graduating high school by 6 percentage points and the likelihood of ever attending college by a similar amount (Gray-Lobe et al., 2022). Observational evidence from England and natural experimental evidence from Norway also finds positive effects on achieved qualifications and labour market outcomes when individuals are in their early 30s (Havnes & Mogstad, 2011; Goodman & Sianesi, 2005).

Many studies find that the benefits of attending ECEC provision are stronger for children from more disadvantaged backgrounds (Bai et al., 2020; Barnett & Jung, 2021; Del Boca et al., 2018; Pendola et al., 2022). Most of the generated benefits are realised from attending for around 15-20 hours per week (Melhuish & Gardiner, 2023), although some studies

suggest there are additional benefits from attending full-time for older children (Atteberry et al., 2019).

Benefits of ECEC for Families and Society

In addition to benefiting children's development, access to free or subsidised ECEC provision also has positive implications for parents, especially mothers, and for the economy and society more generally. For example, Brewer et al. (2022) show that access to free full-time ECEC provision (of around 30 hours per week) for 4-year-olds during term-time increases the proportion of mothers with no younger children who are in work by 3.5 percentage points relative to mothers with access to only free part-time ECEC provision (of 15 hours per week during term-time). They find no effect of free part-time provision vs. nothing on mothers' labour supply, however, suggesting that there is a threshold beyond which childcare subsidies start to become effective (although it is not clear exactly what that threshold is in England).¹

This evidence from England chimes with research from other countries focusing on older pre-school children (summarised in Cascio et al., 2015; Cattan, 2016). There is much less evidence on the labour supply effects of access to free or subsidised ECEC provision for children younger than three, but the evidence that does exist provides a mixed picture in terms of whether estimated effects are likely to be larger (e.g., Baker et al., 2008) or smaller (e.g., Goux & Maurin, 2010) for younger vs. older pre-school children. Of particular interest from an inequalities perspective is that a recent experimental study from Germany found that increasing childcare take-up amongst 2-3-year-olds from lower socio-economic

¹ It should be noted that the effects of access to full-time care are identified from when children move into free full-time primary education. If the labour supply responses are driven to a large extent by the social norms or preferences of mothers to return to work when their youngest child starts school (as opposed to receiving an equivalent amount of free early education at a younger age), these estimates will overstate the likely effect of offering a similar number of hours to families of younger children.

backgrounds significantly increased the labour supply of their mothers (Hermes et al., 2022).

As well as boosting family incomes in the short-term – the positive effects of which have been shown to outweigh the potential negative effect of children spending less time with their mother (Nicoletti et al., 2023) – the benefits of increasing labour market participation can be long-lasting for parents induced to go back into work (e.g. Lefebvre et al., 2009).¹

The economy can also benefit more generally from an increase in available labour at a time of high labour demand, and from limiting skill depreciation and supporting career progression of mothers kept out of the labour market or working limited hours because of lack of access to affordable childcare. Indeed, some studies have shown that the labour supply responses to free or subsidised ECEC provision are greater in tighter labour markets (when unemployment rates are lower) (Brewer et al., 2022).

In addition to boosting maternal labour supply, access to high-quality ECEC provision has also been shown to benefit mothers' mental health (e.g., Blanden et al., 2022; Schmitz, 2020), which in turn boosts labour market participation (e.g., Germinario et al., 2022) and is good for children's development (Cattan et al., 2022). Conversely, use of low quality ECEC provision has been shown to negatively affect mothers' mental health and life satisfaction (Baker et al., 2008; Herbst & Tekin, 2014), highlighting the potentially important role of ECEC quality for outcomes beyond child development.

Several studies have also demonstrated cumulative intergenerational benefits of ECEC provision, highlighting the long-term and dynamic nature of the potential benefits compared to the short-term costs. Evidence suggests that the children of those who have attended high-quality ECEC go on to have higher educational attainment, better health

and stronger employment outcomes, alongside reduced teen pregnancy and criminal engagement, compared to those whose parents did not access ECEC (Barr & Gibbs, 2022; García & Heckman, 2022).

Are current ECEC subsidies in England sufficient to produce these benefits?

Currently, all 3-4 year-olds and disadvantaged 2-year-olds in England can access 570 hours per year of 'free' ECEC provision. This equates to 15 hours per week for 38 weeks of the year (i.e., term-time only). This entitlement increases to 30 hours per week in term-time (i.e., 1,140 hours per year) for 3-4-year-olds from working families within a wide earnings bracket.

Families of children younger than 2, and non-disadvantaged 2-year-olds, do not have access to any free hours of ECEC provision, although low-income families entitled to Universal Credit have access to a generous (but less than 100%) subsidy for spending on ECEC provision, albeit paid in arrears, and working families have access to a much less generous subsidy (tax-free childcare).

The evidence outlined above suggests that the existing subsidies for 3-4-year-olds may be sufficient to affect parental labour supply positively – although it is worth noting that a policy that is only available during term-time is perhaps not the most effective way to support working families, many of whom will be accessing care via private providers who are open all year. There is also ample anecdotal evidence that the provision is not truly free to parents: the guidance to providers suggests they can charge for 'extras' such as lunch, and many only designate a subset of their daily hours for parents to claim against their funded entitlement. This, together with the fact that the funding rate paid to providers for these hours of care is too low,¹ suggests that there

¹ And, in the same vein, the effects of being induced to stay out of the labour market can have similarly long-lasting negative effects (e.g. Gruber et al., 2023).

¹ Evidence on this point is available from a Freedom of Information request made by the Early Years Alliance to the Department for Education and published here: <https://www.eyalliance.org.uk/freedom-information-investigation-findings>.

is scope for reforming the offer to make it even more effective.

The evidence suggests that the childcare subsidies available for parents of 0-2-year-olds are, however, unlikely to be sufficient to enable all those who wish to work to do so. This suggests that providing more free (or more generously subsidised) childcare, especially for 0-2-year-olds, could enable parents to work more.

Does this suggest universal or targeted provision is likely to be most (cost) effective?

As outlined above, the evidence suggests that providing more free or highly subsidised childcare for parents of 0-2-year-olds could potentially increase families' disposable income, raise mothers' labour supply, and benefit children's development, with the benefits likely to be greatest for more disadvantaged families. In a world of tight budgetary constraints, does this automatically mean that targeted subsidies are the way to go?

Targeting subsidies on those most likely to benefit from attending high-quality ECEC (e.g., Cornelissen et al., 2018) or for whom high childcare costs are more likely to constrain their labour supply, would keep upfront costs lower while trying to maximise responses to the policy and minimising 'deadweight loss' (subsidising families to do what they would have done anyway). To the extent that targeted funding and resources for ECEC provision help raise standards overall, there may also be knock-on benefits for other children (Bai et al., 2021).

However, recent US evidence comparing the effectiveness of targeted and universal programmes used in different states has suggested that universal programmes may be more effective at raising test scores, especially amongst children from disadvantaged families (Cascio, 2023). This is partly driven by greater effects on attendance amongst these families, and partly by other factors, such as the benefits of attending settings with more mixed peer

groups (also found in other studies, e.g., Sylva et al., 2004). This, and other studies undertaking cost-benefit analyses of the provision of high-quality universal ECEC provision (e.g., van Huizen et al., 2019), estimate that the benefits are highly likely to outweigh the costs, suggesting that universal provision should be given due consideration.

Summary

There is a strong international evidence base highlighting the benefits for children and families of access to high-quality early education and care. Investments in this area may contribute to a higher skilled, more productive and larger workforce in both the short- and longer-term, suggesting wider benefits to the economy as well. The best available international evidence suggests that offering more generous childcare subsidies to parents of 0-2-year-olds, in particular, would likely encourage more mothers to work (more) and have benefits for children's development. But to maximise the benefits of such an investment, the available ECEC provision must be of high-quality.

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Date: March 2023