

Rapid Review of Evidence on the Impact of Childcare on Parental Poverty, Employment and Household Costs in Low-income Families

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Executive Summary

Purpose

The aim of this review is to appraise evidence from previous research, conducted in Scotland and beyond, which provides insight into the extent to which planned Scottish Government investment in childcare could impact on parental poverty, parental employment and reducing household costs.

Evidence Base

The literature review included studies from Scotland (of which there are a limited number) and those from geographic areas in which findings were deemed to be relevant to contemporary Scotland, e.g., other OECD countries. The evidence base comprised fifty-one academic papers and formal research reports. While it was not an explicit aim of the review, to contextualise the research, the review also considered papers which examined the wider benefits of childcare to society.

Evidence

Evidence of the immediate impact of childcare investment on poverty, employment and reducing household costs is not definitive nor compelling. Across the small number of studies that examined evidence of the impact of childcare provision on poverty, the key conclusion is that the impact is slight, but positive. Empirical evidence suggests that investment in childcare can result in modest reductions in child poverty and cost savings, and modest increases in maternal employment (which, in turn, also can lead to reductions in child poverty). However, these investments do not – alone – transform household income or employment outcomes of the target groups. Research tends to advise that most of the target group endure low income and remain outside the labour market after the introduction of a childcare intervention. Nevertheless, it is important to highlight that there are many qualitative and longer-term benefits of childcare investment, particularly for the most disadvantaged children, and that while childcare alone cannot tackle poverty, formal childcare is often considered to be an indispensable part of a policy toolkit to tackle these problems. Where costs are not covered in the short-term, it is often anticipated that the longer-term outcomes of childcare investment will justify the investment.

Strengthening the Scottish Evidence Base

There is an inadequate Scottish evidence base. Further research is required to strengthen the evidence base to understand the totality of the impact of childcare investment in Scotland. Moreover, it would be prudent to clarify expectations pertaining to the contribution of childcare in tackling poverty, and to understand the co-dependencies of childcare on other aspects of an anti-poverty strategy (such as decent wages, flexibility in employment and a facilitating public transport system).

1. Introduction to the Report

1. SPIRU was commissioned by the Scottish Government (Early Learning and Childcare Directorate) to undertake a rapid review of evidence on the impact of childcare provision on parental poverty, parental employment, and reducing household costs (focused on low-income families).
2. The aim of this review is to provide a contextualised appraisal of evidence, mapping significance to the contemporary Scottish context, with a view to understanding what could be achieved with the implementation of the Scottish Government's childcare plan.
3. The approach to this rapid review is described in Annex 1. Fifty-one articles were appraised as part of the core review (Annex 2), with one member of the research team identifying key learning from each reading, which was then confirmed by a second member of the research team. The core review focused on three potential impacts of childcare investment:
 - RQ1: Impact on poverty
 - RQ2: Impact on employment
 - RQ3: Impact on reducing household costs
4. This is a focused report with specific research objectives. It does not provide a detailed account of the development of childcare policy and provision in Scotland. However, by way of introduction, a short summary of key milestones is presented in section 2 of this report.
5. Although providing a rounded review of the role of childcare in society is not a research objective, a short summary of considered opinion and comment on the wider role of childcare in tackling poverty, and the wider benefits of childcare in society is provided in section 2 of this report. This summary was based on an appraisal of a further 27 articles and reports (Annex 3) that ruminated on the role of childcare in tackling poverty, without having the primary objective of presenting new evidence from empirical analysis.
6. Evidence is presented in section 3 of this report, with implications for contemporary Scotland, summarised in conclusion in section 4.

2. Context

7. To set the evidence review in context, we provide an overview of childcare in recent Scottish social policy (2.2) and review reasons for investing in childcare (2.3), before summarising arguments often posited in support of childcare investment to tackle poverty, increase employment prospects, and reduce household costs, in the short-term (2.4) and longer-term (2.4). First, we summarise the role envisaged for childcare in tackling poverty in Scotland (2.1).

2.1 *Childcare in Scottish anti-poverty strategy*

8. Over many years, a range of stakeholders in Scotland have argued that the lack of adequate childcare is preventing many women from realising their potential in the labour market, which is making it difficult for many families to escape poverty.
9. The commitment made in 2017 to eradicate child poverty by 2030 drew attention to the importance of local actions. Anti-poverty strategy extended and sharpened its focus beyond the central tools of taxation and social security.
10. In *Every Child, Every Chance*,¹ accessible and affordable childcare (alongside accessible and affordable transport) was presented as a tool that was required to underpin two of the three drivers that could be used to tackle child poverty locally, i.e., to reduce house costs, and to enable families to increase income from paid employment.
11. However, childcare is not only envisaged as a tool to tackle contemporary poverty in Scotland. Wider concerns to narrow the poverty-related attainment gap acknowledge the importance of the longer-term benefits of early learning (through formal childcare provision), which is understood to be a means through which to lay foundations to better prepare more of Scotland's children to gain from formal education.

2.2 *Childcare in Scottish social policy*

12. There is no law, which determines the age at which a child can be left at home alone. However, there is a legal requirement that parents/guardians do not put their child at risk by leaving them at home alone.
13. The Scottish Government advises² that that the National Society for the Prevention of Cruelty to Children (NSPCC) recommends:
 - babies, toddlers, and very young children should never be left alone
 - children under 12 are rarely mature enough to be left alone for a long period of time
 - children under 16 should not be left alone overnight

However, the current NSPCC advice³ is that:

- infants and young children aged 0-3 should never be left alone
- children under 12 should not be left home alone, particularly for longer periods of time
- there might be reasons why children aged older than 12 (up to almost 18) do not feel safe in the house alone

It follows that childcare to facilitate parental/guardian employment applies to a wide age-range of children.

14. Childcare takes different forms
 - Informal childcare
 - Child looked after by a friend, neighbour, or family member
 - Playgroups
 - Leisure and/or sporting organisations may, in effect, provide an informal childcare service for the time children are participating in the activity.
 - Formal childcare
 - Childminder
 - Nurseries, which may be provided by the local authority, private sector, community interest sector, social enterprises, workplace, or place of education
 - Out of school care. This refers to care provided before school, after school, or during school holidays
 - Workplace nurseries
 - Au pair
 - Nannies

15. Scottish Government childcare commitments have extended to both pre-school and school-aged children in recent years. Significant developments include:

2014, August	Entitlement for local authority funded childcare increased to 600 hours per year (up from 475) for all three- and four- year-olds, and all eligible two-year-olds
2017, March	Publication of <i>A Blueprint for 2020: The expansion of early learning and childcare in Scotland</i> ⁴
2018, March	Publication of <i>Every Child Every Chance</i> , ⁵ the first delivery plan for tackling child poverty, in which childcare is described as one of the drivers of child poverty and makes commitment to new support for childcare after school and in the school holidays.
2019, August	Publication of <i>Out of School Care in Scotland – Draft Framework</i> consultation ⁶
2020, July	Launch of <i>Access to Childcare Fund</i> ⁷
2020, August	Initial target date for the extension of Scottish Government funded early learning and childcare to 1140 hours per year (up from 600) for all three- and four- year-olds, and all eligible two-year-olds (postponed due to Covid-19 complications)
2020, November	Publication of <i>Analysis of Consultation Responses for Out of School Care in Scotland: A Draft Framework 2019</i> ⁸
2021, March	Publication of <i>School Age Childcare Progress Report</i> ⁹
2021, August	Introduction of the 1140-hour childcare commitment (following Covid-induced delay)
2021, September	<i>A Fairer, Greener Scotland: Programme for Government 2021-22</i> ¹⁰ makes new commitments to extend childcare provision.
2022, March	<i>Bright Start, Best Futures</i> , ¹¹ re-affirms the role of childcare in tackling child poverty in Scotland, as part of this second child poverty delivery plan.
2022, October	<i>Best Start: Strategic Early Learning and School-age Childcare Plan 2022 to 2026</i> , ¹² outline future commitments to childcare provision for children in Scotland.

Wane¹³ provides a comprehensive summary of the history behind the expansion of early learning and childcare in Scotland, while Audit Scotland¹⁴ review the early implementation of the 1140-hour commitment.

16. National entitlements to fully funded childcare comprise:
- Parents/guardians are entitled to 1140 hours per year early learning and childcare (22 hours per week throughout the year, or 30 hours per week during termtime), funded by the Scottish Government, for every child aged 3 or 4 years old.
 - Parents/guardians are entitled to 1140 hours early learning and childcare, funded by the Scottish Government, for every child aged 2-year-old if (i) the parent/guardian is entitled to a qualifying benefit; (ii) the child is looked after by a local council, is in kinship care, or has been appointed a guardian, or (iii) the parent/guardian has experience of care.
 - Local councils have the discretion to offer funded early learning and childcare to those who do not meet funding criteria.
17. The Scottish Government has outlined goals for the development of childcare in Scotland,¹⁵ which would build on current provision, but which would focus on low-income households, and which would comprise:
- Introducing free childcare to one- and two-year-olds.
 - Extending provision of school aged childcare, providing care before and after school, all year round.

2.3 Reasons for investing in childcare

18. Not all reasons for investing in childcare are based on tackling poverty, reducing household costs, and improving employment outcomes for low-income families.
- 18.1 Achieving equity of access to childcare for parents/guardians in Scotland.** Childcare provision may be benchmarked against other nations, with the aim of ensuring that parents/guardians in Scotland have access to a level of childcare that is, at least, equivalent to that which is available in comparable nations.
- 18.2 Achieving equity of access within Scotland.** Similarly, the aim of provision might be to avoid a 'postcode lottery', to ensure that all parents/guardians within Scotland have access to a comparable level of childcare provision, and that the cost of childcare as a percentage of income spent is equitable across rural, island, and urban areas.
- 18.3 Achieving equity with previous generations of parents.** Investment to reduce childcare costs could be justified with evidence that the cost of childcare has risen above the rate of inflation in recent times.¹⁶ The aim would be to reduce the cost of childcare to a level that was equivalent to that expended by earlier generations of parents.¹⁷

- 18.4 Achieving equity in childcare expenditure across families.** There is inequity in that some parents/guardians can draw on informal childcare support from their wider family to avoid costs. Similarly, evidence has demonstrated that – without support - lower income households pay a higher proportion of their income on childcare to access employment.¹⁸
- 18.5 Tackling (poverty-related) attainment gaps for pre-school aged children.** Within Scotland there is clear evidence of an income related educational attainment gap between children from the lowest and highest income brackets: children of pre-school age are already showing clear signs of this attainment gap, with children from higher income families significantly outperforming those from lower income families in terms of vocabulary and problem solving.¹⁹ At aged five this difference in vocabulary is equivalent to a 13-month gap, and for problem solving it is equivalent to a 10-month gap: evidence suggests that the gap for problem solving widens between the ages of 3 and 5.²⁰ Although the evidence also shows that these gaps persist throughout primary and secondary school²¹ – and thus, will not be addressed by early years education alone – earlier provision, with a focus on laying the foundations for academic competency for more disadvantaged children, could have an important role in tackling or reducing these gaps.²² The need for *quality* childcare provision is emphasised in the research, rather than provision, *per se*.²³
- 18.6 Enrichment potential for school-aged children.** In addition to the potential gains of academic competency (on attainment and cognition), it might be argued that childcare is a vehicle for broadening opportunities, widening horizons, socialisation, and imparting ‘soft skills’ to children at an early age, particularly disadvantaged children.²⁴ Here, childcare improves the quality of life of young children, as lived.
- 18.7 Supporting parents, bolstering parental/guardian well-being.** Childcare may provide some respite for parents from the intensity and constant responsibility of parenting. Furthermore, it is asserted that parental wellbeing is enhanced through work:²⁵ if childcare facilitates parental participation in the workplace, then enhancement of parental wellbeing is an indirect and positive outcome of childcare provision. The wellbeing of elderly grandparents who provide informal care was also found to improve when dependency on them, in terms of caring hours were reduced by increased access to formal care.
- 18.8 Enabling parents/guardians to realise their potential.** Childcare may also afford parents/guardians the opportunity to realise their potential beyond the world of work, either through the pursuit of leisure interests, or through training that improves their employability.²⁶ It might be argued that childcare provides a base level of economic security for parents engaged in paid employment²⁷ and allows them to address the central tension for families of participating in the labour market and delivering their caring responsibilities.²⁸

- 18.9 Optimising labour market opportunities.** It has been argued that inadequate childcare may lead to parents accessing employment that is sub-optimal to their needs, abilities, and potential.²⁹
- 18.10 Tackle gender inequalities.** More specifically, where mothers are primary caregivers, childcare provision enables mothers to reconcile paid employment and family life, promoting gender equality.³⁰ Extending childcare provision is understood to remove or reduce one of the barriers that parents/guardians – particularly women as primary caregivers - must overcome to (re)enter the labour market.³¹ This is one means of tackling gender inequalities in income over the life course³² and reducing the gender pay gap.³³
- 18.11 Increase paternal responsibility for childcare.** It has been argued³⁴ that where childcare facilitates the participation of mothers in the workplace, it has the unintended consequence of increasing fathers' contribution and responsibility for childcare (also see paragraph 80 for an alternative view on this issue).
- 18.12 The care economy as an economic development strategy.** Childcare expansion requires an extension of the early years and care workforce.³⁵ Since 2016/17 the ELC workforce in Scotland is reported to have increased by 7,942 full time equivalent positions.³⁶ Investment in childcare can be conceived as an economic (re)generation/development strategy.
- 18.13 The care economy as a gendered economic development strategy.** As women comprise most of the early years workforce, an expansion of the sector is likely to provide more opportunities for women, tackling gender inequalities if remuneration and working conditions are adequate (see also 14.11).³⁷
- 18.14 Childcare as an area economic regeneration strategy.** It has been argued that childcare provision can tackle area-based poverty if targeted at areas of deprivation as it offers employment in a locality, allows parents in that locality to access employment, and improves the quality of childcare provision in these areas.³⁸
- 18.15 Responding to changes in the contemporary labour market.** Many sectors of the economy are currently experiencing labour shortages.³⁹ Economic benefits would accrue by facilitating the labour market participation of parents/guardians able and willing to participate, and adequate childcare might facilitate this.⁴⁰
- 18.16 COVID recovery.** It has been argued⁴¹ that the stabilisation of family employment through childcare provision is important for COVID recovery, particularly for supporting those groups which have been disproportionately affected by the adjustments to the labour market induced by COVID.

- 18.17 Boost to the economy.** There are several ways in which childcare might be expected to boost the economy.⁴² First, there will be the indirect impacts on the economy of the cost savings made by families, which is estimated to be £4,900 per child per annum.⁴³ Second, if childcare provision contributed toward a reduction in child poverty, then it is contended that this would boost GDP and have wider benefits for the economy.⁴⁴ Third, the impact of childcare provision of women's labour market participation, in particular, is expected to boost the economy.⁴⁵
- 18.18 Financing pensions.** It has been argued that increasing women's participation in the labour market – facilitated through childcare – could be one way of financing pensions in an ageing society.⁴⁶
- 18.19 Increase fertility.** Where the cost of raising a child is high,⁴⁷ this cost might be a disincentive for some to raising a family, or to raising a larger family. This could be problematic in contexts where fertility rates are below mortality rates. Encouraging in-migration is one way to redress this imbalance: another is to incentivise family growth. Improving the household economic prospects of families by social investment in childcare has been proposed as a means of tackling one of the disincentives for family growth.⁴⁸
- 18.20 Shift/direct resources to younger adults/parents.** In an economic context where everyday living is most challenging for younger adults – for example, high cost of rent, difficulty accessing owner occupation, more precarious labour market – investing in childcare might be viewed as part of a wider strategy to support younger adults/parents.⁴⁹
- 18.21 Market 'failure'.** It has been argued that – without government support – the market is not able to ensure the provision of childcare at a sufficient quantity or quality at an affordable price.⁵⁰
- 18.22 Improve the quality of childcare provision.** It has been asserted that government investment improves the quality of affordable childcare,⁵¹ heightening the likelihood of childcare delivering on its anticipated outcomes.
- 18.23 Contribution to social infrastructure.** Childcare can be conceived as an element of social infrastructure that promotes wellbeing and is part of a 'good society'.⁵²
- 18.24 Deliver on the Sustainable Development Goals.** Many of the anticipated outcomes of childcare investment are actions that would contribute toward meeting the nation's commitment to tackling the SDGs, e.g., tackling gender inequality, no poverty, quality education, improving health and well-being.⁵³

18.25 Social return on investment. It has been argued that the cost of investment in childcare is neutral to government (for example, on account of savings associated with providing services to socially excluded people,⁵⁴ the reduction in the likelihood of risky behaviours that are detrimental to health, gains through increased civic/social engagement,⁵⁵ or increased tax revenues and savings on social security⁵⁶) and is sustainable.⁵⁷ Even where costs are not covered in the short-term, it is anticipated that the longer-term result of childcare investment will justify the investment.⁵⁸

18.26 Tackle welfare ‘dependency’. Some might argue that many parents are ‘trapped’ on welfare and unable (or unwilling) to access paid employment. Although there is no shortage of evidence that undermines these arguments (demonstrating that decision-making is more complex), it may be posited by some that providing childcare to facilitate paid employment is a way of lowering welfare ‘dependency’.⁵⁹

2.4 Reasons for investing in childcare to tackle child poverty, improve employment outcomes and reduce household costs – in the short-term

19. Butler and Rutter (2016)⁶⁰ argued that one of the two ways in which childcare can tackle poverty is by providing “access to flexible, affordable childcare [which] can reduce pressures on family income and help parents to participate in work, education or training”. This is a short-term intervention. It could be argued that this single reason comprises three elements to justify investing in childcare to tackle child poverty in Scotland, at the present.

- Childcare reduces the disposable income for families with children.
- Childcare enables non-working parents/guardians to participate in the labour market.
- Childcare enables working parents/guardians to increase their engagement in the labour market.

20. The impact of childcare as a tool to tackle relative poverty could be negligible (neutral) or even regressive, depending on how provision is made available.

- If provision enables all parents/guardians to improve returns from the labour market, then the relative disadvantage of the already most disadvantaged may not necessarily be reduced.
- If provision makes it easier for the already least disadvantaged parents/guardians (relative to the most disadvantaged parents) to improve returns from the labour market, then there is a possibility that the level of relative poverty (or intensity of relative poverty) will increase.

The potential of childcare provision to reduce child poverty will, at least in part, depend on how access to this childcare provision is configured.⁶¹

21. The removal of a childcare barrier to employment may not, alone, be sufficient to reduce levels of child poverty.
- 21.1 **Transport.** Access to childcare presents an additional challenge for some families, in both urban and rural settings.⁶² Accessing childcare may incur financial costs and/or opportunity costs. Access to affordable and accessible transport (and childcare) is acknowledged as one of the drivers of child poverty in Scotland.⁶³
- 21.2 **Employment support.** The Parental Employability Support Fund⁶⁴ and the No One Left Behind⁶⁵ investment to support the long-term unemployment, both acknowledge that bespoke and additional interventions are required to assist some parents to prosper from the paid labour market. *Best Start Bright Futures*⁶⁶ acknowledges this need to support parents to access, sustain and progress in employment.
- 21.3 **Social security.** Security is what social security purports to deliver. For the most part, it provides certainty of income. Where paid employment reduces entitlement to benefits (including 'passport benefits' provided locally on account of social security status), then a cost-benefit analysis may present employment as the less attractive alternative.⁶⁷
- 21.4 **Remuneration at work.** Similarly, where remuneration from paid employment is precarious, then leaving behind the certainty (if not security) of social security is a barrier to employment.
- 21.5 **Availability of work.** Although there are currently shortages in the labour market,⁶⁸ there is not always availability of paid work that matches the skills of those who seek it.
- 21.6 **Matching employment opportunities and childcare provision.** Qualitative research by the Fraser of Allander Institute (undertaken by The Poverty Alliance)⁶⁹ with parents of pre-school aged children noted the importance of the availability of employment within localities that offered hours that could accommodate caring responsibilities.
- 21.7 **Flexibility in employment and/or childcare provision.** Qualitative research by the Fraser of Allander Institute (undertaken by The Poverty Alliance)⁷⁰ with parents of pre-school aged children identified the need for flexibility to accommodate emergency caring due to childhood illness, a point also noted in other research.⁷¹
- 21.8 **Quality of childcare provision.** Although it can be contended that childcare provision can improve educational attainment which, in turn and in the longer term, could reduce inter-generational poverty for children currently experiencing poverty (see also 14.5), evidence suggests that high quality care is required to impact on educational attainment.⁷² If childcare is not of an adequate standard, then potential gains may not accrue.⁷³

- 21.9 **Childcare payment cycles.** Qualitative research by the Fraser of Allander Institute (undertaken by The Poverty Alliance)⁷⁴ with parents of pre-school aged children identified that the need to pay for childcare in advance was a disincentive to labour market participation (with this outlay required before wages are received). Although universal provision may offset this problem, it may still be a problem encountered by parents who to (re)enter the labour market, would need to access (and therefore purchase) more than 1140 hours of childcare per year. Similar points were identified by Butler and Rutter in 2016.⁷⁵
22. Tackling child poverty through improving childcare provision may not necessarily improve outcomes for some families experiencing poverty.
- 22.1 **Families with a child aged under one.** Although the Parental Employability Support Fund offers support to families where the youngest child is under one year,⁷⁶ there is wider acceptance that working mothers should be entitled to take up to one year's maternity leave.⁷⁷ Thus, there is an understanding that seeking paid employment – facilitated through childcare – may not be a priority for parents with a child aged under one.
- 22.2 **Families with demanding caring responsibilities.** Qualitative research by the Fraser of Allander Institute (undertaken by The Poverty Alliance)⁷⁸ with parents of pre-school aged children living in poverty with a child who has a disability, suggested that extra childcare provision would be unlikely to transform employment prospects. Disincentives in relation to earnings disregards and the necessity of having to take their children out of care were cited. Also noted were the difficulties faced in managing childcare by families with different ages of children (accessing different childcare services). This confirms findings of earlier research.⁷⁹
- 22.3 **Families with a parent with a long-term health condition that limits their life 'a lot'.** In accordance with the principles and practices underpinning the Adult Disability benefits administered by Social Security Scotland,⁸⁰ a dignified and just society will not require adults to engage in paid employment if their disability and ill-health prevents this.
- 22.4 **Families whose parents are furthest removed from the labour market.** As *No One Left Behind* acknowledges,⁸¹ not all parents are well placed to access the paid labour market. Employability support can lay the foundations for labour market success, but in the interim it will not alleviate poverty.
- 22.5 **Families in transition.** Poverty dynamics research explains that poverty can be transient, persistent, or recurrent.⁸² The importance of persistent poverty is acknowledged as it is one of the four metrics in the *Child Poverty (Scotland) Act 2017*.⁸³ However, the disruptions associated with the life course transitions can leave parents less well placed to access childcare and employment: indeed, house moves associated with these disruptions may mean existing childcare is no longer possible to access.

23. Notwithstanding the challenges outlined in the previous three paragraphs (16 through 18), evidence on participation in the labour market,⁸⁴ and remuneration from it, suggests that many of those most at risk of child poverty in Scotland are also participating less in the labour market and are more likely to gain less financially from it. It follows that overcoming the barriers associated with labour market participation – such as childcare – could contribute to redressing these imbalances.

23.1 Disability in the household

- Whereas all adults are in paid employment in just over two-thirds of families with no disabled children (69.2%), just under one-half of all parents are in employment in a family with a disabled child (47.2%).
- In contrast, among families in which all adults work, although broadly comparable, a slightly higher proportion of families without a disabled child are living in poverty (12.3%, compared to 10.2% of those with a disabled child). A slightly higher proportion of households in which all adults work, which have a disabled adult but not a disabled child are living in poverty (15.2%).

23.2 Child aged under 1 in the household. The published data permits estimates for young children aged under five, comparing them to households with older children.

- Whereas just over three-fifths of households in which the youngest child is aged under five are households with an adult in paid employment (62.3%), this is less than the almost three-quarters of households with an adult in paid employment where the youngest child is aged 5-10 (72.4%).
- Participation in the labour market does not reward all families equally. Among households with one working adult and one non-working adult, the risk of living in poverty is higher where the youngest child is aged under five (44.3%, compared to 34.7% where the youngest child is aged 5-10).

23.3 Minority ethnic families

- Whereas all adults are in paid employment in over two-thirds of 'White' ethnic families (69.5%), just over one-half of all parents are in employment in 'Asian' families (55.6%).
- Calculations are less robust for 'Black' ethnic families, with data suggesting that while all-adult employment rates are higher (80.5%), the proportion of all-adult working families who are living in poverty is higher (44.7%, compared to 22.7% for 'Asian' families, and 13.9% for 'White' families).

23.4 Lone parents

- Work intensity varies markedly among families. For example, 42% of lone parent households have no-one in paid employment, compared to 5% of couple households. On the other hand, every adult is in paid employment in one quarter of households, whether headed by a lone parent (26.3%) or a couple household (25.8%).
- Participation in the labour market does not reward all families equally. For example, one in five lone parents in full-time paid employment are living in poverty (19.5%), which is far greater than the small minority of couple households in which both parents are working full-time (2.9%), but far less than the proportion of couple households with one full-time working parent and one non-working parent (36.8%).

23.5 Families with three or more children

- Approaching one in five families with three or more children do not have a parent in paid employment (18.5%), almost twice as many compared to two-child families (9.9%) and more than one child families (13.4%).
- Participation in the labour market does not reward all families equally. For example, within households where all adults work, a higher proportion of families with three or more children are living in poverty (15.2%), compared to both two-child and one-child families (both 11.3%).

24. It has been contended that childcare provision in the UK is a barrier to labour market participation.

24.1. **Availability.** Lack of childcare is reported to be a barrier throughout the UK.⁸⁵

24.2. **Cost.** In addition to reducing the disposable income of parents using childcare, it is also contended that the cost is a disincentive to (re)entering the labour market.⁸⁶ Reducing the cost of childcare has been an explicit goal of some national childcare strategies.⁸⁷

The Scottish Government 'Childcare offer' seeks to overcome these barriers. Indeed, the UK-wide Corum Childcare Survey of 2022⁸⁸ reports that the cost for a full-time place in a nursery in Scotland (50 hours per week, which would incorporate the 1140 hour per year entitlement) was £85.03 in August 2021, compared to £145.70 per week in 2020. The same report provides evidence that, in general, nursery provision is less expensive in Scotland than the rest of the UK, although there is little difference in the cost of childminder services⁸⁹, and after-school clubs.⁹⁰ These findings are a marked improvement on the evidence reported in 2014 in the *Scottish Childcare Report*.⁹¹

2.5 Reasons for investing in childcare to tackle child poverty, improve employment outcomes and reduce household costs – in the longer-term

25. Butler and Rutter (2016)⁹² argued that one of the two ways in which childcare can tackle poverty is by providing “high quality early education and effective early intervention [which] can act as protective factors for children against the negative effects of poverty”. This is a long-term intervention, which might be conceived as tackling inter-generational poverty.

25.1 Tackling inter-generational poverty. The contribution of childcare to narrowing the poverty-related attainment gap has the potential, in turn, in the longer term, to reduce inter-generational poverty (see also 14.5): those from disadvantaged backgrounds are less than half as likely to go on to further education and are more likely to leave school at 16 and become unemployed or economically inactive (not in education, employment, or training).⁹³

However, as Butler and Rutter (2016) also recognise, the labour market-oriented focus of childcare provision referred to earlier (paragraph 15) might be conceived as laying the foundations for tackling child poverty in Scotland, in the longer-term.

25.2 Laying the foundations for subsequent labour-market participation. As outlined in 14.8, 17.2 and 18.4, childcare may afford training opportunities, which will better position parents to escape poverty through paid employment in the longer-term.

25.3 Entry to the labour market, with potential for subsequent career progression. Some have argued that entry to the labour market can - with proper support and investment from employers – be a platform on which to develop a career in which paid employment provides a route from poverty.⁹⁴

3. Evidence

26. We profile the evidence base (3.1) and review the factors that have been found to shape the uptake of childcare (3.2), before appraising the evidence on the extent to which childcare reduces poverty and household costs (3.3) and impacts on employment (3.4). We also consider how childcare impacts on the drivers of poverty (3.5).

3.1 *The evidence base*

27. Most of the evidence base appraises the impact of childcare on employment outcomes, examining whether increased access to childcare and lower cost of childcare affects labour supply.
28. The evidence base examines a range of childcare policy contexts, i.e., the expansion of low-cost subsidised childcare,⁹⁵ use of tax credits to help low-income households cover childcare costs,⁹⁶ enhanced childcare subsidy/benefit,⁹⁷ universal provision for a target group,⁹⁸ use of vouchers,⁹⁹ and mandatory provision.¹⁰⁰
29. Much of the evidence base is focused on parents whose children have not yet reached school age, including very young children,¹⁰¹ those who in Scotland would be eligible for pre-school education,¹⁰² or both these cohorts.¹⁰³ Other studies focused on families with a child of up to the end of primary school age,¹⁰⁴ children up to the early years of secondary school age,¹⁰⁵ or all children.¹⁰⁶
30. Most of the evidence base focused on maternal outcomes for working aged women, with some focusing on defined sub-populations including single mothers,¹⁰⁷ mothers of vulnerable or disadvantaged children¹⁰⁸ and working mothers.¹⁰⁹
31. The macro-geographical context of the evidence base in this report was restricted to advanced economies and included studies conducted in Australia,¹¹⁰ Canada,¹¹¹ England,¹¹² France,¹¹³ Germany,¹¹⁴ Italy,¹¹⁵ Japan,¹¹⁶ Luxembourg,¹¹⁷ Netherlands,¹¹⁸ Norway,¹¹⁹ Poland,¹²⁰ Spain,¹²¹ Switzerland,¹²² UK,¹²³ USA,¹²⁴ and Wales.¹²⁵ Several cross-national comparisons were reviewed, some of which included the UK,¹²⁶ while others did not.¹²⁷ A limited number of studies focused exclusively on Scotland.¹²⁸
32. The scale of analysis was primarily the nation state, although the evidence base also included case study region analysis,¹²⁹ and comparative geographical analysis across regions,¹³⁰ local administrative districts,¹³¹ smaller localities,¹³² wards within cities,¹³³ and other sub-divisions of the nation state.¹³⁴

33. The sectoral focus of the evidence base included provision that was publicly funded, but delivered by a range of public, private and Third Sector organisations,¹³⁵ public sector provision,¹³⁶ public and private provision,¹³⁷ and non-profit and public provision.¹³⁸
34. The evidence base draws from data collected prior to the millennium,¹³⁹ in the 2000s,¹⁴⁰ 2010s,¹⁴¹ and 2020s.¹⁴²

3.2 *Factors shaping the uptake of childcare*

35. The research did not aim to review current patterns of childcare use in Scotland. We acknowledge the emerging evidence base on families' use of childcare in Scotland,¹⁴³ and the importance of taking cognisance of how families currently use childcare in Scotland when drawing conclusions for Scotland from the evidence base beyond Scotland.
36. An examination of the factors shaping the uptake of childcare services is not included in our Research Questions. However, if childcare provision is not reaching target groups, then the goals of tackling poverty, increasing employment, and reducing household costs will not be attained. Mothers' decisions whether to use formal childcare were shaped by several factors. Key findings are reported below from nine of these key factors, which were identified across the evidence base.

3.2.1 *Cost*

37. The high cost of childcare was identified in several studies as a disincentive to uptake, and therefore a barrier to employment. This conclusion has been drawn from attitudinal (Gillespie and Khan and Glover et al.), modelling (Ravazzini) and cost of living (Viitanen and Campbell et al.) research.
 - Viitanen (2005)¹⁴⁴ asserts that the typical cost of a nursery place in the UK is more than the average family spends over a year on either on food or housing. Consequently, the cost of childcare had a significant, negative effect on the probability of both working and using formal childcare.
 - Campbell et al.¹⁴⁵ observed in 2013 that the cost of 25 hours of nursery childcare in Scotland for one child aged over two was equivalent to more than half (56%) of the average part-time salary.
 - Ravazzini (2018)¹⁴⁶ cites Abrassart and Bonoli¹⁴⁷ who found that the price of childcare is a strong disincentive for female labour supply, and this disincentive seems particularly high for low-income families, a finding supported in other research.¹⁴⁸

- Gillespie and Khan (2016)¹⁴⁹ refer to European Commission research (2013) which reported that 73% of mothers in the UK did not work or worked part-time, as childcare services were inadequate or too expensive. Gillespie and Khan¹⁵⁰ also report that families who require full-time pre-school nursery care were typically spending between 20% and 30% of their income on childcare.
 - Glover et al. (2018)¹⁵¹ note that the cost of childcare is identified by parents in Wales as one of the barriers to paid employment.
38. Anderson and Levine (1999)¹⁵² (reviewing evidence from the USA in the 1990s) find that the share of income expended on childcare varies among parents. Often sub-populations with the highest total spend, also have the lowest share of income spend on childcare. Other studies confirm these findings.¹⁵³
- Less well-educated parents (did not finish high school) pay a higher proportion of their income on childcare (10.4%, compared to 6.5% for the highest skilled workers).¹⁵⁴
 - Unmarried mothers spend twice as much of their income on childcare.¹⁵⁵ More generally, excess income share spend on childcare is found for lone parents, compared to partnered parents.¹⁵⁶ Gennetian et al. (2004)¹⁵⁷ in a review of nine experimental evaluations, from the early to late 1990s, in North America found that single parents below the poverty line were paying an average of one-fifth (19%) of their earnings on childcare.
 - Mattingly et al. (2017)¹⁵⁸ estimate that families below the federal poverty line in the USA spend 20% of their income on childcare, find it difficult to find affordable childcare, and that 12.3% of poor families with young children incur childcare expenses.
39. Further evidence of the challenges families face in paying for childcare is found when analysing family spend after family income has been boosted: Ananat et al. (2022)¹⁵⁹ cite Roll et al. (2022)¹⁶⁰ who report that one-in-ten of the 61 million families in the USA who received a monthly Child Tax Credit payment (for children aged between 6 and 17) in late 2021 used funds to cover childcare expenses.

3.2.2 Cultural and national context

40. Several studies have argued that wider cultural norms shape childcare outcomes and preferences (Akgunduz and Platenga, Bezu and McCallum and Cebrián et al), while others have noted that the particularities of the national economic context at any point in time are also significant (Nollenberger and Rodriguez-Planas).
- Akgunduz and Platenga (2018) note, from their review of articles and working papers between 1988 and 2010, that maternal care is viewed as being more desirable and of higher quality than non-maternal care in some countries.¹⁶¹
 - Bezu and McCallum (2021) note that childcare before the age of five tends to be viewed as a private matter in most, but not all, jurisdictions in Canada.¹⁶²

- Cebrián et al. (2019)¹⁶³ use data from the European Union Survey on Income and Living Conditions (EU-SILC) from 2005 to 2013 to contend that the extent to which patterns of childcare use are shaped by household income varies across Europe. Household income shapes uptake of formal and informal childcare in Southern Europe; only formal childcare is influenced by income in Central Europe and ‘liberal’ countries such as the UK; and only informal childcare use is shaped by income in Eastern European countries.
 - Nollenberger and Rodriguez-Planas (2011)¹⁶⁴ reviewed the impact of universal care for three-year olds in Spain, which was introduced against a backdrop of low female participation in the work force, economic slowdown, high unemployment (above 20%) and labour market rigidities (of the 1990s). They speculate that depressed wages are likely to have reduced the impact of this universal provision, which they expect would have been greater in more favourable economic conditions. Even so, universal provision was judged important and effective in enabling mothers to return to work.
41. Recognition is also given that these cultural norms (and economic conditions) can vary within any national jurisdiction.
- Pavolini and van Lancker (2018)¹⁶⁵ caution that even in countries where the dominant norm is ‘progressive’, a substantial proportion of people may still adhere to what are considered ‘more traditional’ norms on motherhood.
 - Fervers and Kurowska (2022)¹⁶⁶ analysing childcare in Poland between 2004-2013, contend that “traditional” gender role definitions, social norms and conservative cultural contexts undermine the effects of family policies that aim to increase maternal employment, advising that family/ childcare policies must be combined with policies that acknowledge and challenge negative views on women’s employment. However, they note that uptake is much lower in conservative areas and that this may have contributed to low overall rates of uptake (and consequent impact on maternal employment).
42. One study in Scotland suggested that migrants may exhibit preferences and norms that challenge those of the cultural group to which they belong.
- Ramasawmy (2015)¹⁶⁷ describes, using data gathered between 2009 and 2011, how Polish mothers who migrated to Scotland felt negatively about staying at home and not engaging in paid work. This contrasts Fervers and Kurowska’s characterisation of Polish mothers (paragraph 35). Ramasawmy¹⁶⁸ refers to Hakim’s preference theory in which women are described as being ‘work-centred’, ‘family-centred’ or ‘adaptive’. Ramasawmy explains that Polish women in Scotland attribute their preferred work status to their migration status. However, they express a preference for very young children being cared for by family members or close friends (and not ‘strangers’), while 3–5-year-olds are viewed as needing education and socialisation.¹⁶⁹ Ramasawmy relates these preferences to norms and provisions that are established back in Poland,¹⁷⁰ although it may be more appropriate to view their opinions as an adaptation in Scotland to these traditional Polish norms.

3.2.3 Access to informal childcare

43. Satisfaction and utilisation with existing use of informal childcare may be a disincentive to utilising formal childcare.
- Viitanen (2005)¹⁷¹ found that not every employed mother in the UK uses formal childcare. A range of subsidy levels were simulated to estimate the likely impact on utilising childcare. It was found that many mothers would continue to use informal childcare, even when there were high levels of subsidy (50 per cent price subsidy). Further research needs to be conducted to find out whether this 'preference' for informal care can be ascribed to non-economic factors, such as concerns regarding quality of care, availability of childcare, or lack of flexibility in provision, such as no evening care or weekend care available for those who work during these hours.
 - Akgunduz and Platenga (2018)¹⁷² speculate that existing use of informal childcare provision may lessen the impact of cost incentives to increase formal childcare provision.
44. Others have found that childcare investment leads to a shift from informal childcare to formal childcare.
- Glover et al. (2018)¹⁷³ report from their evaluation of the Childcare Offer in Wales, from September 2017 to August 2018, that one in seven parents reported a shift from informal to formal care because of the provision.
 - Havnes and Mogstad (2011)¹⁷⁴ also report a significant shift from informal to formal care because of the large-scale expansion of childcare provision in Norway. They evaluate the effect of reform from 1975 on the employment rate of married mothers.
45. Informal care can also incur hidden costs such as additional energy and food costs and has been found to be used (and the hidden costs incurred) more often by lower-skilled workers. This is particularly significant in the context of the cost-of-living crisis.
- Anderson and Levine (1999)¹⁷⁵ found that in the US the lower the skill level, the more the working mother was likely to pay for relative care, which may suggest that free formal provision may be an incentive as it offers a cost saving to those already in work.

3.2.4 Availability of childcare

46. Provision shapes participation. It cannot be assumed that extra investment and increased provision equates to adequate provision.
- Zimmert (2019)¹⁷⁶ found that the childcare reforms in Germany had no significant impact on the share of full-time employed women (married women aged 18-45), suggesting that one of the reasons for this was the lack of full-time childcare places (subsidised provision was for four hours per day).

3.2.5 Administration

47. In some cases, the ways in which entitlement to childcare has been administered is identified as an additional barrier to uptake.
- Gennetian et al. (2004) note that requirements to pay costs in advance were identified as beyond the means of some families in the US and Canada who were the target populations for some welfare schemes, as was lack of awareness of eligibility. Glover et al. (2018) concur.¹⁷⁷
 - Forry et al. (2013)¹⁷⁸ observe significant differences across states in the USA in the uptake of the Childcare Development Fund (CCDF) (ranging from 7% to 34%). Part of the reason for this is given as states not having adequate funds to support the Fund. However, administrative inefficiencies are also identified as a cause of lower uptake.

3.2.6 Nature of the labour market and women's participation therein

48. Akgunduz and Platenga (2018)¹⁷⁹ speculate that cost incentives to encourage uptake of formal childcare provision may be less effective where structural factors – such as wage structure or flexibility in employment conditions – already facilitate maternal participation in the labour market.
49. Formal childcare is associated with higher levels of household work intensity, which in turn is related to a reduced risk of in-work poverty. Conversely, informal care arrangements are related to higher levels of in-work poverty.
- The prevalence of part-time work may also lower the demand for formal childcare. Akgunduz and Platenga (2018)¹⁸⁰ speculate that this could lower the demand for formal full-time care, as informal care is more manageable with part-time employment.
50. Several studies have highlighted challenges in accessing childcare for working parents with atypical and irregular work patterns.
- Glover et al. (2018)¹⁸¹ report from the Childcare Offer in Wales that parents with less regular shift patterns (for example, ten days on and four days off) found it more difficult to access childcare. Greater flexibility around weekend and evening childcare was needed.
 - Earlier work by Statham and Mooney (2003)¹⁸² explored the challenges of providing childcare to support parents with “atypical work times” in England. Although identifying several barriers and constraints (staffing, sufficient demand, sustainability, combining with standard hours, registration and inspection requirements, premises, and support), they concluded that it was possible to find staff and develop new services, although childminding was generally seen to be the most appropriate form¹⁸³

3.2.7 Socio-economic status

51. Childcare services are often used by higher income families, in particular dual-income families.¹⁸⁴
- Pavolini and van Lancker (2018)¹⁸⁵ observe that disadvantaged children are less likely to use childcare than more advantaged children in almost all European nations.
 - Carta and Rizzica (2015)¹⁸⁶ explain, by using datasets from 2004/05 to 2011/12, how the introduction of a pre-kindergarten service in Italy (which offered a less expensive alternative to pre-school care) provided more benefits for higher income families.
 - Stewart and Waldfogel (2017)¹⁸⁷ note low uptake of targeted places for disadvantaged two-year olds in England, with nearly one-third of eligible two-year-olds not taking up their place.
 - Pascal et al. (2021)¹⁸⁸ examine the uptake of the 30-hour entitlement to childcare in England and observe that uptake is influenced by disadvantage, English as an additional language (EAL), ethnicity, population mobility, special educational needs and disabilities (SEND) and employment status.
52. On the other hand, there is also some evidence of childcare provision being more likely to reach most disadvantaged target groups.
- Paull and La Valle (2018)¹⁸⁹ note that low- and middle- income parents were much more likely than high-income parents to report the extended entitlement of childcare to working parents in England had benefitted them.

3.2.8 Time of year

53. Consideration is not always given to variations in accessing childcare at different points of the year.
- Glover et al. (2018)¹⁹⁰ report from the Childcare Offer in Wales that, although offered during school holidays, fewer parents reported accessing formal childcare during these periods, some observed that it was more difficult to access at these times.

3.2.9 Family demographics

54. Across studies, some consistent variations were identified in the likelihood of mothers using formal childcare. This patterning reinforces the social patterning over which parents benefit from paid employment (facilitated by accessing childcare), which are reported in section 3.4.5.

3.3 Impact on poverty and reducing household costs

55. Research that examined whether the cost of childcare is a barrier to parental employment, inadvertently provides insight into potential cost savings to families of funding childcare provision.¹⁹¹ These research questions are considered together in this section of the report.
56. We describe the evidence base (3.3.1), before highlighting recent evidence from Scotland (3.3.2), considering how childcare has been found to reduce household costs (3.3.3), and noting how some have argued that it should be conceived as a fixed cost which should be deducted from counts of disposable income (3.3.4). Evidence is then presented on the extent to which childcare impacts on poverty for the whole population (3.3.5) and sub-groups (3.3.6). Before concluding (3.3.8), we appraise the evidence base (3.3.7).

3.3.1 The evidence base

57. In addition to the assumption that increased employment within low-income families will increase household income, which in turn will reduce poverty, several studies specified an explicit poverty focus, examining whether poverty is reduced through child tax benefits,¹⁹² public subsidies,¹⁹³ childcare policies which complement welfare and employment policies,¹⁹⁴ subsidised provision,¹⁹⁵ and use of formal provision.¹⁹⁶ Several studies examined the impact of provision on poverty levels in the context of simplification and tighter targeting of childcare benefits.¹⁹⁷
58. No studies were reviewed which appraised supplementary costs associated with childcare, e.g., direct travel costs incurred in accessing childcare, or costs required to equip children for participation. As Cost of the School Day work has demonstrated¹⁹⁸, 'free' education often has hidden costs, and it should not be assumed that funded childcare provision is without any financial cost to families.

3.3.2 Evidence from Scotland

59. Modelling for Scotland by the Fraser of Allander Institute¹⁹⁹ concluded that childcare investment for pre-school aged children would have a small impact on overall levels of child poverty in Scotland. Based on an assumption of a much more generous allocation than is being provided (50 hours per week) and an employment support package, it was estimated that a 3-percentage point reduction in child poverty could be achieved. Although social security savings and increases in tax revenue would also result, the net cost of such a scheme (more generous than that currently being provided) was judged 'very large'. The need for more than investment in employment to tackle poverty has been acknowledged in other studies.²⁰⁰

3.3.3 Reducing household costs

60. In theory, extending financial support for childcare can lead to a reduction in total family expenditure on childcare, an extension of childcare accessed (maintaining the level of family expenditure, but receiving more childcare for that expense), or a mixture of both.
61. The evidence base focuses on the cost savings that accrue from extending childcare provision, although Gennetian et al. (2004) are among the minority who also comment on patterns of childcare use.
 - Bousselin (2022)²⁰¹ reports, using data from 2004 to 2014, that the reforms in Luxembourg led to more families being able to afford childcare and a reduction in the average price of childcare per hour from 4.9 Euros (private sector) and 2.5 Euros (public sector) to 1.4 Euros (both sectors).
 - Mattingly and Carson (2021)²⁰² estimate that capping childcare costs in New England would reduce costs for 80% of families headed by a single parent or when the parent does not have a high school diploma.
 - Gennetian et al. (2004)²⁰³ reviewed 21 welfare schemes in North America concluding that cost savings resulted when expanded childcare assistance was provided, although this did not change the use of childcare or the likelihood of contributing to the cost of childcare. Some welfare programmes increased expenditure on childcare (where welfare requirements were introduced, without expanded childcare assistance).
62. Several studies in the UK have found that many parents report having more money following the extension of public provision of childcare.
 - Paull and La Valle (2018)²⁰⁴ report that following the extension of entitlement to free childcare for parents working full-time in England, 22% reported that they had much more money to spend, 56% slightly more money and 22% no real difference. Parents from more advantaged backgrounds were more likely to report that they had more money to spend.²⁰⁵
 - Preliminary analysis of the introduction of the Childcare Offer in Wales, suggests that most parents reported more disposable income (88%),²⁰⁶ although little more than one in four described this as 'much more money' (28%) and most described this as 'slightly more money' (60%).²⁰⁷
 - The Welsh Government repeated their preliminary analysis, canvassing the opinion of participating parents in their review of the Childcare Offer in Wales (four years into the programme), finding three-quarters of parents reported that it reduced the financial burden of childcare (74%), one-third (34%) reported having 'much more money' and one-half (51%) reported having 'slightly more money' to spend on shopping, clubs, days out, debts, savings.²⁰⁸

63. It is important to appraise evidence of cost savings in the round.

- Early evidence from the reform of a childcare package in Australia that was designed to reduce barriers to childcare for disadvantaged families and communities found that although more low-income families reported that they saved costs (36%, compared to 31% of middle-income and 21% of high-income families), this represents a minority of low-income families (with 55% reporting no change and 9% reporting increased costs).²⁰⁹
- Hufkens et al. (2020)²¹⁰ in a review across five European countries (Belgium, Estonia, Italy, Sweden, and Hungary) of childcare provision for children aged under three found that the impact of increased earnings arising from childcare provision is partly undone by childcare costs, concluding that this cautions for the levying of childcare fees at the bottom of the income distribution.

3.3.4 Childcare as a tax on wages and an expense that tips families into poverty

64. Childcare can be conceived as a tax on wages.²¹¹ Here, childcare is viewed as an essential and non-optional expenditure that must be incurred by working parents to enable their participation in the labour market. The cost of childcare is both a disincentive to participation in the labour market, and a hidden expenditure that is pushing some families into poverty (reducing the amount of truly disposable income) and reducing the 'effective wage' to levels not far removed from the 'reservation wage' (disincentivising employment).²¹²
65. There is a body of evidence that applies the conception of childcare as non-optional expenditure to recalibrate disposable income as being that which remains after childcare (and other essential expenditure) have been deducted from income. This provides an alternative approach to estimating rates of poverty.
- Hirsch and Valdez (2015)²¹³ estimated an AHCC measure of child poverty (after housing and childcare costs). They estimate the impact of this in the UK would be a one percentage point increase in poverty, an increase they describe as not significant overall, a finding and approach not dissimilar to earlier work in the USA by Iceland and Ribar (2001)²¹⁴ and more recently by Mattingly and colleagues²¹⁵. However, they note that when childcare costs are greater than £50 per week, the risk of poverty increases by one-third for everyone with childcare costs, and the risk triples for those with high costs (particularly for those on a low income).²¹⁶ They conclude that current measures mask the impact of childcare on poverty for these groups.²¹⁷

- Mattingly et al. (2017)²¹⁸ estimate that one-third of the poverty experienced by poorer families in the US results from their childcare expenses, and that childcare costs push 3.2% of families who pay for childcare into poverty. This impact is estimated to be experienced unevenly across the population – tipping into poverty 5.8% of those with three or more children, 6.8% of single parents 4.8% of Black ethnic households, 6.1% of Hispanic headed households, 5.9% of households headed by high school graduates, and 10.1% of households whose head did not graduate from high school. Part-time workers were twice as likely as full-time workers to be tipped into poverty because of childcare expenses (4.9%, compared to 2.3%).²¹⁹

3.3.5 Evidence for the total population of the impact on poverty of childcare investment

66. There is evidence on overall levels of poverty being reduced through childcare investment.

- Baker et al. (2021)²²⁰ conclude that childcare benefits in Canada led to an overall reduction in poverty. They review two transitions: first, an increase to universal childcare benefit (increasing the benefit for children aged 0-5 and introducing a fixed monthly payment for children aged 6-17) and the replacement of this with an integrated benefit that (i) incorporated childcare, child tax, and child benefit into a single tax-free benefit, and (ii) introduced means testing of the new benefit.
- Baxter et al. (2019)²²¹ evaluated the implementation of the new Child Care Package introduced in 2018 and anticipate that there will be winners and losers because of the restructuring of childcare support in Australia, estimating that between 262,200 and 330,000 households will be worse off. However, poverty is expected to reduce on account of a shift in focus towards directing support to low- and middle- income families.
- Mattingly and Carson (2021)²²² explore the effects of capping childcare costs in New England (USA) and conclude that it would lead to a reduction in the poverty rate of families with childcare costs from 7.7% to 4.5%. They estimate that between 36% and 50% of people would benefit. They describe the impact on poverty as “dramatic”.²²³
- Engster (2012)²²⁴ conducted a study, using data from 1987 to 2007, of the impact of family policies (including childcare) in 18 western democracies, concluding that public spending on childcare results in a decrease in child poverty rates.
- Forry et al. (2013)²²⁵ conclude that there is a positive correlation between childcare subsidies and annual earnings through the CCDF in the USA.

67. Horemans and van Lancker’s (2017)²²⁶ analysis of European nations concluded that, at the micro-level, there was a tendency for users of formal childcare to be less at risk of in-work poverty (UK being one such example). However, this did not hold in all nations, and in Romania those using formal childcare had a higher risk of experiencing in-work poverty. They draw upon data from 2012 European Union Statistics on Income and Living Conditions (EU-SILC).

3.3.6 Population variation in the impact on poverty of childcare investment

68. As would be expected, the extent to which childcare investment reduces child poverty is uneven across the population. Not all this evidence is consistent.

Lone versus partnered parents

69. There is mixed evidence on the extent to which childcare investment reduces poverty for lone and partnered parents.
- Some studies find greater gains for partnered parents. Nollenberger and Rodriguez-Planas (2015)²²⁷ found lower estimated effects for single mothers than married mothers in Spain. Some studies show that married or cohabiting mothers are more likely to benefit from childcare than single mothers because the financial gains are greater in households where women are the second earner.
 - Some studies find greater gains for lone parents.
 - Baker et al. (2021)²²⁸ found a higher percentage point reduction in poverty for lone parents in Canada, compared to partnered parents (five points, compared to two points), albeit that the initial risk rate of poverty was much higher for lone parents (40%, compared to 10%). It is also significant that most parents remained in poverty after the introduction of childcare benefits (35% of lone parents, compared to 8% of partnered parents).
 - Fortin et al. (2012)²²⁹ found that the rapid expansion of low-fee childcare provision in Quebec led to a rapid increase between 1996 and 2008 in the number of single mothers of pre-school aged children using formal childcare. At the same time, the number of single-parent families on welfare declined from 99,000 to 45,000, the relative poverty rate of single-mother families declined from 36% to 22%, and their average median after-tax income increased by 81%.
 - Engster (2012)²³⁰ found that public support for childcare was more effective in tackling poverty among single mothers (than partnered mothers).

Ethnic background

70. Mattingly and Carson (2021)²³¹ explore the effects of capping childcare costs in New England (USA) and conclude that capping childcare costs would reduce rates and close the gaps in poverty rate between non-Hispanic white individuals and people of color (sic). The anticipated impact on Black new Englanders was to cut their poverty rate by 41 per cent – from 18.3% to 10.8%.

Single earner families

71. Some studies appraise the issue of poverty impact not on percentage point gain, but on the ability to escape poverty. Horemans and van Lancker (2017)²³² conclude, from their analysis of European countries, that childcare may not help single earner families, because of the additional income required to escape poverty.

Higher income families

72. Paull and La Valle (2018)²³³ found that families in England in higher income groups were most likely to benefit from the expansion of childcare entitlement in terms of having more money to spend.
73. Similarly, Engster (2012)²³⁴ found that childcare (and other family policies) had the most impact on reducing poverty in households that were already economically 'better off'. The strategy may be less impactful for those families encountering poverty most intensely.

3.3.7 Appraising the evidence

74. Horemans and van Lancker (2017)²³⁵ note that although formal childcare is associated with a reduced risk of in-work poverty, there is a need to be cautious when drawing conclusions from this: workers who are at risk of in-work poverty have tended to be less likely to use formal childcare services. They contend that this leads to an aggregation paradox whereby, at the level of the household, the use of formal childcare is related to a lower risk of in-work poverty, while, when comparing nations, overall, there is no link between use of formal childcare and in-work poverty.
75. Horemans and van Lancker (2017)²³⁶ note that, at the level of the household, the use of formal childcare is related to a lower risk of in-work poverty, while the use of informal care is associated with a higher risk of in-work poverty. This may reflect Hirsch and Valdez's²³⁷ speculation that the use of informal childcare may be the result of unaffordable childcare costs. Similarly, the use of formal childcare is associated with higher levels of work intensity, i.e., increased number of earners within and across households and increased maternal labour force participation.
76. The effectiveness of childcare as a strategy to reduce child poverty is dependent on what the labour market has to offer. Horemans and van Lancker (2017)²³⁸ note that if childcare provision facilitates employment amongst low-income jobless parents, but the wages are not sufficient to lift them out of poverty, childcare policies will have no impact at the micro level (poor families remain in poverty), yet at the macro level the policies may seem to be effective (there is an increase in the number of people in poverty who are working). The types of jobs available to people is important, e.g., part-time childcare does not allow for full-time work (unless informal childcare is available), and flexible jobs require flexible working hours of childcare facilities.

3.3.8 Conclusion

77. There is a lack of empirical studies, which estimate how many families/children have been, or are likely to be lifted out of poverty, because of universal or publicly subsidized childcare provision. Indeed, one of the criticisms levelled at studies which examine the economic impact of childcare interventions (on employment outcomes) is that they do not capture the impact of reductions on child poverty (a 'spillover' effect).²³⁹
78. Across the small number of studies that examined evidence of the impact of childcare provision on poverty, the key conclusion is that the impact is slight, but positive, with some reduction in child poverty rates and food insecurity²⁴⁰.
79. Horemans and van Lancker (2017)²⁴¹ summarise the impact thus: "Who benefits from childcare expansion very much depends on the country-specific childcare practises, local labour market conditions, norms on motherhood, and other circumstances."

3.4 Impact on employment

3.4.1 The evidence base

80. The employment focus of the evidence base varies, with studies examining the impact on labour force participation of childcare prices,²⁴² child tax credits,²⁴³ childcare vouchers and subsidies,²⁴⁴ welfare regimes and public policy,²⁴⁵ expansion of childcare provision,²⁴⁶ compulsory kindergarten attendance.²⁴⁷ Some of these studies have a particular focusing on a population group, e.g., less-skilled mothers,²⁴⁸ single mothers²⁴⁹ and migrant parents.²⁵⁰
81. The evidence base on impact of childcare investment on employment is more extensive than that on the impact of childcare investment on poverty and household costs (3.3). Here, we summarise evidence from Scotland (3.4.2), before summarising findings from the range of studies that have estimated impact on overall employment (3.4.3). We progress to consider factors that shape how childcare impacts on employment outcomes (3.4.4) and the extent to which the impact is uneven across population groups (3.4.5). Before drawing conclusions (3.4.7), we describe some of the classifications that have been proposed to describe national childcare systems (3.4.6).

3.4.2 Evidence from Scotland

82. Modelling for Scotland by the Fraser of Allander Institute²⁵¹ concluded that evidence on the impact of childcare investment for pre-school aged children on parental earnings is inconclusive.
83. Lapniewska (2016)²⁵² estimates, using data from 2016, small positive gains from childcare investment in Scotland, increasing women's employment (directly) by 0.62 percentage points, increasing household income, which will in turn effect a marginal gain in the overall employment rate (of 0.06 percentage points), with a total aggregated employment gain for women of 1 percentage point, which would close the gender employment gap by 0.71 percentage points.
84. In addition to estimating employment gains in the short-term, Lapniewska²⁵³ conceives of childcare as a long-term social investment, arguing that it will have the direct effect of boosting GDP, that longer-term social and economic benefits are dependent on the provision of quality childcare, and that formal childcare provision is essential to facilitate women's participation in the labour market (noting that men have not increased the amount of domestic work to account for this paid work). This latter point contrasts one of reasons that have been cited for investing in childcare more generally (see paragraph 14.12).
85. Ramasawmy (2015)²⁵⁴ provides a range of interesting insights on the perspectives of one migrant group (Polish mothers in Scotland). Provision in Scotland is considered to offer more choices and flexibility for this group. Although not averse to work, or to utilising childcare, cultural norms shape some of their uptake, and the mothers' highlighted that there were more positive attitudes towards 'full-time, stay-at-home' mothers in Scotland, compared to Poland. However, this perception tends to contrast with the general thrust and underlying motivations of extending childcare provision in Scotland.

86. Hinchcliffe et al. (2021)²⁵⁵ report on outcomes for parents whose child was receiving the previous entitlement of 600 funded hours of early learning and care.
- First, to examine changes through time, they report on parents who used provision when their child was eligible as a two-year-old and revisited them when their child was aged three.²⁵⁶ They found little change in economic activity levels, although there was a small increase in the proportion working part-time (from 25% to 33%). Most of those who were not in work at the outset were also not in work one year further on (83%).
 - They also undertook cross-sectional research at the later point with a larger sample of parents. They found that:
 - Only a minority of parents were working full-time (9% worked at least 30 hours per week if the child was aged 2, compared to 28% of those whose child was aged 3).²⁵⁷
 - A sizeable proportion of parents were working part-time (29% worked up to 30 hours per week if the child was aged 2, compared to 41% of those whose child was aged 3).²⁵⁸
 - Those working part-time were more likely than those working full-time to indicate that they would work more if they could afford more childcare. Slightly more parents of children aged 2 held this opinion (e.g., 55% of parents of a 2-year-old working part-time, compared to 41% of parents of a 3-year-old working part-time).²⁵⁹
 - Only a minority of those not working indicate that a lack of affordable, good quality childcare explained their work status (25% of parents of 3-year-olds and 26% of parents of 2-year-olds).²⁶⁰

3.4.3 Evidence for the total population of the impact on employment of childcare investment

87. Most studies report positive impact on employment outcomes (paragraph 85), although the impact is often described as modest, and other studies have found no impact (87), or even a negative impact (86). Other positive employment benefits – beyond employment rates and income – are also noted (88).
88. There is evidence of parents identifying that childcare is a barrier to employment and presents problems that affect employment.
- Gennetian et al. (2004)²⁶¹ estimated that up the one-fifth of families in North America (across a range of studies) identified childcare as a barrier to employment. Interestingly, the status of childcare can shift from being a barrier to employment to presenting problems that affect employment: one-fifth of families were estimated to experience childcare problems after the implementation of the intervention.²⁶² Notably, such problems were less likely to be reported when the welfare interventions included a childcare element. Provision of childcare can facilitate employment, but it does not determine that all childcare problems have been addressed in relation to managing employment.

89. There is evidence of childcare investment leading to an increase in women's employment, although the overall impact can be modest.

The evidence base has included meta-reviews:

- Gennetian et al. (2004)²⁶³ concluded from examining 21 welfare programmes in North America that 17 generated significant increases in employment and increases in paid childcare. However, not all the schemes increased uptake of childcare (in some, the increases in employment were attributed to innovation in the welfare component of the intervention).
- Schaefer et al. (2006)²⁶⁴ reviewed seventeen studies in the USA that examined the impact of childcare subsidies on employment, finding positive impact in thirteen of these studies, although the extent, the range of benefit varied, and in some studies the benefits were non universal, being greater for some populations.
- Fortin et al. (2012)²⁶⁵ report from five earlier studies on the impact of low-fee childcare provision in Quebec, which estimated an increase in the maternal employment rate of between 7% and 12%.
- Gillespie and Khan (2016)²⁶⁶ refer to a cross-sectional study of fifteen EU countries which determined that the presence of public childcare had the greatest effect on tackling employment rate gaps.

Some studies have focused on all pre-teenage children:

- Bousselin (2022)²⁶⁷ found the introduction of childcare vouchers in Luxembourg led to an increase in women's participation in the labour market of three percentage points (of children aged under 13): overall increase in paid work was of the order of one hour per week.²⁶⁸ They note these compare to findings in the Netherlands and Spain.

Most studies have focused on children of pre-school age (or sub-groups within this age group):

- Carta and Rizzica (2015)²⁶⁹ found that increasing the provision of a low-cost childcare service in Italy (pre-kindergarten) significantly increased women's labour market supply (six percentage points).
- Givord and Marbot (2015)²⁷⁰ identify a significant but small increase of between one and two percentage points in the labour force participation of mothers because of a scheme to extend childcare subsidies in France for parents of children aged between 3 months and 3 years old. They suggest, by using data between 2005-2008, that investment allowed some mothers to sustain full-time employment.²⁷¹
- Gangl and Huber (2021)²⁷² found that a mandatory provision of kindergarten for four-year-olds in Switzerland led to a single percentage point increase in maternal employment over the outcome periods 2010-2017, and a 3.9% increase in mean income.

- Ravazzini (2018)²⁷³ found that the childcare reforms in Switzerland increased the part-time employment rates of mothers of 3-year-olds by two percentage points (noting that the definition of ‘part-time’ [between 20 and 36 hours per week] would be the equivalent of ‘full-time’ in many other European nations).
- The Welsh Government canvassed the opinion of participating parents in their review of the Childcare Offer in Wales (four years into the programme), finding 45% of those accessing the offer increased their working hours,²⁷⁴ with 46% reporting that it allowed them to increase their income (particularly those whose income was below the national average),²⁷⁵

Some studies focus on employment as a whole:

- Nollenberger and Rodriguez Planas (2011)²⁷⁶ report a substantial impact of childcare reform in Spain - universal childcare for 3 years olds - on maternal employment and weekly hours worked, with evidence that these gains persisted over time. In a later study,²⁷⁷ they estimate that the extension of public provision in Spain increased maternal employment by 9.6%.
- Carta and Rizzica (2015)²⁷⁸ found that increasing provision (pre-kindergarten, aged 2) significantly increased female labour supply in Italy (a six-percentage point increase in labour market participation), which they attribute both to the increase in the number of women available to the labour market and a significant drop in the reservation wage of unemployed women (what pay is required to entice participation – which falls due to childcare costs being met).
- Forry et al. (2013)²⁷⁹ review evidence of the impact of the Child Care and Development Fund in the USA and find that reductions in childcare costs are associated with increases in the likelihood of maternal employment.
- De Henau et al. (2019)²⁸⁰ find evidence of childcare investment leading to increased maternal employment (direct, indirect and induced) in South Africa, Uruguay and Turkey, with greater impact being projected in South Africa (compared to Uruguay where the system is already developed and Turkey where more ‘traditional’ attitudes toward women and work prevail).
- De Henau (2019)²⁸¹ simulates the potential of a high-quality childcare system for preschool children on maternal employment in the UK, estimating that it would generate between 1.5 and 1.7 million additional full-time jobs (1.1 million in the childcare industry itself). Based on current gender patterns in employment, this would increase women’s employment rates by between 6.1% and 6.5%.²⁸²
- De Henau (2022)²⁸³ estimates that possibility of significant increases in employment rates in the UK as a result of increasing investment in public childcare for preschool children, i.e., a rise in employment rate of between 2 and 3 percentage points, a reduction of the gender employment gap to 3.6 percentage points (from 9 in 2018), between 23 and 31 percentage point increase in the employment rates of mothers of young children and an increase in the proportion of non-employed mothers entering paid work of between 32% and 48%.
- Horemans and van Lancker (2017)²⁸⁴ find that the use of formal childcare for preschool children is associated with higher levels of work intensity, i.e., increased number of earners within and across households and increased maternal labour force participation.

90. On the other hand, there are concerns that extending provision might have a negative impact on employment outcomes.

- Campbell et al. (2013)²⁸⁵ speculate that childcare vouchers may disincentivise parents to work more hours or to progress into better positions in the UK.
- Paull and La Valle (2018)²⁸⁶ found evidence to support this assertion: a small proportion of mothers (5%) reported working less hours after the extension of childcare provision for early years in England.
- Schaefer et al. (2006)²⁸⁷ reviewed seventeen studies in the USA that examined the impact of childcare subsidies on employment, finding adverse impact in two of these studies, both of which referred to employment sectors into which mothers progressed. They also found that childcare subsidy use in the USA was associated with a concentration of employment in sectors of the economy with high vacancy rates and low pay rates.²⁸⁸

91. Other studies suggest that some maternal employment outcomes are unchanged after investment.

- Zimmert (2019)²⁸⁹ found no change in the share of full-time employed women (in Germany) and in the share of under- and over-employed mothers.
- Schaefer et al. (2006)²⁹⁰ reviewed seventeen studies in the USA that examined the impact of childcare subsidies on employment, finding no impact in two of these studies, with some studies²⁹¹ reporting a shift from informal care to formal care, rather than a change to any employment outcomes.
- Havnes and Mogstad (2011)²⁹² report that the large-scale expansion of subsidised childcare in Norway had little impact on maternal employment, and that only 460 mothers were 'induced' to work following the provision of an additional 17,500 places. Little impact was also observed on working hours.²⁹³
- Glover et al. (2018)²⁹⁴ reported that that 86% of parents reported no change in hours worked following the introduction of the Childcare Offer in Wales for 3 and 4 years old, concluding that overall, there was no significant impact on employment.
- The Welsh Government canvassed the opinion of participating parents in their review of the Childcare Offer in Wales (four years into the programme), finding most parents reported that their employment situation would be the same, even if the Childcare Offer was not available to them (58%),²⁹⁵ and that only 9% reported that they would not be in work if the Offer was not available.²⁹⁶

92. Some studies report positive employment outcomes that extend beyond the number of hours worked and income gained.

- Glover et al. (2018)²⁹⁷ reported that that two-thirds of parents reported making more flexible work-related decisions (66%) and perceived that they have more opportunity to increase earnings (67%) following the introduction of the Childcare Offer in Wales.

3.4.4 Factors shaping how childcare provision impacts on employment outcomes

93. The evidence base referred to many factors that influenced how, and the extent to which, childcare provision shaped employment outcomes. Here, we summarise evidence for nine of them.

Cost of childcare

94. Various conclusions have been drawn from research on the impact of the cost of childcare on maternal labour market participation (labour force participation elasticity), some finding substantial gain, while others find insignificant effects.
- Akgunduz and Platenga (2018)²⁹⁸ reviewed 36 studies from 11 countries (focusing on USA and Europe, and including the UK), aiming to identify overarching conclusions across the evidence base. They found that the extent to which childcare costs shape mothers' participation in the labour market: (i) have become smaller over time; (ii) are smaller where there are high rates of part-time work; and (iii) are smaller where there are either very high or very low rates of female labour force participation (albeit for different reasons).
 - Baaker and van Vliet (2021)²⁹⁹ suggest that high levels of women's labour market participation in OECD countries may explain why early childhood policies appear to be becoming less impactful on increasing employment.
 - Ravazzini (2018)³⁰⁰ speculates that the generosity of government subsidy in Switzerland – which is less generous than comparable countries, such as the Netherlands – may explain why the increases in participation rates have been lower than elsewhere.
95. Studies which evidence positive impact of subsidising cost on maternal labour market participation, still draw cautious conclusions on childcare subsidy. For example, Anderson and Levine (1999)³⁰¹ concluded from simulation in the USA with 1999 data that a 50% drop per hour in childcare costs would increase the participation in the labour market of all women with a child aged under 13 by eight percentage points. However, they also observed that this would leave two-thirds of these women outside the labour market. It is concluded that childcare (cost) constraints are only a small part of the difficulties faced by women in the labour market.

Cash-first consequences

96. Some have expressed concern that increasing income would be a disincentive to employment (see paragraph 86) or that reducing childcare costs may lead to a reduction in hours worked (as the reservation wage without childcare costs is lower – see de Henau in paragraph 94). In contrast, there is some evidence to suggest that changes to welfare regimes that increase income for low-income households do not necessarily act as a disincentive to employment. In their examination of the impact of a new integrated child benefit, the incomes of single mothers increased but this did not act as a disincentive to labour market participation. Baker et al. (2021)³⁰² found that there was no reduction in the labour market participation of single mothers, following the introduction of the benefit.

Childcare as part of a wider intervention package

97. Baaker and van Vliet (2021)³⁰³ reviewed social investment strategies across 26 OECD countries, including childcare. Although finding little correlation between early childhood policies and short-term changes in employment outcomes, they did conclude that there were statistically significant ‘institutional complementarities’ when active labour market policies are combined with early childhood policies, meaning that positive outcomes can result when policies complement each other by being targeted toward the same goal.

Women in the labour market

98. National evidence suggests that rates of female labour force participation are impacted less by childcare investment when participation is high - childcare policy improvements are likely to have more modest impact than the same policies in countries with lower levels of female labour force participation.
- Gangl and Huber (2021)³⁰⁴ found that a mandatory provision of kindergarten for four-year-olds in Switzerland led to only a small increase in maternal employment, noting that participation rates were already above average for OECD countries.
 - Bettendorf et al. (2015)³⁰⁵ also argue that in countries in which female labour force participation is already high the effects produced by childcare are usually minimal.
 - Givord and Marbot (2015)³⁰⁶ suggest that the ‘small impact’ on employment outcomes of the public subsidy scheme for parents of children aged between 3 months and 3 years in France reflects an already high participation rate of French mothers.
 - De Henau’s³⁰⁷ simulation in 2019 of employment outcomes arising from childcare investment for early years in the UK acknowledges that it would be likely to reduce the working hours of those who are only working full-time to pay for childcare.
 - Pascal et al. (2021)³⁰⁸ argue that the 30-hour entitlement in England benefited families by helping those who were already working to reduce costs.

Labour market

99. The nature of the local labour market has also been found to shape the effectiveness of childcare investment in shaping employment outcomes.
- Carta and Rizzica (2015)³⁰⁹ observe that the increase in maternal participation in the labour market varied across regions in Italy following an increase in provision, with participation rising by as much as 11.3 percentage points in places with a high vacancy rate, while the effect is ‘hardly positive’ in areas where the vacancy rate is low.
 - Using data from 1998 Del Boca and Vuri (2007)³¹⁰ note that in Italy in areas with higher unemployment, women are less likely to work and use formal childcare for children aged under 3.

On preferred employment

100. Using data from 2009 Kawabata (2014)³¹¹ explores the impact of childcare provision on women’s preferred employment in Tokyo, finding that adequate provision – particularly for children aged under three – helps women to attain their preferred employment and continue employment when raising children. It is estimated that accessing preferred employment was 38.6 percentage points higher when women had access to a childcare centre³¹²
101. Schaefer et al.’s (2006)³¹³ review of seventeen studies in the USA referred to one study which contends that single mothers were more likely to work standard hours than nonstandard hours on receipt of childcare subsidies.

Impact of, and access to, informal care

102. Gennetian et al. (2004)³¹⁴ found that formal childcare provision in the US and Canada facilitates longer periods of employment, as it provides more stable childcare (compared to informal provision).
103. Cebrián et al. (2019)³¹⁵ argue that access to informal care through relatives/friends is easier in small towns. Similarly, children in intermediate/thinly populated areas are more likely to be in informal care, while the opposite is true for children living in densely populated areas.

Nature of childcare provision

104. The form (Gangl and Huber (2021) and quality (in Schaefer et al. (2006) of childcare provision have been found to shape employment outcomes.
- Gangl and Huber (2021)³¹⁶ refer to the work of Felfe et al. (2016)³¹⁷ who demonstrated that after-school care increases the full-time employment of mothers.

- Schaefer et al. (2006)'s³¹⁸ review of seventeen studies in the USA referred to one study which contends that childcare quality had a greater impact than cost of childcare on shaping women's employment outcomes.

Provision shapes participation

105. There are various ways in which public provision of childcare shapes employment outcomes.

Some of these studies compare national variation.

- Gillespie and Khan (2016)³¹⁹ refer to work that demonstrates that higher rates of maternal employment are found in countries with more publicly funded childcare.
- Givord and Marbot (2015)³²⁰ note in their evaluation of increased childcare subsidies in France that short-term supply issue (availability during a period of expansion) may be more important than cost in explaining impact on employment rates. They also refer to other studies that suggest that the highest positive impacts on mothers' labour market participation is when policies create new public childcare facilities.

Many studies note different outcomes within nations, reflecting uneven geographies of provision.

- Zimmert (2019)³²¹ found that the employment rate and hours worked increased more in districts (in Germany) that had a large increase in provision.
- Ravazzini (2018)³²² found that employment participation rates were higher in cantons in Switzerland that expanded their childcare provision at a rate greater than the national average.
- Nollenberger & Rodríguez-Planas (2015)³²³ found that higher levels of maternal employment were recorded in Spain among early adopting states compared to later adopting states (2.8% percentage points higher).
- Kawabata (2014)³²⁴ in an analysis of childcare provision in wards in Tokyo found a geographical mismatch between supply and demand of childcare centres, which impacted particularly on those families when the child was aged two or below.
- Schaefer et al. (2006)'s³²⁵ review of seventeen studies in the USA referred to one study in which welfare recipients living in areas with full-day kindergarten were more likely to work than those who lived in areas with part-day kindergarten.
- Del Boca and Vuri (2007)³²⁶ find in Italy that the impact on maternal employment is greater in areas with greater provision: a 50% subsidy of childcare costs is estimated to increase mothers' employment by 11% in areas with adequate provision, but only by less than 3% in areas with less provision. Here, increasing the subsidy to 100% (free childcare) is only estimated to increase participation by 5.4%.

In a finding that mimics the impact of childcare investment when women's engagement in the labour market is already established (paragraph 94), further developments to an established childcare system are also found to be less impactful.

- It has been observed that the elasticities associated with childcare provision on maternal labour market participation are reducing. Bousselin (2022)³²⁷ suggests that this may result when reforms are expanding (improving) an existing system.

Not only does evidence suggest that the nature of the local labour market influence the effectiveness of childcare investment on employment outcomes (paragraph 95), one study on the UK suggests that the very nature of childcare provision reflects the local labour market.

- Butler and Rutter (2016)³²⁸ argue that in the UK families in areas of low employment are less likely to have access to flexible childcare (being served mainly by maintained providers in schools), which further constrains employment opportunities.

3.4.5 Population variation over whether childcare provision impacts on employment outcomes

106. Population outcomes were uneven across population groups. Some of this evidence is mixed, some more clear-cut. Here, we describe the impact of childcare investment on employment outcomes for nine population groups.

Education

107. Evidence for education was mixed (paragraphs 104 and 105), with some studies reporting that the initial impact changed through time (paragraph 106).
108. Several studies found that the desired employment outcomes were more likely to be achieved by mothers with higher levels of education.
- Zimmert (2019)³²⁹ found that the employment rate was higher for mothers with a high school degree than those without.
 - Cebrián et al. (2019)³³⁰ found that more highly educated mothers were more likely to engage in paid employment through formal childcare use.
109. However, some studies found that employment outcomes were strongest for less educated mothers.
- Schaefer et al.'s (2006) review of seventeen studies in the USA found some evidence of less educated mothers benefitting most from childcare subsidies, although even with these gains employment rates were described as 'far below' those of other women.³³¹
 - Carta and Rizzica (2015)³³² note that groups most under-represented in the labour market – married and less educated women – benefitted most by the extension of provision in Italy.

- Fortin et al. (2012)³³³ found movement into employment was evident among those without a university degree if the child was under six years old.
110. Several studies found that the impact of childcare provision on employment changed through time, with Nollenberger and Rodriguez Planas describing divergence, whereas Fortin et al. identify convergence.
- Nollenberger and Rodriguez Planas (2011)³³⁴ report that gains through time in Spain were driven by mothers with a high school degree. Through time, the gains for mothers without a high school degree faded away.
 - Fortin et al. (2012)³³⁵ found that initially degree-educated mothers were more likely to progress into employment, although after a few years, the progression into employment was not associated with education level of the mother.

Income

111. As for education, there was some conflicting evidence, although more studies reported greater positive impact for low-income parents.
112. Several studies found that the desired employment outcomes were strongest among parents with lower income.
- Zimmert (2019)³³⁶ found that the employment rate and hours worked increased more for mothers on low- or middle- income compared to mothers on high- incomes.
 - Paull and La Valle (2018)³³⁷ reported that low-income parents were much more likely than middle- and high- income parents to report that the extended provision for full-time working parents in England had a positive impact on their work (56% compared to 48% and 29%, respectively).
 - The Welsh Government canvassed the opinion of participating parents in their review of the Childcare Offer in Wales (four years into the programme), finding that the Offer is providing most support to lower income earning parents, enabling them to remain in employment; increasing their working hours and/or earnings; giving them more flexibility in the way they work; and improving their opportunities for in-work training.³³⁸
113. In contrast, the particularities of some labour markets determined that higher income parents were more likely to benefit in other areas.

Ethnic background

114. In some studies, employment outcomes are appraised according to ethnic background.
- Paull and La Valle (2018)³³⁹ found that Asian mothers in England were more likely than those of White, Black, and Mixed ethnic backgrounds to report that the increased childcare

provision had a positive impact on their work (59%, compared to 40%, 47% and 42%, respectively).

Parental Age

115. There is mixed evidence on whether parental age is associated with employment outcomes of childcare investment, with some reporting no difference (Zimmert), but most reporting greater positive impact from older parents (Gangl and Huber, Nollenberger and Rodriguez, and Cebrián et al.).

- Zimmert (2019)³⁴⁰ found no significant differences in employment outcomes across age groups.
- In contrast, Gangl and Huber (2021)³⁴¹ found that older mothers who had ‘completed their families’ were most likely to have benefited from the introduction of mandatory kindergarten provision for four-year-olds in Switzerland.
- Nollenberger and Rodriguez Planas (2015)³⁴² found that employment gains in Spain were strongest among older parents (mothers aged at least 30 had a 15.3% increase in maternal employment), with much of these gains persisting through time.
- Cebrián et al. (2019)³⁴³ found that older mothers were more likely to engage in paid employment through formal childcare use.

Age of Child

116. The age of the child is associated with the extent to which childcare provision impacts on employment outcomes. Studies tend to suggest greater impact for pre-school children, but not children of the very youngest age (paragraph 113), although there are some complexities that must be acknowledged (paragraph 114).

117. In some studies, employment outcomes were found to vary according to the age of the child.

- Bousselin (2022)³⁴⁴ found that greatest increases were found when the youngest child was aged 3–5-year-old, compared to 0-2 years, and then 6-12 years, i.e., increases in overall participation of 6, 5 and 2 percentage points, respectively, and increases in hours worked of 3, 2 and 1 hour per week, respectively.
- Schaefer et al.’s (2006) review of seventeen studies in the USA referred to a study in which a 30% subsidy of childcare costs increased employment rates for low-income mothers within one year by seven percentage points and by eight percentage points for mothers within two years of childbirth.³⁴⁵
- De Henau’s (2019)³⁴⁶ simulation of employment outcomes of optimal childcare investment identifies mothers with young children under primary-school age as being the group whose employment behaviour is most likely to change as a result.

118. Significant variations across Europe are identified in the extent to which childcare provision impacts on different age groups (Cebrián et al), with an anomalous outcome in Italy where the use of formal childcare increases and employment participation decreases where there are children of pre-school age in the household.
- Cebrián et al. (2019)³⁴⁷ found different relationships with age of child and mothers' participation in paid work across Europe: in Scandinavian and Liberal countries mothers' time in paid work increases with children's age; in Eastern European countries it decreases over the first 2 years of life; in Central Europe mothers with children aged 12-23 months tend to work less than mothers of children under 12 months (can be explained by the length of maternity leaves offered); in Southern European countries mothers work slightly more as children grow.
 - Del Boca and Vuri (2007)³⁴⁸ observe in Italy that the presence of children aged 4-5 years in the household increases the likelihood of using formal childcare but decreases the likelihood of working. They explain what might appear to be counter-intuitive by speculating that this could be attributed to the fact that having more pre-school children makes it harder for the mother to reconcile work and family life.

Number of Children

119. In some studies, employment outcomes are appraised according to the number of children in the household. However, findings are mixed, with some studies identifying greater gains for smaller families (paragraph 116) and others identifying greater gains for larger families (paragraph 117).
120. In some studies, employment outcomes are strongest for smaller families.
- Givord and Marbot (2015)³⁴⁹ conclude that an extension of childcare subsidies in France for parents of children aged between 3 months and 3 years old benefitted mothers of one child, whose resulting labour force participation became very close to the participation rates of mothers without children. In contrast, no significant impact on average earnings was observed for mothers of three or more children (although there was some evidence of movement into part-time paid employment for this group).
 - Ravazzini (2018)³⁵⁰ found that mothers with large families in Switzerland did not increase the number of working hours following the expansion of provision after childcare investment in Switzerland.
 - Fervers and Kurowska (2022)³⁵¹ note that the increase in maternal employment in Poland was greater in smaller families (7.1 percentage points, compared to 4.3 as a whole). The effect for larger families was close to zero.
121. In contrast, other studies report greater gains for larger families.
- Paull and La Valle (2018)³⁵² found that mothers of large families (three or more children) were more likely than those of small families to report that the increased childcare provision had a positive impact on their work (51%, compared to 41%)

- Nollenberger and Rodriguez Planas (2015)³⁵³ found that employment gains in Spain were strongest among parents with more than two children (14.9% increase in maternal employment), with much of these gains persisting through time. Together with evidence that older parents were more likely to benefit, led them to conclude that provision is most successful among mothers who have completed their fertility.³⁵⁴

Family status

122. There is also conflicting evidence on whether childcare provision is more likely to benefit partnered parents (paragraph 120) or single parents (paragraph 119). Cebrián et al. (2019) relate differences to the nature of national childcare systems (paragraph 121), while Ravazzini (2018) notes how partners' income in Switzerland can shape decision-making and outcomes (paragraph 122).
123. Studies have found that the effects of childcare investment are likely to be more significant for single mothers and unmarried mothers.
 - Schaefer et al. (2006)'s review of seventeen studies in the USA found some evidence of single mothers benefitting most from childcare subsidies, although even with these gains employment rates were described as 'far below' those of other women.³⁵⁵
 - Schaefer et al. also referred to a study in which the level of childcare cost subsidy was associated with the scale of increased employment rates with unmarried mothers benefitting more than married mothers.³⁵⁶ For example, a 50 cent per hour subsidy increased unmarried women's employment by 8%-9%, whereas a \$1 per hour subsidy increased the same by 19-20%.
124. Other studies have found greater benefit for partnered parents.
 - Ravazzini (2018)³⁵⁷ found that married or cohabitating mothers benefitted more from childcare investment in Switzerland. They explain that this may reflect that their study examined both the private and public sector (given that single parents were less likely to access private sector childcare) and that single parents were already given priority for subsidised places on waiting lists, and that the expansion of places may have disproportionately benefitted partnered parents.
 - Paull and La Valle (2018)³⁵⁸ report that single parents were much less likely to report that the extended provision of childcare for full-time working parents in England had a positive impact on childcare use (although more reported a positive impact on their work).
 - Carta and Rizzica (2015)³⁵⁹ note that groups most under-represented in the labour market – including married women – benefitted most by the extension of provision in Italy.
125. Cebrián et al. (2019)³⁶⁰ found differences across (childcare systems in) Europe: higher female labour force participation can be explained by the fact that there is a lack of provision of public aid for single mothers in Southern Europe, whereas in Scandinavian, Liberal, and Eastern European countries single mothers tend to work fewer hours than mothers partnered to employed men.

126. The influence of partner's income on female labour force participation is also a factor which impacts on decision-making in the early years. Ravazzini (2018)³⁶¹ found that in Switzerland this influence declines four years after childbirth, but not before.

Users of informal care

127. Once more, mixed evidence is available, with studies reporting the extension of formal childcare having no impact on informal care (paragraph 124), contrasting with those that describe a shift from informal to formal provision (paragraph 125). Horemans and van Lancker (2017) caution that a shift in provision may be a stronger outcome than ones that are employment-related (paragraph 126).
128. Bousselin (2022)³⁶² finds no empirical evidence of a 'crowding out' effect on informal childcare of the expanded formal childcare provision and the introduction of childcare vouchers in Luxembourg. Instead, the study found that formal and informal childcare are complementary. Nonetheless, the study realises that in countries where universally subsidised childcare already exists, childcare vouchers may lead to crowding out effects and schemes might substitute for private alternatives.
129. Zimmert (2019)³⁶³ found some evidence of families substituting informal care for formal care as a result of childcare reform in Germany.
130. If workers with young children substitute informal care for formal childcare arrangements, for instance when governments start to invest in public childcare, the impact at both the micro and the macro level could be zero,³⁶⁴ therefore, the investment could appear unsuccessful.

Existing work status

131. There is some evidence to suggest that childcare investment tends to be of greatest benefit to mothers who are already in employment.
- Ravazzini (2018) found that childcare expansion in Switzerland had a greater influence on working hours rather than labour market entry, i.e., determining whether working mothers worked part-time or full-time. The effects of which were noted as being greater for mothers who were married or cohabited and had 'upper-secondary education' and significant effects for women with two children.³⁶⁵
 - Paull and La Valle (2018), in an evaluation of the rollout of extended hours in England, found that additional provision allowed one-quarter of mothers to increase their working hours (26%).³⁶⁶ Only 2% reported that they had entered work because of the reform.³⁶⁷
 - Bousselin (2022)³⁶⁸ found that the introduction of childcare vouchers in Luxembourg led to an increase in previously working mothers' hours of 4 hours per week (compared to 2 hours per week for the population as a whole). Similarly, the greatest gains were found for those mothers who were previously working part-time.

- Givord and Marbot (2015)³⁶⁹ observed benefits for one-child mothers who were already working who increased their work intensity because of the extension of childcare subsidies for children aged between 3 months and 3 years in France.
- Cebrián et al. (2019)³⁷⁰ found that in all countries except Central and Eastern Europe, mothers whose partners are unemployed are less likely to work than mothers whose partner is employed.

Hufkens et al. (2020)³⁷¹ describe this as hampering the impact of public services as an anti-poverty strategy.

132. On the other hand, some ‘progressive’ outcomes were identified in the sense that wider gains (Glover et al. (2018)) and some studies highlight benefits from groups who were less engaged in the labour market (Horemans and van Lancker (2017)).

- Glover et al. (2018)³⁷² reported that parents working part-time were more likely to report that they had increased learning opportunities following the introduction of the Childcare Offer in Wales.
- Horemans and van Lancker (2017)³⁷³ find, using European data, that higher-skilled mothers and those close to the labour market are most likely to benefit from childcare expansion.

133. Some studies move beyond describing impact to explore the complexities around the changes induced by childcare provision.

- Paull and La Valle (2018)³⁷⁴ explored the reasons why increased provision did not have an impact on work among those who reported that it did not: they found already working full-time was the main reason for women (38%), with others reporting they had other childcare commitments (22%), could not increase their hours (17%), could not make sufficient additional money to make it worthwhile (12%), that they wanted free time (6%), did not need additional income (5%), could not find another job with more hours (1%), with other reasons reported by 16%.
- Carta and Rizzica (2015)³⁷⁵ estimate that mothers who already worked reduced their working hours following the extension of provision in Italy (an increase of 720 Euros was estimated to result in a reduction of working hours of 1.5 per week). This is part of an employment shift, as the net effect of the provision was to extend maternal labour market supply.
- On the other hand, there is evidence of a re-alignment of agreed and preferred working hours after a childcare intervention. This suggests that norms and preferences can change, and outcomes are not pre-determined by experience. Zimmert (2019)³⁷⁶ found evidence in Germany of a re-alignment of agreed and preferred working hours, i.e., the availability of low-cost childcare changed preferences.

3.4.6 A Childcare Systems Approach

134. Several studies have presented a typology of childcare systems across developed countries (OECD and Europe).
135. Flynn (2017)³⁷⁷ conceives of four ideal types of childcare system in OECD countries based on affordability and availability. These are described in terms of 'penalty' for maternal employment.
- No penalty. Available and affordable (typically Scandinavian countries)
 - Female penalty. Affordable, but not necessarily available (mainly Mediterranean countries, but also Ireland and Netherlands)
 - Traditional penalty. Not available and not affordable (mainly Germanic countries)
 - Young child penalty. Available but not affordable (mainly English-speaking countries, plus France)

Flynn conceives of the UK as belonging to the 'young child penalty' group. Arguably, the investments by the Scottish Government aim to shift Scotland into the 'no penalty' group. Flynn argues that it is necessary to have a strong public and a strong private sector to achieve desirable employment outcomes, estimating that across OECD countries, where there is both, there is a 68% chance of maternal employment for children aged under 3 and an 81% chance of employment for children of pre-school children aged over 3.³⁷⁸

136. Pavolini and van Lancker (2018)³⁷⁹ also group European nations into four categories based on the parents' attitudes on 'traditional norms on motherhood' and 'structural constraints in childcare provision'.
- Above average structural constraints, with below average traditional norms (four countries, including the UK)
 - Above average structural constraints, and above average traditional norms (seven countries)
 - Below average structural constraints, with below average traditional norms (eight countries, including Scandinavian countries)
 - Below average structural constraints, with above average traditional norms (eight countries, including the UK)

137. Cebrián et al. (2019)³⁸⁰ also group European countries according to type of childcare system: however, they identify five regional groupings.

- Southern European: low female labour market participation but growing at speed. Conservative family values, but move to a mixed system of informal and formal care
- Social democratic welfare / Scandinavian. Extensive formal provision and high rates of labour market participation.
- Central European: High rates of part-time work, between Scandinavian and Eastern/Southern European in character).
- Eastern: Some progress in developing provision, but more conservative in values, with lower female labour market participation.
- Liberal: Mothers 'choose' between paid work and care work (unpaid domestic). High part-time profile. Participation often targeted at low-income households.

3.4.7 Conclusion

138. The findings are not conclusive or straightforward. For example, some studies find substantial gains for some subgroups (e.g., single mothers) while other studies find insignificant gains for those groups, or that the effect on maternal employment is modest or weak at best. This is further complicated by the range of childcare interventions and provisions deployed in different settings.

139. The effect of childcare policies on maternal employment (the employment of fathers in relation to childcare provision is rarely the focus of study) varies across studies, countries, and time periods. The societal, economic and policy context is critical in determining (or speculating) the impact of an intervention in any specific instance.

140. Notwithstanding these complexities, and as for the impact on poverty of childcare investment (paragraph 74), the key conclusion is that the balance of evidence for the impact of childcare on employment outcomes is positive in nature.

3.5 *Impact on tackling the drivers of child poverty*

141. Before reflecting on the implications for contemporary Scotland (section 4), it is useful to reflect on the wider ways in which childcare provision is pertinent to tackling child poverty in Scotland. Here, we revisit four themes to which reference has been made in passing in the report, i.e., the risk of an inverse care law (3.5.1), longer-term impact through child development (3.5.2), viewing childcare as social investment (3.5.3) and reflecting on how childcare improves quality of life (3.5.4).

3.5.1 *Sensitivity to the Inverse care law*

142. It has already been noted that there is some evidence that the reach of childcare investment is more limited than would be expected for an anti-poverty intervention.
143. Where the aim of childcare is to tackle child poverty, consideration must be given to who benefits from improvements in childcare provision.
- As Horemans and van Lancker (2017) note,³⁸¹ childcare provision is only an effective policy instrument to combat in-work poverty if those workers with young children who have lower levels of household work intensity and lower earnings are reached. Conversely, if more advantaged families are likely to benefit from childcare subsidies, then this strategy could undermine rather than support anti-poverty goals by reinforcing existing inequalities.
 - It is significant, if not a matter of concern, that formal childcare use in the UK and many European countries is already socially stratified (with low-income or low-skilled parents being less likely to enrol their children in formal childcare services relative to more advantaged families).

Therefore, care must be taken to ensure that childcare policy mitigates existing inequality rather than reinforce it by ensuring that disadvantaged children are able to access formal childcare.

144. Where the reach of childcare investment to tackle child poverty is designed to avoid the inverse care law – it is targeted at children and mothers in families experiencing poverty – then positive impact can result. Hufkens et al. (2020)³⁸² estimate that young child poverty was halved when this was the approach taken in Belgium, Estonia, and Hungary.

3.5.2 The longer-term impact on reducing poverty through child development

145. Although it was not a focus of this review, many studies find evidence that childcare subsidies positively affect children's emotional, behavioural, and cognitive development. Early years education has a positive impact on the most disadvantaged children regardless of their parents' level of education, as young children can develop their cognitive skills independently of their parents in high quality formal care settings. Multiple papers maintain that the utmost priority of childcare policies should be to improve children's development, and not simply to increase employment, reduce rates of poverty, and increase revenue for the government.
146. For example, Waldfogel (2002)³⁸³ reviews the evidence from studies in the UK, USA, and Ireland on the impact on child outcomes of childcare and maternal employment in the pre-school years. The paper reports that evidence from the USA and Ireland suggests that quality childcare begun after the first year of a child's life has a positive impact on the cognitive and educational outcomes of financially disadvantaged children and from the USA for children whose parents have the least education.
- A review of childcare by the Research and Development Corporation (RAND) in the U.S. showed that "well-designed early intervention programs (sic), including childcare programs (sic), can make a positive difference in the lives of children" – evidenced in terms of higher cognitive abilities (IQ test), higher achievement in school test scores, less time in special education, better grades, less grade repetition, higher rates of graduation from high-school.
 - Additionally, the RAND review demonstrated that early childcare eventually led to higher employment, earnings, and income as well as lower crime rates and delinquency.
 - The RAND review also showed positive effects on parents – less abuse and neglect, less welfare use, improved mother-child interaction, improvements in how the home environment promotes child development, increasing levels of mothers' education and employment, as well as increased parental involvement in the child's school.
 - Evidence also shows that childcare programmes that intervened earlier and were more intensive had stronger effects. Furthermore, programmes that had some kind of 'follow-through component' were more successful in sustaining the gains.

Waldfogel (2002)³⁸⁴ also refers to longitudinal studies in France which suggest that universal programmes reduce the gap in school readiness between children from financially advantaged and disadvantaged backgrounds.

147. There is a wide body of evidence that amplifies Waldfogel's evidence:

- Ravazzini (2018)³⁸⁵ maintains that quality childcare has positive effects on the cognitive development of children, independent of their parents' level of education. Furthermore, early intervention (it should be noted that early intervention differs from childcare) is beneficial for children whose parents have low levels of education as longitudinal studies in the USA have found positive effects on cognition and higher rates of high school graduation.
- Felfe et al. (2015)³⁸⁶ found evidence that universal childcare for three-year olds improves reading skills at age 15 and grade progression during primary school.
- Longitudinal studies in France show that universal programmes reduce gaps between school readiness between the better-off and less well-off. However, the quality of care is crucial. e.g., staff must hold relevant professional qualifications and be able to identify and meet the needs of individual children.
- Cornellison et al. (2018)³⁸⁷ analysed data from an ELC expansion in Germany to evaluate the impact on children's skills, utilising school entry tests as an indicator to assess the impact on motor skills, language and cognitive development. They found that, overall, universal ELC had positive impact. However, and of relevance in this instance, is that the gains made varied between children depending on their familial and economic background. Children from low-income or immigrant families benefitted the most in terms of motor skills, language, and cognitive development. This evidence suggests that there is potential for ELC to eliminate a proportion of the attainment gap for children from more disadvantaged socio-economic backgrounds.
- Felfe and Lalive (2018)³⁸⁸ found evidence of the ability and effectiveness of ELC in closing the educational attainment gap in Germany. The authors went on to demonstrate that the benefits are not only apparent at the time of school entry but also in later life, and this has implications for the future of the workforce. In combination with the immediate economic gains from increased female labour market participation that is often associated with the expansion of ELC, they found that there are positive economic impacts from the workforce 20 years later when the children who received ELC are active in the labour market. They find that the benefits of ELC for a child's cognitive development is most pronounced for low-income and immigrant backgrounds. The researchers also found that high quality ELC helps close the attainment gap between boys and girls, having a greater effect on boys' language, motor and socio-emotional skill development, which helps bring them on par with girls who generally display a greater level of these skills at that age.
- Paull and La Valle (2018)³⁸⁹ found that most parents in England (86%) reported that their child was better prepared for school (although this reflection may also be influenced by the time passed and readiness acquired as the child develops across the time passed since they started the increased entitlement, and not just the time spent in childcare).

148. This body of evidence is pertinent to this review in that it indicates that high quality early years education and early intervention has the potential to ameliorate the negative effects of poverty on children by improving developmental and educational outcomes and by addressing the poverty related attainment gap. It is theorized that these cognitive and educational gains will mitigate the negative effects of poverty by facilitating social mobility in the longer-term.
149. Some studies warn about the necessity of analysing what effects the expansion of childcare facilities, reduction of childcare costs and increasing availability of spaces would have on the quality of care – it is important for staff to NOT be overburdened, underpaid and their training underfinanced as a result of the expansion of the childcare system.³⁹⁰ Campbell et al. (2013)³⁹¹ are among those who contend that the economic benefits of formal childcare provision are highly dependent on the quality of care provided. Stewart and Waldfogel (2017) express concern that staff working in early years setting are becoming less highly qualified.³⁹²
150. Butler and Rutter (2016)³⁹³ contend that although there is little poor-quality care across the UK, there is a lack of the extremely high standards in pre-school programmes with all the elements – well-qualified and experienced staff, good social mix of children, proactive approach to supporting home learning, and strong links with early intervention services – required to support children who are most at risk of ‘falling behind’.

3.5.3 Childcare as social investment

151. Some studies emphasise that public spending on high quality childcare must be viewed as investment into social infrastructure, not public expenditure. This would challenge the orthodox political views, leading to rationalisation of funding problems and eventually result in the provision of free universal high-quality childcare.³⁹⁴
152. Studies which demonstrate that childcare investment is cost neutral strengthen the case for this investment.
 - De Henau³⁹⁵ performs simulations of the potential effects of investing in free universal childcare for early years on employment and fiscal revenue in the UK.³⁹⁶ All three studies prove that such investment would be beneficial for the government as it would not only “pay for itself” over the average working life of a mother after childbirth but also result in positive long-term impacts – reduced inequalities in life chances, improved children’s well-being and cognitive development (this would increase productivity in the economy through better education, social skills etc. in the long run), reduction of the gender gap in employment and earnings, and overall improved social cohesion
 - Fortin et al. (2012)³⁹⁷ present interesting evidence from Quebec, Canada where public investment into universal low-fee childcare programme (for early years and after school care) ended up being profitable for the government.³⁹⁸

153. In contrast, the recent modelling by the Fraser of Allander Institute – referred to earlier in the report – suggests that childcare investment would not be cost neutral. Of note is that within this modelling the costs are recuperated through increased taxation: whilst this reverses the overall expansionary economic impact, people at the bottom of the income distribution still benefit in each of the three modelling scenarios.

3.5.4 Enhancing quality of life

154. Childcare provision has also been reported to improve mothers' quality of life (paragraph 151) and the wider quality of family life (paragraph 152).
155. Increasing income from employment (and tackling child poverty) through childcare provision has been found to enhance parental wellbeing.
- Mothers interviewed as part of an evaluation of childcare expansion in England reported that additional early years childcare entitlement improved their health and wellbeing.³⁹⁹ Childcare was welcomed by mothers of three or more children and mothers of children with additional support needs who reported that this was of particular benefit to them because the additional care afforded them with much needed respite and impacted positively on their family life.⁴⁰⁰
 - Glover et al. (2018)⁴⁰¹ found that many parents reported less stress and anxiety around costs following the introduction of the Childcare Offer in Wales for early years.
156. Provision was also described as affording benefits to the wider family.
- Zimmert (2019)⁴⁰² found that an expansion of subsidized early childcare in Germany provided flexibility (i.e., ability to fulfil preferred working hours), had positive effects on individual/family life, health and working life.
 - Paull and La Valle (2018)⁴⁰³ report that many parents report improvements in the quality of family life because of the increased early years childcare provision to working parents in England, i.e., 43% reporting it was 'much better' and 36% reporting it was 'better'. However, of note is that a minority reported that family life had deteriorated.
 - Paul and La Valle's⁴⁰⁴ evaluation of the expansion of childcare provision in England also found that benefits were noted for grandparents who did not need to provide as much childcare.

4. Implications for Contemporary Scotland

157. For many years, it has been acknowledged that it is challenging to estimate the direct impact of childcare provisions on reducing poverty⁴⁰⁵ and increasing maternal employment. It remains a challenging task. There is a need to better understand and more clearly specify the expected contribution of childcare.

4.1 *On Impact*

158. Evidence of the immediate impact of childcare investment on poverty, employment and reducing household costs is not compelling.
159. Empirical evidence suggests that investment in childcare can result in modest reductions in child poverty and cost savings, and modest increases in maternal employment (which, in turn, also can lead to reductions in child poverty). However, these investments do not – alone – transform household income or employment outcomes of the target groups. Research tends to advise that most of the target group endure low income and remain outside the labour market after the introduction of a childcare intervention.
160. To optimise the impact of childcare investment on tackling poverty, childcare policy must be designed, and childcare services must be made available in a way that ensures it reaches those target populations who need childcare to gain income employment. In arguing this point, for example, Hufkens et al. (2020)⁴⁰⁶ assert that extra early years places should be allocated to “poor children and all poor mothers who are taking on a job.”
161. It should be acknowledged that findings from one context cannot be easily transferred to another, because both the context and the household composition might differ. By extension, there is a need to be sensitive to how extending provision may have variable impact across Scotland.
162. Childcare is not an all-encompassing solution to tackling child poverty or in-work poverty and must not be conceived as a blunt tool. However, there may be a role for formal childcare as an indispensable part of a policy toolkit to tackle these problems.
163. Looking ahead, it must be acknowledged that maternal employment is much less dependent on the demand for external childcare where public childcare is widely available and affordable, and families receive more financial support.

164. Multiple studies emphasise that often there are more obstacles to employment than childcare costs – thus, it is important to realise that childcare policies/ subsidies (even when designed for lower-income, vulnerable groups) are likely to be insufficient on their own as instruments of moving mothers into employment and must be used in conjunction with other policies - in some cases policies are needed to address the lack of flexible working arrangements, conservative social/ gender norms or to promote BOTH parents’ engagement in childcare.⁴⁰⁷

4.2 On the wider value of childcare

165. Although not a formal focus of this enquiry, the evidence base draws attention to the many ways in which childcare provision contributes to many ‘progressive’ outcomes, which extend beyond poverty, employment, and household costs.
166. Analysts consistently recommend that investing in childcare provision should be an integral part of an anti-poverty ‘toolbox’. There is a need to better understand and more clearly specify the expected contribution of childcare and to develop a coherent, holistic approach to tackling child poverty, for example, through the collaborative working approaches which are promoted between local authorities and health boards in the joint production of Local Child Action Reports (LCPARs) as part of their duty under the Child Poverty (Scotland) Act 2017.
167. There is a need to appraise whether there is alignment in Scotland between some wider objectives of extending childcare provision and the goal of tackling child poverty. For example:
- Where childcare aims to tackle gender inequalities by promoting women’s participation in the workforce, there is a need to ensure that provision does not widen inequalities among mothers, given some evidence that those who gain from childcare investment are not always the most disadvantaged among mothers.
 - Where childcare aims to tackle gender inequalities by promoting women’s participation within the labour market, there is a need to ensure the expanding workforce within childcare itself is monitored. Almost all (96%) of the childcare workforce are women, and not all partner providers pay a living wage. Commodification of care risks reinforcing care work as low paid and insecure gendered employment.
 - Where childcare aims to tackle gender inequalities by encouraging men to play a greater role in domestic labour and child-raising, there is a need to monitor that these outcomes are realised: otherwise, women are taking on extra paid work, in addition to pre-existing domestic duties.
 - Where childcare aims to increase the pool of labour that is available, there is a need to ensure that this does not merely result in a considerable drop in the reservation wage, which might be most beneficial to employers who are able to hire women at lower cost.

4.3 On future provision

168. Although there are many examples of ‘demand-led’ childcare interventions, there is strong support for ‘supply-side’ interventions – such as universal provision in Scotland – on the grounds that is “the most effective means of delivering reliable access to affordable, flexible and high-quality childcare, regardless of parents’ ability to pay”.⁴⁰⁸ However, there is a need to ensure that supply-side initiatives meet the needs of all families, including those in the priority groups to ensure that their specific needs are met. Achieving this is not an insignificant undertaking: however, it is consistent with the person-centred approach that characterises Scotland’s child poverty delivery plan.
169. Scottish Government investment in childcare must be monitored to ascertain that it is not reinforcing existing inequalities in formal childcare use by disproportionately benefiting more advantaged families⁴⁰⁹.
170. There is a need to maintain a focus on, and guard against, the criticism levelled by Butler and Rutter (2016)⁴¹⁰ against a universal system of free childcare, i.e. – *an excessive focus on free childcare risks locking the UK into a low quality funding model, distracts policy-makers from investment in early intervention services and will not address fundamental access and flexibility challenges ... universal free childcare is likely to undermine rather than support anti-poverty policy goals*. It should be countered that in Scotland, childcare is conceived as part of a wider system of anti-poverty activity and that this criticism is less pertinent. However, there is a need to ensure that investment in this universal childcare system is sufficient if its anti-poverty potential is to be realised.

4.4 On future research

171. There is an inadequate evidence base that would enable us to understand the totality of the impact of childcare investment on tackling child poverty, promoting maternal employment and reducing household costs in Scotland. This needs to be strengthened in many ways.
- The evidence base must be strengthened on the long-term outcomes of childcare investment. This would consider both outcomes for children through childcare participation, outcomes for parents over the life course, and economic return on investment.
 - Research tends not to consider seasonal challenges, and other times of the calendar year when childcare becomes a challenge to manage for working parents. School children, for example, only attend school for 190 days of the year. There is a need for research that is focused on the impact of childcare provision around the school day, at weekends, during short school holidays and during longer school holidays.
 - Research tends to focus on facilitating the labour market participation of parents with a younger child in the household. There is a need for more research that is sensitive to the childcare challenges faced across the full range of age-stages (and family compositions). To align with child poverty objectives, this research must also focus on the six priority groups.

- Research tends not to be attuned to the differences across geographical and local economic contexts. There is a need for intelligence that is locally relevant across Scotland.
- Research stresses the importance of the quality of care for the realisation of longer-term gain for children. There is a need to understand how the quality of childcare that is being offered in this period of expansion of provision is likely to impact on child poverty outcomes.
- Further research is required around maternal 'preference' for informal care to establish the extent to which decision making can be attributed to parental beliefs/attitudes or to barriers in accessing formal care.

4.5 Toward a holistic understanding of the impact of childcare provision on child poverty

172. There is a need to develop an understanding of the complexity of the pathways to impact that result from the nature of childcare provision on levels of child poverty, reducing household costs and maternal employment.
173. In particular, there is a need to inter-relate the (primarily) short-term impacts on poverty of using childcare to facilitate increased income through parental employment and by reducing household costs (with more focus on the quantity of provision – childcare affordability for working families), and the long-term impacts of tackling child poverty by laying the foundations for future development through early learning and care (with more focus on the quality of provision – quality education for child development). This reiterates the recommendation of Butler and Rutter (2016) of the two principles that should underlie the creation of an anti-poverty childcare system.⁴¹¹

Annex 1: Approach to the Rapid Review of Literature

A1.1 Rapid literature reviews

The research objective was to undertake a rapid review of academic literature to better understand the likely impact of childcare provision on poverty, employment and household costs for families experiencing poverty.

With the constraint of what was conceived as a small-scale project of fixed and limited duration, the objective was not to undertake a full and formal Systematic Review. However, we approached the review with the same rigour and formulated a systematic approach to appraising the evidence base.

Grant and Booth⁴¹² describe a rapid review as way to meet “the need for evidence-based decisions within a policymaker’s time frame” (p.100). Although this requires accepting limits to the scope and range of the evidence identified and analysed, it requires a systematic approach to selection and analysis, and does not compromise on standards.

A1.2 Analytic framework

The geographical parameter of what was judged ‘relevant’ literature to review was not limited to studies focused on Scotland (or parts thereof): rather, research judgement was made to ascertain what was deemed relevant to Scotland and to comment on the likely significance of findings for Scotland from studies undertaken furth of Scotland.

Similarly, we did not limit our search to contemporary work. Our concern was to glean understanding from appraisals of pertinent childcare interventions, regardless of when these were undertaken. Indeed, many contemporary evaluations draw on evidence that is much older in origin.

Therefore, it was prudent to adopt a realist approach to analysis.⁴¹³ Realist evaluation is particularly attuned to the importance of context. It asks ‘what works, for whom, under what conditions’. Realist evaluations do not aim to produce definitive answers nor generate ‘how to’ guides; rather, they highlight important areas to consider, including identifying the boundaries of what is known and knowledge gaps.

A1.3 Identification of literature – three stages

Literature was identified in three stages. First, a formal scoping of the academic literature was undertaken (A1.3a). Second, expert review of the results of the scoping exercise led to an additional eight papers being incorporated in the formal evidence review (A1.3b). Stages one and two were completed in advance of the research brief being agreed. Third, while preparing the report, an additional twenty papers and reports were encountered which provided broader comment on the role of childcare in tackling poverty and how childcare contributed to wider societal goals: although not part of the formal evidence review, these papers provided helpful context to the rapid evidence review (A1.3c).

A1.3a Stage One – Formal Screening of Academic Literature

Two academic databases were utilised to identify relevant literature - Google Scholar and GCU's Discover database. There is an extensive literature on childcare, much of which concerns employment and some of which concerns poverty. Research judgement was used to set no date parameters for search combinations.

Eight search combinations were specified to identify research articles that met the research objectives. These search combinations were applied to each database.

- allintitle: poverty childcare
- allintitle: poverty "child care"
- allintitle: evaluation "child care"
- allintitle: evaluation childcare
- allintitle: Scotland childcare
- allintitle: Scotland "child care"
- allintitle: employment "child care"
- allintitle: employment childcare

These searches generated several thousand 'hits'

- allintitle: poverty childcare (56 hits for Google Scholar) - [link](#) and (154 hits on GCU Discover) - [link](#)
- allintitle: poverty "child care" (99 hits for Google Scholar) - [link](#) and (81 hits on GCU Discover) - [link](#)
- allintitle: evaluation "child care" (539 hits for Google Scholar) - [link](#) and (289 hits on GCU Discover) - [link](#)
- allintitle: evaluation childcare (169 hits for Google Scholar) - [link](#) and (805 hits on GCU Discover) - [link](#)
- allintitle: Scotland childcare (42 hits for Google Scholar) - [link](#) and (44 hits on GCU Discover) - [link](#)
- allintitle: Scotland "child care" (52 hits for Google Scholar) - [link](#) and (72 hits on GCU Discover) - [link](#)
- allintitle: employment "child care" (583 hits for Google Scholar) - [link](#) and (299 hits on GCU Discover) - [link](#)
- allintitle: employment childcare (365 hits for Google Scholar) - [link](#) and (421 hits on GCU Discover) - [link](#)

The Titles and Abstracts of these papers were scanned to identify those that were most likely to relate to research questions. 388 articles were identified in a 'long list' of possible articles to review. Duplicates from this initial 'long list' were removed: 166 of the 388 candidate articles were removed at this stage (leaving 222 papers).

Next, the Title and Abstract of these 222 articles were reviewed in closer detail. This led to a judgement of each as either worthy of review (category 1), of interest, but beyond the scope of what can be achieved in this rapid review (category 2) or not relevant on closer analysis (category 3).

- 40 were identified as Category 1
- 89 were classified as Category 2, with the following observations noted for each
 - a – Weaker focus (not on poverty or on employment outcomes for low-income families)
 - b – Older study
 - c – Less relevant geographical setting
 - d – Not enough information to reach judgement
- 93 were classified as Category 3

Prior to reviewing those classified as ‘worthy of review’, additional steps were undertaken to identify other relevant work that may not have been identified through the literature search process.

- Citation tracking of category one articles (identifying articles ‘worthy of review’ that had cited one of these 40 papers in a later publication)
- Google search of “poverty childcare Scotland”

Seven additional articles were identified, giving a total of 47 articles to review.

The 47 ‘category one’ articles can be classified as follows:

- AA – Think-piece (4 articles) – Annex 3.1
- BB – Focus on poverty (9 articles) – Annex 2.1
- CC – Focus on pertinent issues at times of expanded provision (10 articles) – Annex 2.2
- DD – Focus on childcare in contemporary UK (9 articles) – Annex 2.3
- EE – Review across studies / meta-analysis (7 articles) – Annex 2.4
- FF – Interesting empirical observation (8 articles) – Annex 2.5

It should be noted that the think-pieces (AA above) were deemed worthy of appraisal, but not as part of the formal evidence review (A1.3c).

A1.3b Stage Two – Expert confirmation of screening exercise results for formal evidence review

Dr. Hakeem confirmed the utility of 43 of the 47 category one articles for the core evidence review (all except the think-pieces). Dr. Hakeem recommended that a further eight articles were added to the core evidence review (Annex 2.6), giving a total of 51 papers.

A1.3c Stage Three – Supplementary reading for the contextual review

The four ‘think-pieces’ were not part of the core evidence review that is reported in section 3 (Annex 3.1). However, these four papers provided important contextual insight and were reviewed for section 2 (Context) of this report.

In addition to these four papers, twenty reports and papers were encountered in the process of undertaking the review, each of which provided broader comment on the role of childcare in tackling poverty and contributing to wider societal goals. These papers are listed in Annex 3.2. Insight from these papers were also incorporated in section two of the report.

A1.4 SPIRU evidence review protocols

Professor McKendrick drafted a review protocol and a proforma to record the results of each review. The papers were allocated to three SPIRU researchers (Lisamarie Reid, Michelle Ritchie and Justyna Sadovska). The researchers were briefed in advance, clarifying the focus of the review work and the broader goals of the research.

Two papers were used in a pilot exercise, with each paper reviewed by each SPIRU researcher. The review team debriefed on the pilot and agreed on the level of detail required for the main stage of reviews. Some clarification of research objectives was also provided by the Scottish Government at this point. Together, this led to some minor revisions to the review proforma (Annex 4).

Reviewing was completed over a three-week period, with papers allocated evenly among the research team. The review team debriefed weekly during this period. Once all papers had been reviewed, the key findings were checked and confirmed by another member of the research team.

A1.5 SPIRU synthesis

In advance of the review, Dr. Hakeem prepared a briefing based on his prior knowledge of the literature (based on his recently completed doctoral research thesis). Each of the SPIRU researchers also prepared a briefing of key points after they had completed their review work.

Professor McKendrick drafted this report, drawing on the four briefings, fifty-one reviews and appraisals of the general literature listed in Annex 3. This draft was reviewed by the wider research team, before being presented to the Scottish Government as a final draft report.

Annex 2: Literature Reviewed – Core

A2.1 Focus on poverty

1 (BB): Forry, N. D., Daneri, P., Howarth, G. (2013). Child care subsidy literature review. *OPRE Brief 2013-60*. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Focus: participation (impact of subsidies)

Link: <https://www.childtrends.org/wp-content/uploads/2015/08/2014-72Child-Care-Subsidy-Literature-Review.pdf>

Abstract: This review was co-authored by researchers from Child Trends, with input from members of the Child Care Policy and Research Consortium's Child Care Subsidy Workgroup. Policy-relevant responses to the research were provided by two state administrators, Melanie Brizzi from the Indiana Family and Social Services Administration and Leigh Bolick from South Carolina's Department of Social Services. The purpose of this review is to summarize research related to subsidy use, associations between subsidy receipt and parents' choice of high quality care, continuity of subsidized care arrangements, and associations between subsidy receipt and select family and child outcomes. It is intended to provide a foundation of empirical knowledge for state administrators, early childhood program developers, and policymakers who can use information about child care subsidies and outcomes to improve programs and services for families.

1 (BB): Szarfenberg, R. (2021). Family, Poverty, and Social Policy Interventions. In *The Palgrave Handbook of Family Sociology in Europe* (pp. 239-256). Palgrave Macmillan, Cham.

Focus: Poverty (impact of provision)

Link: https://link.springer.com/chapter/10.1007/978-3-030-73306-3_12

Abstract: The aim of this chapter is to convince the reader that poverty harms family as a whole and their members individually, and the harm is long lasting and multi-generational. Social policy instruments can reduce poverty and therefore exert a positive impact on the family. The first premise in this argument will be backed by a review of extensive evidence based mainly on the Family Stress Model. The second premise will be supported by distinguishing four types of social policy instruments aimed at reducing family poverty. There is evidence that child poverty is reduced by direct and indirect measures. The theory and evidence support these two premises, while the conclusion holds that anti-poverty social policy is important from a family welfare and well-being perspective. The chapter is based on a review of empirical and comparative research related mainly to European countries.

1 (BB): Hufkens, Figari, F., Vandelannoote, D., & Verbist, G. (2020). Investing in subsidized childcare to reduce poverty. *Journal of European Social Policy*, 30(3), 306–319.

Focus: Poverty (impact of provision)

Link:

https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_sage_journals_10_1177_0958928719868448

Abstract: Expanding childcare is often considered as a suitable way to enhance employment opportunities for mothers with young children as well as to reduce child poverty. In this study, the authors critically investigate this assertion by simulating a set of scenarios of increasing subsidized childcare slots and mothers' employment. For a variety of European welfare states, the impact on poverty and on the government's budget is estimated using the European microsimulation model EUROMOD. The findings suggest that to achieve significant poverty reductions among young children, both additional childcare slots and increased mothers' employment should be well targeted. The expenditures for additional childcare slots can to a large extent be recovered by the government receipts generated by the additional employment; however, there appears to be a trade-off between the extra revenue that can be generated and the extent of poverty reduction.

1 (BB): Horemans, J. & Van Lancker, W. (2017). *Into the Great Wide Unknown: Untangling the Relationship between Childcare Service Use and In-Work Poverty (No. 1704)*. Centre for Social Policy Working Paper 17/04. University of Antwerp. (re-published as a book chapter: Van Lancker, W., & Horemans, J. (2017). Chapter 15: Childcare Policies and In-Work Poverty. In H. Lohmann & I. Marx (Eds.), *Handbook of Research on In-Work Poverty*. Cheltenham: Edward Elgar

Focus: poverty (impact of utilisation)

Link:

https://medialibrary.uantwerpen.be/oldcontent/container2453/files/CSB%20WP%202017/CSB_WP_17_04.pdf

Abstract: In the literature on in-work poverty (IWP), childcare services are often assumed to be an effective policy instrument in reducing the number of working poor. However, such assumption has never been properly put to the test. This chapter provides, for the first time, empirical evidence on the role of childcare services in combating in-work poverty. First, a conceptual overview of the pathways through which childcare service use is expected to reduce in-work poverty. Second, a comprehensive overview of the literature on the employment effects of childcare use is provided. Third, drawing on the 2012 wave of the European Union Statistics on Income and Living Conditions (EU-SILC), the link between using formal childcare and IWP is examined at both the micro and the macro level. The results provide evidence for an aggregation paradox: there is no link between the level of formal childcare use and the IWP rate at the country level, while using childcare at the household level is related to a lower risk of being working poor. This can be explained by the fact that families using formal care are also families with higher levels of work intensity. Finally, we argue that the type of care matters much as we find that informal care arrangements are related to higher levels of IWP.

1 (BB): Baker, M., Messacar, D., & Stabile, M. (2021). *The effects of child tax benefits on poverty and labor supply: Evidence from the Canada Child Benefit and Universal Child Care Benefit* (No. w28556). National Bureau of Economic Research, USA

Focus: poverty and participation (impact of tax benefits)

Link: https://www.nber.org/system/files/working_papers/w28556/w28556.pdf

Abstract: We investigate whether child tax benefits reduce child poverty and labor force participation among single mothers within the context of the 2015 expansion of the Canadian Universal Child Care Benefit (UCCB) and the 2016 introduction of the Canada Child Benefit (CCB). We compare single mothers to single childless women as single mothers have historically had the highest poverty rates. Our analysis indicates that both reforms reduced child poverty, although the Canada Child Benefit had the greater effect. We find no evidence of a labor supply response to either of the program reforms on either the extensive or intensive margins.

1 (BB): Hirsch, D., & Valadez, L. (2015). *How much does the official measure of child poverty underestimate its extent by failing to take account of childcare costs*. Centre for Research in Social Policy, Loughborough University.

Focus: poverty rate (impact of childcare cost)

Link:

https://cpag.org.uk/sites/default/files/uploads/How%20much%20does%20the%20official%20measure%20of%20child%20poverty%20under%20estimate%20its%20extent%20by%20failing%20to%20take%20account%20of%20childcare%20costs_0.pdf

1 (BB): Iceland, J., & Ribar, D. C. (2001, March). *Measuring the impact of child care expenses on poverty*. In Population Association of America (PAA) meetings in Washington, DC, March (Vol. 29).

Focus: poverty rate (impact of childcare cost)

Link: <https://www.census.gov/content/dam/Census/library/working-papers/2001/demo/childexp.pdf>

Abstract: Many families, especially those with low incomes, confront the challenge of paying for child care expenses in order to work and earn a living. Recognizing this, a National Academy of Sciences Panel on Poverty and Family Assistance recommended taking these expenses into account in a new, updated measure of poverty. Employing 1995 data from the Survey of Income and Program Participation, this paper compares the effect of using different methods of estimating child care expenses on poverty rates under the new, experimental poverty measure. Our analysis indicates that the NAS's specific recommendations for taking child care expenses into account could be improved. While the overall differences in the effect of the different methods are moderate, the alternatives we propose are conceptually more appealing and technically no more complex to implement than the NAS methods. A couple of these methods should therefore receive serious consideration for adoption in the experimental poverty measure.

1 (BB): Mattingly, Wimer, C. T., & Collyer, S. M. (2017). Child Care Costs And Poverty Among Families With Young Children. *American Journal of Medical Research* (New York, N.Y.), 4(2), 162–167.

Focus: poverty rate (impact of childcare cost)

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_gale_healthsolutions_A519075556

Abstract: In this research paper, we consider the extent to which families who incur child care expenses for their young children are pushed below the poverty threshold by those costs using a supplemental poverty measure (SPM) framework. Families most often pushed into poverty by child care expenses include households with three or more children, those headed by a single parent, those with a black or Hispanic head of household, and those headed by someone with less than a high school degree or by someone who does not work full time. Data and Methods To analyze the effects of child care expenses on the poverty rate, we assembled a data file consisting of the five most recent years, 2012-2016 (capturing poverty from 2011-2015) of the Current Population Survey's Annual Social and Economic Supplement, downloaded from IPUMS.3 Because child care expenses are combined with other work-related expenses in the SPM, we first create a somewhat different version of the SPM to look specifically at child care expenses. Nonetheless, our findings suggest that lowering out-of-pocket child care expenses for families with young children would serve to reduce poverty.

1 (BB): Mattingly, M. J., & Carson, J. (2021). *Proposal to Offset Families' Child-Care Costs Could Enhance Equity by Dramatically Cutting Poverty Among People of Color Across New England*. Federal Reserve Bank of Boston

Focus: poverty rate (impact of subsidy)

Link: <https://www.bostonfed.org/publications/community-development-issue-briefs/2021/proposal-to-offset-families-child-care-costs.aspx>

Abstract: In this brief, authors Beth Mattingly and Jess Carson consider the impact of capping child-care expenses for New Englanders paying out of pocket for child care. Using the Census Bureau's Supplemental Poverty Measure, they find that poverty would decline by 40 percent among New Englanders in families paying for care if out-of-pocket payments were eliminated for those below their state median income and capped at 7 percent of income for higher-earning families. Absolute reductions would be greatest for Black and Hispanic New Englanders, meaning that such a policy change would also bring their poverty rate closer to rates among white New Englanders, thereby decreasing the racial/ethnic poverty-rate gap.

A2.2 Focus on pertinent issues at times of expanded provision

1 (CC): Bezu, S., & McCallum, K. E. (2021) Childcare and women's employment in Canada: a policy perspective. *Mimeo*.

Focus: participation (impact of cost)

Link:

https://www.researchgate.net/publication/349348904_Childcare_and_women%27s_employment_in_Canada_a_policy_perspective

Abstract: Although the gender gap and differences in rates of labour market participation between men and women have narrowed in Canada, women are still more likely to work part-time, to get paid less for similar work, and experience frequent employment interruptions. One of the leading causes of employment interruption for women, and the most common reason for voluntarily selecting part-time roles, is childcare. Studies show that when mothers have access to affordable childcare, they are more likely to work, enjoy career advancement, and experience fewer career interruptions. However, reliable, affordable, quality childcare is still inaccessible for many women. We assess the effect of childcare cost on female labour market participation in Canada. We show how the COVID-19 pandemic threatened women's employment and highlighted the importance of childcare for their labour market participation. We argue for the implementation of a national childcare strategy, as proposed in the Report of the Royal Commission on the Status of Women in Canada (1970), and describe the economic value of such a coordinated strategy. We recommend that policymakers work to strengthen supports for childcare to help position women to make unconstrained choices about work, labour force attachment, and family life in the workforces of the future.

1 (CC): Nollenberger, & Rodríguez-Planas, N. (2015). Full-time universal childcare in a context of low maternal employment: Quasi-experimental evidence from Spain. *Labour Economics*, 36(October), 124–136.

Focus: participation (impact of expanded provision)

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_proquest_journals_1713771214

Abstract: Using a natural experiment framework, we study the effects of offering full-time public childcare for 3-year-olds in a context of low female labor force participation and insufficient infrastructure of childcare slots. We find that two mothers entered employment for every ten additional children enrolled in public childcare. The effect is driven by mothers 30 years old and older and those with two children or more. While our estimates compare to those found earlier, they cannot be explained by a crowding out of alternative childcare modes. Nonetheless, as the reform was implemented in a period of low labor demand in Spain, our estimates may not be as modest as they appear at first sight. •We estimate the effects of offering full-time public childcare on maternal employment. •2 mothers entered employment for every 10 additional children in public childcare. •The reform did not crowd out private childcare. •The effect is driven by older mothers and those with two children or more. •The results highlight the importance of the country's broader economic environment.

1 (CC): Havnes, & Mogstad, M. (2011). Money for nothing?: Universal child care and maternal employment. *Journal of Public Economics*, 95(11/12), 1455–1465.

Focus: participation (impact of provision in times of expanded provision)

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_proquest_miscellaneous_918740170

Abstract: The strong correlation between child care and maternal employment rates has led previous research to conclude that affordable and readily available child care is a driving force both of cross-country differences in maternal employment and of its rapid growth over the last decades. We analyze a staged expansion of subsidized child care in Norway. Our precise and robust difference-in-differences estimates reveal that there is little, if any, causal effect of subsidized child care on maternal employment, despite a strong correlation. Instead of increasing mothers' labor supply, the new subsidized child care mostly crowds out informal child care arrangements, suggesting a significant net cost of the child care subsidies.

1 (CC): Ravazzini, L. (2018). Childcare and maternal part-time employment: a natural experiment using Swiss cantons. *Swiss Journal of Economics and Statistics*, 154(1), 1-16.

Focus: participation (impact of provision in times of expanded provision)

Link: <https://sjes.springeropen.com/track/pdf/10.1186/s41937-017-0003-x.pdf>

Abstract: Fuelled by federal stimuli of 440 million Swiss francs, the staggered expansion of childcare in many cantons allows the evaluation of this family policy on female labour supply. With new cantonal data, this study analyses both the decision to participate in the labour market and the intensity of participation. Empirical results of difference-in-differences regressions show that mothers work at higher percentage rates if they live in cantons that have expanded their childcare services more than the national average. The reform stimulated part-time employment of between 20 and 36 h per week by 2 percentage points. The expansion of childcare particularly affected women with two children and upper-secondary education, who are married or cohabit with their partner.

1 (CC): Paull, G., & La Valle, I. (2018). *Evaluation of the First Year of the National Rollout of 30 Hours Free Childcare*. London: Department for Education.

Focus: employment (impact of expanded provision)

Link:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/740168/Evaluation_of_national_rollout_of_30_hours_free-childcare.pdf

1 (CC): Baxter, J., Bray, J.R., Carroll, M., Hand, K., Gray, M., Katz, I., Budinski, M., Rogers, C., Smart, J., Skattebol J., & Blaxland, M. (2019). *Child Care Package Evaluation: Early monitoring report*. (Research Report). Melbourne: Australian Institute of Family Studies.

Focus: participation (impact of childcare investment)

Link: <https://aifs.gov.au/publications/child-care-package-evaluation-early-monitoring-report>

1 (CC): Zhang, & Managi, S. (2021). Childcare availability and maternal employment: New evidence from Japan. *Economic Analysis and Policy*, 69, 83–105.

Focus: participation (impact of provision in times of expanded provision)

Link:

https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_crossref_primary_10_1016_j_eap_2020_11_001

Abstract: As grandparental childcare in Japan becomes highly uncommon in recent years, working mothers need to rely more on formal childcare services. In 2015, the Japanese government launched the Comprehensive Support System for Children and Child-rearing (CSSCC) to promote the expansions of early childhood education and care (ECEC) services. This study estimates the effects of ECEC availability on maternal employment in the new context, using a fresh dataset combining official municipality data and individual-level data of a sample of mothers with preschool children extracted from an original Japanese nationwide survey dataset for 2015, 2016, and 2017. Identification for the maternal employment effects is based on the variation across municipalities and over time in the pace of ECEC expansions triggered by the CSSCC. The empirical results show that a one percentage point increase in the capacity rate of ECEC facilities targeted at the 0–5 age group predicts an increase of 0.27 percentage points in mothers' working probability. The overall increase in working probability is almost entirely explained by the increase in nonregular employment rather than regular employment and is mainly driven by mothers with low education. A new type of ECEC service established under the CSSCC for the 0–2 age group has a sizable effect exclusively on the nonregular employment of mothers from three-generation households. Comparisons with the findings by previous studies and implications for the future design and implementation of family policy are discussed.

1 (CC): Nollenberger, N., & Rodríguez-Planas, N. (2011). Child care, maternal employment and persistence: a natural experiment from Spain. *IZA Discussion Paper 5888*. Bonn.

Focus: participation (I/t of provision)

Link: <https://docs.iza.org/dp5888.pdf>

Abstract: Reconciling work and family is high on many governments' agenda, especially in countries, such as Spain, with record-low fertility and female labor force participation rates. This paper analyzes the effects of a large-scale provision of publicly subsidized child care in Spain in the early 1990s, addressing the impact on mothers' short- and long-run employment outcomes (up to four years after the child was eligible to participate in the program). Exploiting the staggered timing and age-targeting of this child-care expansion, our estimates show that the policy led to a sizable increase in employment (8%), and hours worked (9%) of mothers with age-eligible (3-year-old) children, and that these effects persisted over time. Heterogeneity matters. While persistence is strong among mothers with a high-school degree, the effects of the program on maternal employment quickly fade away among those without a high-school degree. These findings are consistent with the program reducing the depreciation of human capital. The lack of any results among college educated mothers, which represent less than one tenth of mothers, is most likely due to the fact that they are able to pay day care (even when it is mainly privately supplied), and that most of them are already strongly attached to the labor force.

1 (CC): Zimmert, F. (2019). Early child care and maternal employment: Empirical evidence from Germany (No. 2/2019). *IAB-Discussion Paper*. German Federal Employment Agency.

Focus: participation and hours (impact of expanded subsidy)

Link: <https://doku.iab.de/discussionpapers/2019/dp0219.pdf>

Abstract: This paper examines the effect of an expansion of subsidized early child care on maternal labor market outcomes. It contributes to the literature by analyzing, apart from the employment rate and agreed working hours, preferred working hours. Using the legal claim for subsidized child care introduced in Germany in August 2013 for children aged one to three years, I apply a semi-parametric difference-in-differences estimator to examine maternal labor market outcomes. Findings based on survey data from the German Micro Census show a positive effect on the employment rate, as well as on agreed and preferred working hours in districts where the child care coverage rate increases intensely in contrast to districts with a lower expansion of subsidized child care. As agreed and preferred working hours adjust in line with each other, expansion of early child care can tap labour market potentials beyond those of currently underemployed mothers.

1 (CC): Bousselin, A. (2022). Access to universal childcare and its effect on maternal employment. *Review of Economics of the Household*, 20: 497-532.

Focus: participation (Impact universal provision expansion)

Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8245926/>

Abstract: Subsidized childcare is a key instrument to support maternal employment in most OECD countries. Using a major reform implemented in Luxembourg in 2009, I study the effects of expanding access to subsidized childcare on the employment decisions of women in a context where childcare is universal and heavily subsidized, but is limited by capacity constraints. The identification strategy relies on temporal variation across age groups of children. In response to the reform, the employment rate of mothers increased by 3 percentage points, and their working time grew by 1 h per week. This effect hides the difference between children's ages, as mothers of the youngest children are found to be more responsive to the reform than mothers of children in primary education. Studying heterogeneous effects reveals a differential impact of the reform with regard to prior employment status.

A2.3 Focus on contemporary UK

1 (DD): Ramasawmy, L. (2015). The Impact of Migration on Paid Work and Child-Care Arrangements among Polish Migrant Parents in Scotland. *Studia Migracyjne-Przegląd Polonijny*, 41(3 (157)).

Focus: participation / childcare (impact of culture)

Link: http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-38be49fd-8cfe-41a6-9fd3-7671d07605e4/c/St_Migr_3_15_2_L.Ramasawmy.pdf

Abstract: This paper draws on a qualitative study of Polish parents in thirty families who migrated to Scotland after Poland's accession to the EU in 2004. It investigates the different ways in which these parents negotiate child-care and paid work, looking at how their preferences and choices relate to social and policy norms in Poland and the UK, to their own personal life trajectories, and to the contexts and opportunities available to them in Scotland. In my analysis, I make use of theory relating to labour market change and to women's preferences in work, drawing on Catherine Hakim's 'Preference Theory'. I look at the relevance of historical influences and norms stemming from communism and Catholicism in Poland, as well as the more recent impact of neoliberalism, on paid work and child-care strategies. In my analysis, I highlight in particular the importance placed by parents on the opportunities provided by the more flexible labour market, greater availability of parttime work and easier access to vocational training for parents in the UK than in Poland. To assist analysis, I distinguish three family types within my study group: first, young families in which parents migrated singly and subsequently started families in the UK; second, older families who migrated with school-age children in search of a better standard of living; and third, professional or skilled parents who migrated to take up employment in their field in the UK. I find that each type of family is associated with a different pattern of child-care and employment in the UK and explore how migration has impacted on parents' ability to enact their chosen lifestyle.

1 (DD): Glover, A., Harries, S., Lane, J., & Lewis, S. (2018). *Evaluation of the Early Implementation of the Childcare Offer for Wales*. Cardiff: Welsh Government.

Focus: participation (impact of provision)

Link: <https://gov.wales/sites/default/files/statistics-and-research/2019-06/181122-evaluation-early-implementation-childcare-offer-en.pdf>

Abstract: An evaluation of the first year of the early implementation of the Childcare Offer for Wales. The evaluation focused on the effectiveness of the Offer for parents and children, the impact of the Offer on parental employability, well-being and disposable income and impact on the childcare sector.

1 (DD): Harrison, J., Kumar, A., Congreve, E., Connolly, K., & MacGregor, P. (2022). *Modelling packages to meet Scotland's child poverty targets: Scenarios, benefits and trade-offs*. Fraser of Allander Institute Report. Glasgow.

Focus: Poverty (impact of provision)

Link: <https://www.abrdn.com/docs?editionId=bde78a83-0d06-4d6c-88da-cbcbbc0b54a5>

1 (DD): Hirsch, Donald (2022): *The cost of a child in Scotland 2022*. Loughborough University. Report.

<https://hdl.handle.net/2134/19329800.v1>

Focus: poverty rate (impact of childcare cost)

Link: https://repository.lboro.ac.uk/articles/report/The_cost_of_a_child_in_Scotland_2022/19329800

1 (DD): Campbell, Jim, Prof Diane Elson and Prof Ailsa McKay (2013) *The Economic Case for Investing in High Quality Childcare and Early Years Education*, Women in Scotland's Economy Research Centre
Focus: system cost-benefit (impact of provision)

Link:

http://archive2021.parliament.scot/S4_EducationandCultureCommittee/Scotlands%20educational%20and%20cultural%20future/51.WomeninScotlandsEconomy.pdf

1 (DD): De Henau, J. (2017, September). The Short-Term Employment and Fiscal Effects of Investing in Universal Childcare: A Macro-Micro Simulation Analysis for the UK. In *Levy Economics Institute of Bard College workshop on Gender Macroeconomics*, New York (pp. 13-15).

Focus: system cost-benefit and participation (impact of universal provision)

Link: https://www.open.ac.uk/ikd/sites/www.open.ac.uk.ikd/files/files/working-papers/DeHenau_costingchildcareUK.pdf

Abstract: This paper analyses the macro-micro linkages between paid and unpaid work, and their fiscal implications, following investment in a public system of universal childcare for all preschool children. Taking the UK as an example of expensive and inadequate childcare provision of uneven quality, the objective of the paper is to show the extent to which large-scale investment in childcare as a form of social infrastructure, often overlooked by policy-makers and economists in their conceptualisation of 'investment', is beneficial to society. It benefits children by improving their access to high quality early education, especially those living in lower income families, and thus improving their life chances and social inclusion. It has larger short-term employment effects than corresponding investment in less labour-intensive industries such as construction; and it fosters gender equality in employment by not only providing many high-quality jobs for women but also allowing many mothers to realise their full potential by freeing up their childcare constraints (and improve their lifetime earnings prospects). The paper estimates the gross cost for central government of investing in universal full-time full-year childcare with highly qualified and well paid staff using different benchmark scenarios for current pay and qualification levels. It then examines labour demand and supply effects from a gender perspective. Not only childcare investment increases demand for direct and indirect jobs which can be estimated, it also changes the labour supply characteristics of potential candidates as it reduces the budget constraints of carers. Estimations of increased employment and corresponding household income are performed so that tax liabilities and benefit entitlements can be calculated on aggregate to analyse fiscal sustainability considerations. Results show that the net annual funding requirement would only amount to 25% of the gross investment, given behavioural effects on employment and consumption, and thus tax revenue. Moreover, we estimate a fiscal break-even point of the minimum number of years required of increased maternal employment and earnings to yield sufficient tax revenue that recoups the total childcare cost. Results show that if mothers of young children can regain their prior level of earnings (i.e., are not subjected to a child penalty) then the number of years of gainful employment needed before the policy breaks even fiscally ranges between 7 and 13 years for a typical mother of two children in childcare, which is well within a typical working life-course

1 (DD): De Henau, J., Budlender, D., Filgueira, F., Ilkkaracan, I., Kim, K., & Mantero, R. (2019). Investing in Free Universal Childcare in South Africa, Turkey and Uruguay: A comparative analysis of costs, short-term employment effects and fiscal revenue. *UN Women Discussion Paper*. New York: UN Women. Focus: system cost-benefit and participation (impact of universal provision)

Link:

<https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2019/Discussion-paper-Investing-in-free-universal-childcare-in-South-Africa-Turkey-and-Uruguay-en.pdf>

Abstract: This discussion paper makes the case for investing in free universal childcare services of high quality in order to reduce gender inequality in earnings and employment. It estimates the employment-generating and fiscal effects of investing in free universal childcare in three middle income countries: South Africa, Uruguay, and Turkey. It calculates the total annual costs of investing in high-quality childcare services that would cover the entire population of children below primary school age, using parameters relevant to each national context. Results show that employment rates can be significantly increased, especially for women, as a result of the combined direct, indirect and induced job creation. Although the total annual cost of such investment can go up to 3 to 4% of GDP, the net cost can be halved thanks to significant fiscal returns stemming from increased employment and earnings, without changing the tax structure itself (rates and bands). Results are compared with those obtained using a similar method for the UK and show that the reach of a country's tax system plays an important role in the funding process. The paper also estimates a theoretical fiscal break-even point, based on longitudinal labour supply effects of mothers closing their lifetime employment and earning gap following such generous childcare offer. In all three countries and the UK, the fiscal return on investment based on this measure is likely to outstrip the total cost of childcare for a typical mother of two children on average earnings.

1 (DD): Łapniewska, Z. (2016). Growth, equality and employment: investing in childcare in Scotland. *WiSE Working Paper*. GCU: Glasgow.

Focus: participation (impact of childcare investment)

Link: <https://researchonline.gcu.ac.uk/en/publications/growth-equality-and-employment-investing-in-childcare-in-scotland>

Abstract: The Scottish Government has made a commitment to double expenditure on childcare to 'increase the amount of free hours of childcare available to all 3-4 year olds and "vulnerable" 2 year olds from 15 to 30 hours per week (1,140 per year)' by 2021 (Davis et al. 2016). Existing studies focus mainly on the feasibility and the cost of that promise as well as incentives from the employment of parents. However, investment in the childcare sector also brings employment effects (especially for women) such as a direct effect (the number of people employed in the care sector); an indirect effect (increased demand of the care sector's suppliers) and an induced effect (increased household consumption because of higher employment). This paper explores how the proposed investment in the childcare sector can have positive direct, indirect and induced effects on employment, contributing to Scotland's economic growth. The analysis is primarily based on existing data for Scotland including the official input-output tables of the Scottish Government's Statistical Office.

1 (DD): De Henau. (2022). Simulating employment and fiscal effects of public investment in high-quality universal childcare in the UK. *International Journal of Child Care and Education Policy* (Seoul), 16(1), 3–3
Focus: system cost-benefit and participation (impact of universal provision)

Link:

https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_doaj_primary_oai_doaj_org_article_70bac28d35d243ae9d7390633f4c4d88

Abstract: This paper simulates the likely fiscal and employment effects of a vast public annual investment programme of free universal high-quality early childhood education and care (ECEC) services in the UK. It examines the extent to which it would pay for itself fiscally for different scenarios of pay increases. Investing in high-quality universal ECEC benefits all children by improving their life chances, especially for those living in lower income families. It also generates larger employment effects than other more typical investment policies such as construction projects and fosters gender equality in employment: not only it provides many high-quality jobs for women, it also allows many mothers to improve their lifetime earnings prospects by freeing up their childcare constraints. This in turn has beneficial fiscal revenue effects for the government. Estimations of annual public expenditure for a system of highly qualified and well-paid childcare staff with low child-to-staff ratios are performed, with universal coverage for all pre-school children aged 6 months to 4.5 years. Labour demand and matching supply effects are also simulated using input–output methods, for different take-up rates of the programme. A microsimulation tool is used to calculate increases in household income and tax liabilities and decreases in social security benefits spending. This results in a net annual funding requirement of between 28 and 39% of the gross investment. Two funding methods are then explored: raising taxation in a progressive way and recouping the cost over time from persistent mothers' increased earnings. The former would entail a net additional contribution by the richest 20% of households of at most 0.4% of their income; the latter would require 21 to 31 years to offset the programme on average, which is within a typical working life-course following a first child's birth, of 35 years.

A2.4 Cross-study reviews

1 (EE): Akgunduz, & Plantenga, J. (2018). Child Care Prices And Maternal Employment: A Meta-Analysis: Child Care Prices And Maternal Employment. *Journal of Economic Surveys*, 32(1), 118–133

Focus: participation (impact of cost)

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_crossref_primary_10_1111_joes_12192

Abstract: The literature estimates for labor force participation elasticity with regard to child care prices are extensive and varying. While some estimates imply substantial gains from child care subsidies, others find insignificant effects. To determine the causes of the variance, this paper reviews and analyzes the elasticity sizes using estimates from 36 peer-reviewed articles and working papers in the literature. We start by reviewing the theoretical and empirical aspects related to participation elasticity with regard to child care costs, paying special attention to sample characteristics, methodological aspects, and macro level factors. We conclude by providing a meta-regression using control variables based on our review of the literature to explain some of the differences between the estimates. As research builds on and improves the methods and assumptions in prior works, elasticity estimates have become smaller over time. This decline might also be partially explained by changes in labor market characteristics. In countries with high rates of part-time work and very high or very low rates of female labor force participation, we find elasticity rates to be smaller.

1 (EE): Anderson, P. M., & Levine, P. B. (1999). Child care and mothers' employment decisions. *NBER Working Paper 7058*. NBER.

Focus: participation (impact of cost)

Link: https://www.nber.org/system/files/working_papers/w7058/w7058.pdf

Abstract: Rising female labor force participation and recent changes to the welfare system have increased the importance of child care for all women and, particularly, the less-skilled. This paper focuses on the child care decisions of women who differ by their skill level and the role that costs play in their work decision. After reviewing government child-care programs targeted at less-skilled women, we present a descriptive analysis of current utilization and child care costs. We emphasize differences across skill groups, showing that the least-skilled women both use less costly paid care and are more likely to use unpaid care. We then survey the existing evidence regarding the responsiveness of female labor supply to child care costs, reviewing both econometric studies and demonstration projects that include child care components. To investigate variation in the response to child care cost across skill levels, we implement models similar to this past literature. We conclude that while the overall elasticity of labor force participation with respect to the market price of child care is between -0.05 and -0.35, this elasticity is larger for the least skilled women and declines with skill. Throughout the paper, we reflect upon the implications of our analysis for welfare reform.

1 (EE): Bakker, V., & van Vliet, O. (2021). Social Investment, Employment and Policy and Institutional Complementarities: A Comparative Analysis across 26 OECD Countries. *Journal of Social Policy*, 1-23.

Focus: participation (impact of provision)

Link: https://www.cambridge.org/core/services/aop-cambridge-core/content/view/38F29A46E1D2D774A734838B983F6DD0/S0047279421000386a.pdf/social_investment_employment_and_policy_and_institutional_complementarities_a_comparative_analysis_across_26_oecd_countries.pdf

Abstract: Raising employment has been at the heart of EU strategies for over twenty years. Social investment, by now a widely debated topic in the comparative welfare state literature, has been suggested as a way to pursue this. However, there are only a couple of systematic comparative analyses that focus on the employment outcomes associated with social investment. Analyses of the interdependence of these policies with regard to their outcomes are even more scarce. We empirically analyse the extent to which variation in employment rates within 22 OECD countries over the period 1992-2012 can be explained by effort on five social investment policies. We additionally explore the role of policy and institutional complementarities. Using time-series cross-section analyses we find robust evidence for a positive association between effort on ALMPs and employment rates. For other policies we obtain mixed results. ALMPs are the only policies for which we observe signs of policy interdependence, which point at diminishing marginal returns. Additionally, our analysis demonstrates that the interdependence of social investment policies varies across welfare state regimes. Together, this indicates that the employment outcomes of social investment pol

1 (EE): Gennetian, Crosby, D. A., Huston, A. C., & Lowe, E. D. (2004). Can child care assistance in welfare and employment programs support the employment of low-income families? *Journal of Policy Analysis and Management*, 23(4), 723–743.

Focus: participation (impact of provision)

Link:

https://discover.gcu.ac.uk/discovery/fulldisplay?context=PC&vid=44GLCU_INST:44GLCU_VU2&search_scope=MyInst_and_CI&tab=Everything&docid=cdi_proquest_miscellaneous_61538307

Abstract: Policymakers have long recognized child care as a key ingredient in low-income parents' employability. We examine the effects of expansions in child care policies that were bundled with a mix of employment-related policies and implemented as part of several random assignment studies on families' child care access and cost. Almost all of these welfare and employment programs increased employment and led to concomitant increases in the use of child care, especially paid child care. Only the programs that also expanded access or affordability of child care consistently increased the use of child care subsidies and reduced out-of-pocket costs to parents, allowing parents to purchase center-based care. With one exception, such programs had small effects on employment-related child care problems, suggesting that broader and more generous targeting of child care assistance may be important for achieving the goal of enhancing the stability of employment among low-income families.

1 (EE): Schaefer, S. A., Kreader, J. L., & Collins, A. (2006). *Parent employment and the use of child care subsidies*. Childcare and Early Education Research Connections. Columbia University.

Focus: participation (impact of subsidies)

Link: <https://academiccommons.columbia.edu/doi/10.7916/d8-4bxa-3z71>

Abstract: This literature review, second in the series, Reviews of Research on Child Care Subsidies, examines research asking the question: “What parent employment outcomes are associated with the use of child care subsidies?”¹ That is, how do employment decisions and patterns for low-income parents with subsidies tend to differ from those of low-income parents without them? For which subgroups of these parents—e.g., those with or without high school diplomas, with or without cash assistance histories—do child care subsidies appear to make more difference? What factors in addition to subsidies influence parents’ employment decisions? While these questions are posed broadly in terms of “parents,” the research to date focuses on “mothers.”

1 (EE): Waldfogel. (2002). Child Care, Women’s Employment, and Child Outcomes. *Journal of Population Economics*, 15(3), 527–548.

Focus: participation (impact of utilisation)

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_jstor_primary_20007828

Abstract: This paper reviews the evidence on the impact of child care and maternal employment in the pre-school years on child outcomes. This topic has long been of interest to economists, developmental psychologists, and scholars from other disciplines, and has been the focus of increased attention in recent years, as research has provided additional evidence about the processes of development in the earliest days, weeks, and years of life. In this paper, I review the evidence on two broad sets of questions: what we know about the potential benefits of early intervention child care programs, and what we know about the effects (whether positive or negative) of maternal employment and child care in the first years of life. The evidence reviewed in this paper suggests that we now know a good deal about both sets of questions. But, this review also suggests that there are important gaps in our knowledge that future work by economists could fruitfully address.

1 (EE): Engster, D. (2012). Child poverty and family policies across eighteen wealthy Western democracies. *Journal of Children and Poverty*, 18(2), 121-139.

Focus: poverty rate (impact of childcare provision)

Link: <https://www.tandfonline.com/doi/abs/10.1080/10796126.2012.710481>

Abstract: While a good deal has been written about the potential value of family policies in reducing child poverty in Western countries, few cross-national quantitative studies have been carried out on this topic. This article uses ordinary least squares regression analysis on panel data from 18 Western democracies from 1987 to 2007 to test the significance of family policies and other welfare policies on child poverty rates. It extends existing research on the relationship between family policies and child poverty by utilizing a broader data-set in terms of time, countries, and child poverty measures. The main finding is that all three of the main family policies studied – child cash and tax benefits, paid parenting leaves, and public support for childcare – correlate significantly with lower child poverty rates. Somewhat surprisingly, disability and sickness insurance also correlates significantly with lower child poverty in nearly every model and test. These findings provide valuable insight for future research and policy-making in the area of child poverty.

A2.5 Interesting empirical observations

1 (FF): Ananat, E., Glasner, B., Hamilton, C., & Parolin, Z. (2022). *Effects of the expanded Child Tax Credit on employment outcomes: Evidence from real-world data from April to December 2021* (No. w29823).

National Bureau of Economic Research.

Focus: participation (impact of subsidies)

Link: <https://www.nber.org/papers/w29823>

Abstract: Studies have established that the expanded Child Tax Credit (CTC), which provided monthly cash payments to most U.S. families with children from July to December 2021, substantially reduced poverty and food hardship. Other studies posit, however, that the CTC payments may generate negative employment effects that could offset its potential poverty-reduction effects. Scholars have simulated employment scenarios assuming various labor supply elasticities, but less work has empirically assessed how the monthly payments affected employment outcomes using real-world data. To evaluate employment effects, we apply a series of difference-in-differences analyses using data from the monthly Current Population Survey and the Census Pulse, both from April through December 2021. Across both samples and several model specifications, we find very small, inconsistently signed, and statistically insignificant impacts of the CTC both on employment in the prior week and on active participation in the labor force among adults living in households with children. Further, labor supply responses to the policy change do not differ for households for whom the CTC's expansion eliminated a previous work incentive. Thus, our analyses of real-world data suggest that the expanded CTC did not have negative short-term employment effects that offset its documented reductions in poverty and hardship.

1 (FF): Cebrián, Davia, M. A., Legazpe, N., & Moreno, G. (2019). Mothers' employment and child care choices across the European Union. *Social Science Research*, 80, 66–82.

Focus: participation (availability)

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_proquest_miscellaneous_2205411060

Abstract: The aim of this paper is to analyse cross-country differences in the maternal employment patterns and the demand for formal and informal child care as interrelated decisions across Europe. We explore a sample of preschoolers and their mothers drawn from the EU-SILC (2005–2013) in a set of 11 EU countries with different institutional settings. The analytical strategy – a set of simultaneous tobit models – allows for mutual interdependencies across decisions. The results vary across welfare regimes and are related to the public provision of child care as well as other dimensions of the institutional context and values. We have found complementarities between paid employment and child care while formal and informal care are shown to be mutual substitutes, even in countries where the provision of external, formal child care is very extended and child care does not depend much on families. This means that the mere expansion of public child care is not enough to improve maternal employment rates. Other institutional aspects of the labour market and societal values also need to be taken into account in this endeavour.

1 (FF): Carta, Francesca and Rizzica, Lucia, Female Employment and Pre-Kindergarten: On the Unintended Effects of an Italian Reform (September 22, 2015). *Bank of Italy Temi di Discussione (Working Paper) No. 1030*, Available at

SSRN: <https://ssrn.com/abstract=2722504> or <http://dx.doi.org/10.2139/ssrn.2722504>

Focus: participation (impact of cost)

Link: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2722504

Abstract: We theoretically show that when mothers need to buy childcare services not only if they work but also if they want to search actively for a job, a reduction in the price of childcare will increase their likelihood of searching but may decrease their willingness to accept a job offer and therefore lower employment. We test these predictions empirically by means of a Regression Discontinuity design and find ... (No. 091).

1 (FF): Del Boca, & Vuri, D. (2007). The mismatch between employment and child care in Italy: The impact of rationing. *Journal of Population Economics*, 20(4), 805–832

Focus: participation (impact of provision)

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_springer_primary_2007_148_20_4_126

Abstract: In Italy the women's participation is among the lowest in Europe. The female employment rate stands almost 13 percentage points below the EU average and 22 below the Lisbon target. One of the most important reasons is related to the characteristics of child care system. We analyze the characteristics of the child care system in Italy and its relationship to the labor market participation decision of mothers. The two decisions are jointly considered in a discrete choice framework, which also allows for simple forms of rationing. We go on to estimate a bivariate probit model of the child care and employment decisions and find evidence that rationing is an important factor in interpreting price effects on utilization rates and employment decisions.

1 (FF): Gangl, S., & Huber, M. (2021). *From homemakers to breadwinners? How mandatory kindergarten affects maternal labour market attachment*. arXiv preprint arXiv:2111.14524.

Focus: participation (impact of provision)

Link: <https://arxiv.org/pdf/2111.14524.pdf>

Abstract: We analyse the effect of mandatory kindergarten attendance for four-year-old children on maternal labour market outcomes in Switzerland. To determine the causal effect of this policy, we combine two different datasets and quasi-experiments in this paper: Firstly, we investigate a large administrative dataset and apply a non-parametric regression discontinuity design (RDD) to evaluate the effect of the reform at the birthday cut-off for entering the kindergarten in the same versus in the following year. Secondly, we complement this analysis by exploiting spatial variation and staggered treatment implementation of the reform across cantons (administrative units in Switzerland) in a difference-in-differences (DiD) approach based on a household survey. All in all, the results suggest that if anything, mandatory kindergarten increases the labour market outcomes of mothers very moderately. The effects are driven by previous non-employed mothers and by older rather than younger mothers.

1 (FF): Fervers, L., & Kurowska, A. (2022). Local cultural context as a moderator of the impact of childcare on maternal employment: Evidence from a natural experiment. *Journal of European Social Policy*, 09589287221080395.

Focus: participation (impact of provision)

Link: <https://journals.sagepub.com/doi/abs/10.1177/09589287221080395>

Abstract: In spite of increasing levels of female employment, having a child below school age often goes along with a substantial decrease in employment engagement for women. Consequently, previous family policy research suggests that increasing childcare availability might be a promising tool to facilitate maternal employment as it increases the economic incentive to take up work. Another line of reasoning highlights that cultural attitudes towards maternal employment are equally important in shaping the employment decisions of mothers. In this article, we combine insights of both approaches and argue that culture, in addition to its direct effect on maternal employment, moderates the impact of childcare policies. In particular, we argue that the positive effect of childcare may be weaker in more conservative cultural contexts. To assess this question empirically, we exploit the implementation of a centralised childcare reform in Poland as a natural experiment by means of a regression discontinuity design. Relying on individual-level data on employment and regional-level information on the influence of conservatism in a certain region, we run multilevel regressions with cross-level interaction terms to estimate the effect of the reform depending on the local cultural context. Consistent with our theoretical expectations, the impact of the reform is rather strong in less conservative areas but fades away in increasingly conservative contexts. Supplementary analyses reveal that the effect also differs with regard to household composition, with smaller families displaying larger gains in maternal employment. These findings confirm that conservative cultural attitudes appear to suppress the positive effect of increasing childcare availability.

1 (FF): Kawabata. (2014). Childcare Access And Employment: The Case Of Women With Preschool-Aged Children In Tokyo: Childcare Access and Employment. *Review of Urban and Regional Development Studies*, 26(1), 40–56.

Focus: participation (impact of provision)

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_crossref_primary_10_1111_rurd_12018

Abstract: This article presents an empirical study on childcare accessibility and the importance of access to childcare in attaining preferred employment among women with preschool-aged children in Tokyo. The age-wise childcare accessibility of this study takes into account spatial variations in the supply and demand of childcare, as well as “spatial competition,” based on spatially micro areas — blocks. The accessibility reveals a considerable geographic mismatch between childcare center supply and demand, particularly for children aged up to two years. Empirical results show that access to childcare is closely associated with a higher probability of attaining preferred employment among women with preschool-aged children. The association is remarkably strong when a woman has a very young child aged up to two years and when the childcare center is one that is desired. Adequate childcare provision, particularly for children under the age of three, helps to augment active female participation in the labor market.

1 (FF): Pavolini, E. & Van Lancker, W. (2018). The Matthew Effect in early childhood education and care: How family policies may amplify inequalities. *Journal of European Public Policy*, 25(6): 878-893.

Focus: Poverty (impact of provision)

Link: [file:///Users/John/Downloads/CeSO-SPSW-2021-02%20-%20Van%20Lancker%20\(1\).pdf](file:///Users/John/Downloads/CeSO-SPSW-2021-02%20-%20Van%20Lancker%20(1).pdf)

Abstract: This working paper reviews the current evidence on the Matthew effect and its relevance for understanding the outcomes of present-day family policies. It is discussed how the Matthew effect is studied and interpreted in sociology and in the field of family policy, focusing on subtleties involved in studying the phenomenon and its root causes, how it is conceptualized, and its functions or dysfunctions. An empirical illustration is presented of how the Matthew effect in childcare services across European countries can be studied and understood. The results show that in the majority of countries, childcare participation is biased against poor children. While childcare use has risen over time, inequality did not decline to the same extent. This means that the children who would benefit most from being integrated into high-quality childcare are the ones currently most likely to be excluded. This not only jeopardizes the potential of childcare provision to reduce inequalities in early life, it might even fuel compounding inequalities over the life-course. Potential pathways to redress childcare policies in order to foster socioeconomic equality in childcare participation are explored. The paper ends with a call to arms for more advanced studies into the causes, mechanisms and consequences of the Matthew effect in social and family policies, with a particular focus on life-course approaches.

A2.6 Additional expert recommendations from Dr. Hakeem

Viitanen, T.K., (2005). Cost of childcare and female employment in the UK. *Labour*, 19, pp.149-170.

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_proquest_miscellaneous_61590286

Abstract: Mothers of young children may be prevented from working because of the high cost of available, formal childcare. In the UK, the typical cost of a nursery place is more than the average household spends a year on either food or housing. This study examines the extent to which female labour force participation is affected by the cost of formal childcare. The results suggest that childcare price subsidies have a modest impact both on labour force participation and on the use of formal childcare.

Stadelmann-Steffen, I. (2008). Women, Labour, and Public Policy: Female Labour Market Integration in OECD Countries. A Comparative Perspective. *Journal of Social Policy*, 37(3), 383-408.

doi:10.1017/S0047279408001967

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_proquest_miscellaneous_61692732

This article investigates the influence of political measures and instruments on women's employment in OECD countries. The policy dimension builds the central explanatory category filling the 'black box' between political institutions and the decision-making process on the one hand, and policy outcome on the other. Unlike former comparative studies on the relationship between women's employment and public policies, this article analyses a much larger country sample, looking at 28 OECD countries as well as a broader range of policies. Additionally, path analyses are conducted, modelling direct and indirect causal effects on women's labour market integration. The analyses show that while the cultural, economic and political framework can create a positive environment for women's employment in general, 'women-friendly' public policies are important, and are necessary for the more intensive and egalitarian labour market integration of women compared to that of men.

Givord, P. and Marbot, C., (2015). Does the cost of child care affect female labor market participation? An evaluation of a French reform of childcare subsidies. *Labour Economics*, 36, pp.99-111.

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_proquest_journals_1713771220

This study evaluates the short-run impact of an increase in childcare subsidies on the use of paid childcare and the participation rate of mothers of preschool children. We use a natural experiment provided by the PAJE, a French reform in family allowances introduced in 2004. This reform temporarily creates discrepancies in the childcare subsidies received by families according to the year of birth of the children. We apply a difference-in-differences strategy on exhaustive French fiscal data that provide information on gross income as well as on the use of paid childcare services between 2005 and 2008. We use the fact that the new policy results in a significant increase in the use of paid childcare services. The effect on the labor force participation of mothers is significant but of a smaller magnitude. The highest impact is observed for mothers of large families.

Fortin, P., Godbout, L. and St-Cerny, S., (2012). *Impact of Quebec's universal low fee childcare program on female labour force participation, domestic income, and government budgets* /

Pierre Fortin, Luc Godbout, & Suzie St-Cerny. (2013). L'impact des services de garde à contribution réduite du Québec sur le taux d'activité féminin, le revenu intérieur et les budgets gouvernementaux. *Interventions Économiques Pour Une Alternative Sociale*, 47.

<https://doi.org/10.4000/interventionseconomiques.1858>

Link:

https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_doaj_primary_oai_doaj_org_article_00716e22dcdd4736a9800b714f96b74e

An examination of trends in child care services and female labor force participation in Quebec and Canada, a review of research on the relationship of Quebec's universal, low-fee child care program to maternal employment, and an estimation of the relationship of the program to provincial gross domestic product and government finances / A low-fee child care program for pre-school children began to be implemented in Quebec in September 1997. Based on earlier studies, we estimate that in 2008 this program induced about 69 700 more mothers (a 3.8 % increase) to hold jobs than if the province had instead continued to follow the traditional approach based mainly on tax incentives that is still in force in other Canadian provinces. We calculate that Quebec's domestic income (GDP) was higher by about \$ 5.1 billion (1.7 %) as a result. We then estimate the impact that the childcare program has had on direct government subsidies to childcare facilities, federal and provincial child care tax subsidies, and own-source government revenues and family transfers resulting from the increases in mothers' employment income and GDP. On net, relatively to the traditional approach, we estimate that the Quebec program had a favorable impact of \$ 919 million on government fiscal balances in 2008.

Bettendorf, L.J., Jongen, E.L. and Muller, P., (2015). Childcare subsidies and labour supply—Evidence from a large Dutch reform. *Labour Economics*, 36, pp.112-123.

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_proquest_journals_1713771208

After the introduction of the Law on Childcare in 2005, childcare subsidies in the Netherlands became much more generous. Public spending on childcare increased from 1 to 3 billion euro over the period 2004–2009. Using a differences-in-differences strategy we find that, despite the substantial budgetary outlay, this reform had only a modest impact on employment. Furthermore, the rather small effects we find are likely confounded by a coincident increase in the EITC for parents with young children of 0.6 billion euro, which presumably also served to increase the labour supply of the group. The joint reform increased the maternal employment rate by 2.3 percentage points (3.0%) and maternal hours worked by 1.1h per week (6.2%). The results further suggest that the reform slightly reduced hours worked by fathers.

Gillespie G & Khan U (2016) Childcare-a transformational policy? In Campbell J & Gillespie M (eds) *Feminist Economics and public policy, reflections on the work and impact of Ailsa McKay*. Abington: Routledge, pp102-118

Link: <https://ebookcentral.proquest.com/lib/gcal/detail.action?docID=4516718>

Brewer, M., Cattan, S., Crawford, C. and Rabe, B., (2016). Free Childcare and Parents' Labour Supply: Is More Better? Institute for Fiscal Studies. *IFS Working Paper W16/22*.

Link: <https://ifs.org.uk/uploads/publications/wps/WP201622.pdf>

Despite the introduction of childcare subsidies in many countries, the cost of childcare is still thought to hinder parental employment. Many governments are considering increasing the generosity of their childcare subsidies, but the a priori effect of such a policy is ambiguous and little is known empirically about its likely impact. This paper compares the effects on parents' labour supply of offering free part-time childcare and of expanding this offer to the whole school day in England using an empirical strategy which, unlike previous studies, exploits both date of birth discontinuities and panel data. We find that the provision of free part-time childcare has little, if any, causal impact on the labour market outcomes of mothers or fathers. Increasing the number of hours of free childcare to cover a full school day, however, leads to significant increases in the labour supply of mothers whose youngest child is eligible, with impacts emerging immediately and increasing over the months following entitlement.

Annex 3: Literature Reviewed – Supplementary

A3.1 Identified in the systematic search

1 (AA): Flynn. (2017). Childcare markets and maternal employment: A typology. *Journal of European Social Policy*, 27(3), 260–275.

Focus: participation (impact of provision)

Link: https://discover.gcu.ac.uk/permalink/44GLCU_INST/h3pn8n/cdi_proquest_journals_1913333940

Abstract: How does the structure of a country's childcare market influence maternal employment? Childcare markets vary across countries, leading mothers to rely on various forms of care depending on what is available to them in both the public (state-provided) and private (non-state) childcare markets. Maternal employment is higher in countries that combine comprehensive childcare policies with an available and affordable private care market. When aspects of either the public or private market are lacking, the employment of mothers, and especially mothers with young children, is lower. This article proposes a fourfold classification scheme based on the type of 'penalty' that women experience in the labour market as mothers. It then links each penalty to distinct policy structures of childcare markets and shows that the four penalties are visible at both the country and individual level. By articulating how public and private care markets work in concert to shape maternal employment, this article adds to a literature that to date has focused primarily on the role of public childcare in reconciling work and family.

1 (AA): Butler, A., & Rutter, J. (2016). *Creating an anti-poverty childcare system*. York: Joseph Rowntree Foundation.

Focus: Thinkpiece on poverty impact of childcare

Link: https://www.jrf.org.uk/report/creating-anti-poverty-childcare-system?gclid=EAlalQobChMlt4umra259wIV4YBQBh0guAuHEAAYASAAEgJtwfD_BwE

Abstract: This paper focuses on the impact of high-quality early education and effective early intervention, which can act as protective factors for children against the negative effects of poverty. It also highlights how access to flexible, affordable childcare can reduce pressures on family income and help parents work, train, or study

1 (AA): Skinner, C. (2006). *How can childcare help to end child poverty*. Joseph Rowntree Foundation, University of York.

Focus: Thinkpiece on poverty impact of childcare

Link: <https://www.jrf.org.uk/report/how-can-childcare-help-end-child-poverty>

Abstract: This paper examines the contribution that childcare might make to ending child poverty, focusing on childcare policy specifically in England as Scotland, Wales and Northern Ireland have separate strategies.

1 (AA): Waldfogel, J., & Garnham, A. (2008). *Childcare and child poverty*. York: Joseph Rowntree Foundation.

Focus: Thinkpiece on poverty impact of childcare

Link: <https://www.jrf.org.uk/sites/default/files/jrf/migrated/files/2267-poverty-children-childcare.pdf>

Abstract: Over the past 10 years, great strides have been made in improving childcare, but more must be done to improve quality and to make childcare more affordable and available to the most disadvantaged groups. This report sets out how, with further improvements, childcare policy can continue to play a key role not just in reducing poverty for today's children, but also in improving outcomes and preventing poverty for the next generation.

A3.2 Additional papers encountered (and reviewed) during the research

Audit Scotland (2020). *Early learning and childcare: follow up*. Edinburgh: Audit Scotland.

<https://www.audit-scotland.gov.uk/publications/early-learning-and-childcare-follow-up>

Birt, C., Milne, B., Sandor, A., Wenham, A., Drake, B., Hay, D. and Evans, J. (2021). *Laying the Foundations for a Scotland without poverty*. York: JRF. <https://www.jrf.org.uk/report/laying-foundations-scotland-without-poverty>

Centre for Progressive Policy (2021). *Women in the labour market: The full-time deficit*. London: Centre for Progressive Policy. [https://www.progressive-policy.net/downloads/files/ CPP Women-in-the-labour-market_The-full-time-deficit.pdf](https://www.progressive-policy.net/downloads/files/_CPP_Women-in-the-labour-market_The-full-time-deficit.pdf)

Citizens Advice Scotland (2014). *Working at the edge: childcare*. Edinburgh: CAS.

<https://www.cas.org.uk/publications/working-edge-childcare>

Cohen, N. (2021). *Women in the labour market: Why childcare can drive economic recovery*. London:

Centre for Progressive Policy. [https://www.progressive-policy.net/downloads/files/Norman-Cohen Women-in-the-labour-market_Childcare.pdf](https://www.progressive-policy.net/downloads/files/Norman-Cohen_Women-in-the-labour-market_Childcare.pdf)

Coleman, L., Shorto, S. and Ben-Galim, D. (2022). *Childcare Survey 2022*. London: Family and Childcare Trust.

https://www.familyandchildcaretrust.org/sites/default/files/Resource%20Library/Final%20Version%20Cooram%20Childcare%20Survey%202022_0.pdf

Boyle, R. (2021). *Close the Gap briefing for the Scottish Government debate early learning and childcare – 1140 hours and beyond*. Glasgow: Close the Gap.

<https://www.closesthegap.org.uk/content/resources/Close-the-Gap-briefing-for-Scottish-Government-Debate---Early-Learning-and-Childcare.pdf>

Engender (2014). *Engender submission of evidence on the Child Poverty (Scotland) Bill to the Scottish Parliament Social Security Committee*. Edinburgh: Engender.

<https://www.engender.org.uk/content/publications/Engender-submission-of-evidence-on-the-Child-Poverty-Scotland-Bill.pdf>

Family and Childcare Trust (2015). *Childcare for London parents with atypical work patterns*. London: FCT.

<https://www.familyandchildcaretrust.org/sites/default/files/Resource%20Library/Childcare%20for%20London%20parents%20with%20atypical%20work%20patterns.pdf>

- Fraser of Allander Institute (2021). *Modelling packages to meet Scotland's child poverty targets: scenarios, benefits and trade-offs*. Glasgow: FoA Institute.
<https://fraserofallander.org/publications/modelling-packages-to-meet-scotlands-child-poverty-targets/>
- Hinchliffe, S., Scholes, A. and Bradshaw, P. (2021) *Scottish Study of Early Learning and Childcare: Three-year-olds (Phase 3) Report*. Edinburgh: Scottish Government.
<https://www.gov.scot/publications/scottish-study-early-learning-childcare-three-year-olds-phase-3-report-updated-2021/pages/3/>
- Johnes, R. and Hutchinson, J. (2016) *Widening the Gap? The impact of the 30-hour entitlement on early years education and childcare*. London: Education Policy institute. <https://epi.org.uk/wp-content/uploads/2018/01/widening-the-gap-final-epi.pdf>
- Mason, A., Lloyd, R., Rayment, M., White, A., Jackson, O., Coombes, M. and Young, C. (2010) *Local authority child poverty innovation pilot evaluation: final synthesis report*. London: Department of Education.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/182415/DFE-RR152.pdf
- Paull, G. and La Valle, I. (2017) *Evaluation of Early Years implementation of 30 Hours Free Childcare*. London: Department for Education.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/629460/Evaluation_of_early_implementation_of_30_hours_free_childcare_.pdf
- Pascal, Pascal, C., Bertram, T., & Cole-Albäck, A. (2021) *What do we know about the 30 hour entitlement? Literature review and qualitative stakeholder work*. Centre for Research on Early Childhood. <https://www.suttontrust.com/wp-content/uploads/2021/08/What-do-we-know-about-the-30-hour-entitlement-literature-review.pdf>
- Rutter, J. and Stocker, K. (2014) *The 2014 Scottish Childcare Report*. London: Family and Childcare Trust.
<https://www.familyandchildcaretrust.org/2014-scottish-childcare-report>
- Scottish Government (2021) *School Age Childcare in Scotland: Progress Report 2021*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/school-age-childcare-progress-report/>
- Scottish Women's Budget Group (2022). *Women's Survey 2022 – All Results Report*. Glasgow: SWBG.
<https://www.swbg.org.uk/content/publications/Womens-Survey-Results-Report.pdf>
- Statham, R. and Mooney, A (2003) *Around the Clock: Childcare services at atypical times*. York: JRF.
<https://www.jrf.org.uk/report/childcare-services-atypical-times>

Stewart, K. and Waldfogel, J. (2017) *Closing Gaps Early: The role of early years policy in promoting social mobility in England*. London: The Sutton Trust. https://www.suttontrust.com/wp-content/uploads/2019/12/Closing-Gaps-Early_FINAL.pdf

Welsh Government (2021) *Evaluation of the childcare offer for Wales: Year 4 (emerging findings)*. Cardiff: Welsh Government. <https://gov.wales/sites/default/files/pdf-versions/2022/1/1/1642418939/evaluation-childcare-offer-wales-year-4-emerging-findings.pdf>

Women's Budget Group (2022). *Childcare and gender. Spring budget 2022. Pre-budget briefings*. London: WBG. <https://wbg.org.uk/analysis/spring-budget-2022-pre-budget-briefings/>

Annex 4: Review Proforma

Article	•
Summary of Research	
Aims (on poverty)	•
Aims (on employment)	•
Age-stage	•
Macro-Geographical context (country)	•
Micro-Geographical context (place/area type)	•
Sector (public/private)	•
Policy context	•
Date/s	•
CONTEXTS – JUSTIFYING INVESTMENT	
Reasons for investing in childcare (<i>noted in context</i>)	
•	
Reasons for investing in childcare to tackle poverty (<i>noted in context</i>)	
•	
ON POVERTY	
Evidence – Overall Impact (and level of impact) on poverty of childcare investment (<i>noting whether positive, neutral, or negative</i>)	
•	
Evidence – What specific drivers / factors effect this impact on poverty	
•	
Evidence – Did the childcare investment have unintended consequences on poverty? (<i>noting whether positive, neutral, or negative</i>)	
•	
ON EMPLOYMENT	
Evidence – Overall Impact (and level of impact) on employment of childcare investment (<i>noting whether positive, neutral, or negative</i>)	
•	
Evidence – What specific drivers / factors effect this impact on employment	
•	
Evidence – Did the childcare investment have unintended consequences on employment? (<i>noting whether positive, neutral, or negative</i>)	
•	
ON REDUCING COSTS	
Evidence – Overall Impact (and level of impact) on reducing household expenses of childcare investment (<i>noting whether positive, neutral, or negative</i>)	
•	
Evidence – What specific drivers / factors effect this impact on reducing household expenses	
•	
Evidence – Did the childcare investment have unintended consequences on reducing household expenses? (<i>noting whether positive, neutral, or negative</i>)	
•	
ON IMPLICATIONS FOR CONTEMPORARY SCOTLAND	
•	
Reviewer	•
Time Taken to Review	•

Endnotes

In these Endnotes, reference details for papers referred to only by author and year can be found in Annex 2 or Annex 3. Full reference details are provided for other papers, which were not part of the rapid evidence review.

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- ¹ Scottish Government (2018) *Every Child, Every Chance: Tackling child poverty delivery plan, 2018-2022. Annex 2*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/tackling-child-poverty-delivery-plan-annex-2-further-technical-information/pages/2/>
 - ² Scottish Government (2020) *Keeping Your Child Safe*. [online]. Edinburgh: Scottish Government <https://www.mygov.scot/child-safety>
 - ³ NSPCC (n.d.) *A Going Out or Staying Home Alone* [online]. London: NSPCC. <https://www.nspcc.org.uk/keeping-children-safe/in-the-home/home-alone/>
 - ⁴ Scottish Government (2017) *A Blueprint for 2020: The expansion of early learning and childcare in Scotland. - 2017/2018 action plan*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/blueprint-2020-expansion-early-learning-childcare-scotland-2017-18-action/>
 - ⁵ Scottish Government (2018)
 - ⁶ Scottish Government (2019) *Out of School Care in Scotland: A draft framework 2019*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/out-school-care-scotland-draft-framework-2019/>
 - ⁷ For more information, <https://childreninscotland.org.uk/access-to-childcare-fund-summary/>
 - ⁸ Scottish Government (2019) *Analysis of Consultation Response for Out of School Care in Scotland: A draft framework 2019*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/out-school-care-analysis-consultation-responses/>
 - ⁹ Scottish Government (2021) *School Age childcare: Progress report*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/school-age-childcare-progress-report/>
 - ¹⁰ Scottish Government (2021) *A Fairer, Greener Scotland: Programme for Government 2021-22*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/fairer-greener-scotland-programme-government-2021-22/>
 - ¹¹ Scottish Government (2022) *Best Start, Bright Futures: Tackling child poverty delivery plan, 2022-2026*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/best-start-bright-futures-tackling-child-poverty-delivery-plan-2022-26/documents/>
 - ¹² Scottish Government (2022) *Best Start: Strategic Early Learning and School-age Childcare Plan 2022 to 2026*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/best-start-strategic-early-learning-school-age-childcare-plan-scotland-2022-26>
 - ¹³ Wane, K. (2019) *The Expansion of Early Learning and Childcare*. SPICE Briefing SB-19-20. Edinburgh: SPICE. <https://digitalpublications.parliament.scot/ResearchBriefings/Report/2019/4/16/The-expansion-of-early-learning-and-childcare>
 - ¹⁴ Audit Scotland (2020) *Early Learning and Childcare. Follow Up*. Edinburgh: Audit Scotland. <https://www.audit-scotland.gov.uk/publications/early-learning-and-childcare-follow-up>
 - ¹⁵ Op cit., Note 9, Scottish Government (2021)
 - ¹⁶ Hirsch (2022, p.5)

-
- 17 Recent TUC analysis shows that childcare costs have risen by more than £2,000 per annum since 2010 for a family with a child under 2. <https://www.theguardian.com/money/2022/jun/13/uk-childcare-costs-soar-by-more-than-2000-in-a-decade-tuc-says>
- 18 Iceland and Riber (2001, p.2)
- 19 Sosu, E. and Ellis, S., (2014). *Closing the Attainment Gap in Scottish Education*. York: Joseph Rowntree Foundation
- 20 Bradshaw, P. (2011) *Growing up in Scotland: Changes in child cognitive ability in the pre-school years*. Edinburgh: Scottish Government.
- 21 Op cit., Note 16, Sosu and Ellis (2014)
- 22 Akgunduz and Platenga (2018, p.130); De Henau (2022, p.3); Gillespie and Khan (2016, p.3); Havnes and Mogstad (2011, p.1464); Hufkens et al. (2020, p.308); Lapniewska (2016, p.2); Pavolini and van Lancker (2018, p.879)
- 23 Pavolini and van Lancker (2018, p.890)
- 24 Carta and Rizzica (2015, p.5); De Henau et al., (2019, p.1); Havnes and Mogstad (2011, p.1464); Lapniewska (2016, p.2); Nollenberger and Rodriguez-Planas (2011, p.9); Pavolini and van Lancker (2018, p.880); Zimmert (2019, p.5)
- 25 Harrison et al. (2022)
- 26 Lapniewska (2016, p.2)
- 27 Mattingly and Carson (2021, p.4)
- 28 Szaferberg (2021, p.242)
- 29 Kawabata (2014, p.40)
- 30 Boussetlin (2022, p.497); Campbell et al. (2013, p.1); Cebrian et al. (2019, p.66); de Henau (2019, p.1); Lapniewska (2016, p.2, p.3); Stadelmann-Steffin (2008, p.393)
- 31 De Henau (2022, p.5); De Henau et al., (2019, p.11); Fervers and Kurowska (2022, p.2); Gillespie and Khan (2016, p.2, p.3); Zimmert (2019, p.3)
- 32 De Henau (2022, p.3)
- 33 Gillespie and Khan (2016, p.3)
- 34 Bezu and McCallum (2021, p.5); Ravazzini (2018, p.13)
- 35 De Henau et al., (2019, pp.11-12); Glover et al. (2018, p.9)
- 36 Improvement Service (2021) *Early Learning and Childcare Expansion Delivery Progress Report September 2021*. Livingston: IS. https://www.improvementservice.org.uk/_data/assets/pdf_file/0022/27850/ELC-Delivery-Progress-Report-Oct-2021.pdf
- 37 De Henau (2019, p.1)
- 38 Campbell et al. (2013, p.1)
- 39 Gillespie, G. (2022) *The State of the Economy*. Edinburgh: Office of the Chief Economic Advisor, Scottish Government. <https://www.gov.scot/publications/state-economy-2022/documents/>
- 40 De Henau (2022, p.3, p.5); Del Boca and Vuri (2007); Harrison et al. (2022, p.2); Ravazzini (2018, p.1)
- 41 Mattingly and Carson (2021, p.9)
- 42 Campbell et al. (2013); Lapniewska (2016, p.2); Gillespie and Khan (2016)
- 43 Scottish Government (2021) Childcare savings for families [online]. October 4, 2021. <https://www.gov.scot/news/childcare-savings-for-families>; Harrison et al. (2022, p.2)
- 44 Harrison et al. (2022)
- 45 Campbell et al. (2013, p.1)
- 46 Stadelmann-Steffin (2008, p.384)
- 47 Hirsch (2022)

-
- 48 Akgunduz and Platenga (2018, p.130); Campbell et al. (2013, p.1); Carta and Rizzica (2015, p.5); Ravazzini (2018, p.13); Zimmert (2019, p.5)
- 49 Akgunduz and Platenga (2018)
- 50 Campbell et al. (2013, p.1)
- 51 Engster (2012); Waldfogel (2002, p.528)
- 52 Lapniewska (2016, p.2)
- 53 De Henau et al., (2019, p.1)
- 54 De Henau (2022, p.5)
- 55 Campbell et al. (2013, pp.3-4); De Henau (2022, p.5)
- 56 Evidence summarised in Box 5 of Butler and Rutter (2016, pp.11-12)
- 57 Baxter et al. (2019, p.26); Fortin et al. (2012)
- 58 De Henau et al. (2019, pp.1-2); De Henau (2019, pp.18-21); Nollenberger, & Rodríguez-Planas (2015, pp.133-134).
- 59 Havnes and Mogstad (2011, p.1455)
- 60 Butler and Rutter (2016, p.5)
- 61 Pavolini and van Lancker (2018, p.880)
- 62 McKendrick, J.H. (2021) *Childcare. Considerations from families experiencing poverty in Perth and Kinross. Briefing Note 2*. Glasgow: SPIRU
- 63 Scottish Government (2018) *Every Child, Every Chance: Tackling child poverty delivery plan, 2018-2022. Annex 2*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/tackling-child-poverty-delivery-plan-annex-2-further-technical-information/pages/2/>
- 64 Employability in Scotland (n.d.) *Parental Employability Support Fund (PESF)* [online]. <https://www.employabilityinscotland.com/employability-services/parental-employability-support-fund/>
- 65 Employability in Scotland (n.d.) *No One Left Behind*. [online]. <https://www.employabilityinscotland.com/policy/no-one-left-behind/>
- 66 Op cit., Note 10, Scottish Government (2022)
- 67 Bezu and McCallum (2020, p.20); Campbell et al. (2013, p.8)
- 68 Op cit., Note 37, Gillespie (2022)
- 69 Harrison et al. (2022)
- 70 Harrison et al. (2022)
- 71 Baxter et al. (2019, p.51); Glover et al. (2018, p.30)
- 72 Jessen, J., Waights, S. and Spieß, C.K., (2019). The Impact of Formal Child Care on Parenting Intensity; Gupta, N.D. and Simonsen, M., 2010. Non-cognitive child outcomes and universal high quality child care. *Journal of Public Economics*, 94(1-2), pp.30-43.
- 73 Anderson and Levine (1999, p.34); Campbell et al. (2013, p.9)
- 74 Harrison et al. (2022)
- 75 Butler and Rutter (2016, p.5).
- 76 Op cit, Note 61, Employability in Scotland (n.d.)
- 77 Scottish Government (2022) *Maternity, Paternity and Parental Leave: Employer guide*. [online]. <https://www.mygov.scot/maternity-paternity-parental-leave>
- 78 Harrison et al. (2022)
- 79 Op cit, Note 59, McKendrick (2021)
- 80 Scottish Government (n.d.) *Social Security Policy: disability assistance*. [online]. <https://www.gov.scot/policies/social-security/benefits-disabled-people-ill-health/>
- 81 Op cit, Note 62, Employability in Scotland (n.d.)

-
- 82 Smith, N. and Middleton, S. (2007) *A Review of poverty Dynamics Research in the UK*. York: JRF.
<https://www.jrf.org.uk/report/poverty-dynamics-research-uk>
- 83 *Child Poverty (Scotland) Act 2017*. Asp.6. <https://www.legislation.gov.uk/asp/2017/6/contents/enacted>
- 84 Data on poverty risk rate in paragraph 19 are the Authors' own calculations using the Stat-Xplore tool
(<https://stat-xplore.dwp.gov.uk/webapi/jsf/login.xhtml>). As recommended, three-year averages are presented
to overcome volatility in annual data. Scotland is the geographical unit of analysis throughout, and the data
refer to children aged under 16 (unless otherwise specified).
- 85 Coleman, L., Shorto, S. and Ben-Galim, D. (2022) *Childcare Survey 2022*. London: Coram Family and Childcare
Trust.
https://www.familyandchildcaretrust.org/sites/default/files/Resource%20Library/Final%20Version%20Coram%20Childcare%20Survey%202022_0.pdf
- 86 Op cit., Note 82, Coleman et al. (2022)
- 87 Baxter et al. (2019, p.86)
- 88 Op cit., Note 82, Coleman et al. (2022, p.5)
- 89 Op cit., Note 82, Coleman et al. (2022, p.13)
- 90 Op cit., Note 82, Coleman et al. (2022, p.18)
- 91 Rutter, J. and Stocker, K. (2014) *The 2014 Scottish Childcare Report*. London: Family and Childcare Trust.
<https://www.familyandchildcaretrust.org/2014-scottish-childcare-report>
- 92 Butler and Rutter (2016, p.5)
- 93 Pirrie, A. and Hockings, E., (2012). *Poverty, Educational Attainment and Achievement in Scotland: A critical
review of the literature*. Edinburgh: SCCYP.
https://dera.ioe.ac.uk/15894/1/Poverty_educational_attainment_and_achievement.pdf
- 94 Fuller, J.B. and Raman, N. (2022) *Building from the Bottom Up: What business can do to strengthen the bottom
line by investing in front-line workers*. Boston: Harvard Business School. <https://www.hbs.edu/managing-the-future-of-work/Documents/research/Building%20From%20The%20Bottom%20Up.pdf>
- 95 Fortin et al. (2012); Gillespie and Khan (2016); Harrison et al. (2022); Lapniewska (2016); Nollenberger and
Rodríguez Planas (2011); Nollenberger and Rodríguez Planas (2015); Ravazzini (2018); Zhang and Managi
(2021); Zimmert (2019)
- 96 Ananat et al. (2022); Campbell et al. (2013); Viitanen (2005)
- 97 Baker et al. (2021); Baxter et al. (2019); Bettendorf et al. (2015); Forry et al. (2013); Givord and Marbot (2015)
- 98 Bezu and McCallum (2021); Fervers and Kurowska (2022); Paull and La Valle (2018)
- 99 Bousselin (2022)
- 100 Gangl and Huber (2021)
- 101 Cebrian et al. (2019); del Boca and Vurj (2007); Flynn (2017); Givord and Marbot (2015); Hufkens et al. (2020);
Pavolini and van Lancker (2021); Ravazzini (2018); Zimmert (2019)
- 102 Fervers and Kurowska (2022); Gangl and Huber (2021); Gillespie and Khan (2016); Viitanen (2005); Lapniewska
(2016); Paull and La Valle (2018)
- 103 Brewer et al. (2016); Carta and Rizzica (2015); de Henau (2017); de Henau (2022); Horemans and van Lancker
(2017); Kawabata (2014); Nollenberger and Rodríguez Planas (2011); Nollenberger and Rodríguez Planas
(2015); Stadelmann-Steffen (2008); Viitanen (2005); Waldfogel (2002); Zhang and Managi (2021)
- 104 Havnes and Mogstad (2011); Ramasawmy (2015)
- 105 Anderson and Levine (1999); Bettendorf et al. (2015); Bousselin (2022); Fortin et al. (2012); Gennetian et al.
(2004); Iceland and Riber (2001); Mattingly and Carson (2021)
- 106 Engster (2012)
- 107 Baker et al. (2021); Gennetian et al. (2004)
- 108 Lapniewska (2016); Paull and La Valle (2018)

109 Glover et al. (2018); Zhang and Managi (2021)
 110 Baxter et al. (2019)
 111 Baker et al. (2015); Bezu and McCallum (2021); Fortin et al. (2012)
 112 Brewer et al. (2016); Paull and La Valle (2018)
 113 Givord and Marbot (2015)
 114 Zimmert (2019)
 115 Del Boca and Vuri (2007)
 116 Kawabata (2014); Zhang and Managi (2021)
 117 Bousselin (2022)
 118 Bettendorf et al. (2015)
 119 Havnes and Mogstad (2011)
 120 Fervers and Kurowska (2022)
 121 Nollenberger and Rodríguez Planas (2011); Nollenberger and Rodríguez Planas (2015)
 122 Gangl and Huber (2021); Ravazzini (2018)
 123 Campbell et al. (2013); de Henau (2017); de Henau (2022); Viitanen (2005)
 124 Ananat et al. (2022); Anderson and Levine (1999); Forry et al. (2013); Iceland and Riber (2001); Mattingly and Carson (2021); Mattingly et al. (2017)
 125 Flynn (2017); Glover et al. (2018)
 126 Akgunduz and Plantenga (2018); Baaker and van Vliet (2021); Cebrian et al. (2019); Engster (2012); Horemans and van Lancker (2017); Pavolini and van Lancker (2021); Stadelmann-Steffen (2008); Szarfenberg (2021); Waldfogel (2002)
 127 de Henau et al. (2019); Gennetian et al. (2004); Hufkens et al. (2020)
 128 Gillespie and Khan (2016); Harrison et al. (2022); Lapniewska (2016); and Ramasawmy (2015)
 129 Fortin et al. (2012); Mattingly et al. (2017); Ramasawmy (2015)
 130 Zimmert (2019)
 131 Glover et al. (2018); Paull and La Valle (2018); Ravazzini (2018); Zhang and Managi (2021)
 132 Fervers and Kurowska (2022)
 133 Kawabata (2014)
 134 Del Boca and Vuri (2007); Pavolini and van Lancker (2021)
 135 Bettendorf et al. (2015); Brewer et al. (2016); Glover et al. (2018); Zimmert (2019)
 136 Ananat et al. (2022); Anderson and Levine (1999); Baker et al. (2021); Baaker and van Vliet (2021); de Henau (2017); de Henau (2022); Fervers and Kurowska (2022); Gangl and Huber (2021); Havnes and Mogstad (2011); Hufkens et al. (2020); Kawabata (2014); Lapniewska (2016); Nollenberger and Rodríguez Planas (2011)
 137 Baxter et al. (2019); Bousselin (2022); Cebrian et al. (2019); Del Boca and Vuri (2007); Flynn (2017); Givord and Marbot (2015); Harrison et al. (2022); Iceland and Riber (2001); Mattingly and Carson (2021); Mattingly et al. (2017); Nollenberger and Rodríguez Planas (2015); Paull and La Valle (2018); Ravazzini (2018)
 138 de Henau et al. (2019)
 139 Anderson and Levine (1999); Del Boca and Vuri (2007); Gennetian et al. (2004); Iceland and Riber (2001); Nollenberger and Rodríguez Planas (2015)
 140 Bettendorf et al. (2015); Brewer et al. (2016); Bousselin (2022); Cebrian et al. (2019); Fervers and Kurowska (2022); Flynn (2017); Fortin et al. (2012); Givord and Marbot (2015); Kawabata (2014); Ramasawmy (2015); Ravazzini (2018); Stadelmann-Steffin (2008); Viitanen (2005)
 141 Baker et al. (2021); Baxter et al. (2019); Gangl and Huber (2021); Gillespie and Khan (2016); Glover et al. (2018); Horemans and van Lancker (2017); Hufkens et al. (2020); Zimmert (2019); Lapniewska (2016); Mattingly and Carson (2021); Mattingly et al. (2017); Paull and La Valle (2018); Zhang and Managi (2021); Zimmert (2019)

-
- 142 Ananat et al. (2022)
- 143 Scottish Government (2020) *Scottish Household Survey Early Learning and Childcare (2019) Topic Report*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/scottish-household-survey-childcare-topic-report/pages/2/>; Scottish Government (2022) 'Childcare'. *Scottish Household Survey 2020 Telephone Survey. Key Findings. An Experimental Statistics Publication for Scotland*. Edinburgh: Scottish Government. pp.58-60. <https://www.gov.scot/publications/scottish-household-survey-2020-telephone-survey-key-findings/documents/>; Hinchliffe, S., Scholes, A. and Bradshaw, P. (2021) *Scottish Study of Early Learning and Childcare: three-year olds (Phase 3) Report*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/scottish-study-early-learning-childcare-three-year-olds-phase-3-report-updated-2021/>; Scottish Government (2019) *Out of School Parent Survey: Report*. Edinburgh: Scottish Government. <https://www.gov.scot/publications/out-school-care-survey-parents-scotland/documents/>
- 144 Viitanen (2005)
- 145 Campbell et al. (2013, p.8)
- 146 Ravazzini (2018)
- 147 Abrassart, A., & Bonoli, G. (2015). Availability, cost, or culture? Obstacles to childcare services for low-income families. *Journal of Social Policy*, 44(4), pp.787-806.
- 148 Anderson and Levine (1999, pp.8-9); Pavolini and van Lancker (2018, p.879)
- 149 Gillespie and Khan (2016, p.7)
- 150 Gillespie and Khan (2016, p.7)
- 151 Glover et al. (2018, p.30)
- 152 Anderson and Levine (1999)
- 153 Bezu and McCallum (2021); Iceland and Ribar (2001, p.2)
- 154 Anderson and Levine (1999)
- 155 Anderson and Levine (1999)
- 156 Bezu and McCallum (2021, p.15)
- 157 Gennetian et al. (2004, p.724)
- 158 Mattingly et al. (2017, pp.162-164)
- 159 Ananat et al. (2022)
- 160 Roll, S., Hamilton, L., & Chun, Y. (2022). *Expanded Child Tax Credit payments have not reduced employment. Evidence from Census data*. (Mimeo) Retrieved from <https://cpb-us-w2.wpmucdn.com/sites.wustl.edu/dist/a/2003/files/2021/10/CTC-and-Employment-10212021.pdf>.
- 161 Akgunduz and Plantenga (2018, pp.124).
- 162 Bezu and McCallum (2021, p.11)
- 163 Cebrián et al. (2019, p.77)
- 164 Nollenberger and Rodriguez-Planas (2011, p.30)
- 165 Pavolini and van Lancker (2018, p.891)
- 166 Fervers and Kurowska (2022)
- 167 Ramasawmy (2015, p.27)
- 168 Ramasawmy (2015, p.22); Hakim (2000)
- 169 Ramasawmy (2015, p.29, p.31, p.34)
- 170 Ramasawmy (2015, p.30)
- 171 Viitanen (2005)
- 172 Akgunduz and Plantenga (2018, pp.124).
- 173 Glover et al. (2018, p.22)
- 174 Havnes and Mogstad (2011, p.1456)
- 175 Anderson and Levine (1999, p.10)

176 Zimmert (2019, pp.21-22)
 177 Glover et al. (2018)
 178 Forry et al. (2013, p.18, p.21)
 179 Akgunduz and Plantenga (2018, p.125).
 180 Akgunduz and Plantenga (2018, p.125).
 181 Glover et al. (2018, p.72)
 182 Statham and Mooney (2003)
 183 Statham and Mooney (2003, p.29)
 184 Hufkens et al. (2020, p.308)
 185 Pavolini and van Lancker (2018, p.878)
 186 Carta and Rizzica (2015, p.26)
 187 Stewart and Waldfogel (2017 p.3)
 188 Pascal et al. (2021, p.31)
 189 Paull and La Valle (2018, p.136)
 190 Glover et al. (2018, p.22)
 191 Ravazzini (2018); Viitanen (2005)
 192 Baker et al. (2021); Engster (2012)
 193 Engster (2012); Mattingly and Carson (2021)
 194 Gennetian et al. (2004); Szarfenberg (2021)
 195 Glover et al. (2018); Harrison et al. (2022); Hufkens et al. (2020)
 196 Horemans and van Lancker (2017); Hufkens et al. (2020)
 197 Baker et al. (2021) in Canada; Baxter et al. (2019) in Australia
 198 CPAG (n.d.) *Cost of the School Day: Breaking down the financial barriers to education*. [online].
<https://cpag.org.uk/cost-of-the-school-day>
 199 Harrison et al. (2022)
 200 Hufkens et al. (2020, p.308)
 201 Bousselin (2022, p.502)
 202 Mattingly and Carson (2021, p.7)
 203 Gennetian et al. (2004, pp.738-740)
 204 Paull and La Valle (2018, p.145)
 205 Paull and La Valle (2018, p.150)
 206 Glover et al. (2018, p.16, p.107)
 207 Glover et al. (2018, p.111)
 208 Welsh Government (2021, p.20)
 209 Baxter et al. (2019, p.86)
 210 Hufkens et al. (2020, p.314)
 211 Akgunduz and Plantenga (2018, pp.118-120)
 212 Mattingly and Carson (2021, p.4)
 213 Hirsch and Valdez (2015)
 214 Iceland and Ribar (2001)
 215 Mattingly et al. (2017); Mattingly and Carson (2021)
 216 Hirsch and Valdez (2015, p.11)
 217 Hirsch and Valdez (2015, p.13)
 218 Mattingly et al. (2017, p.164)
 219 Mattingly et al. (2017, p.165)
 220 Baker et al. (2021)

221 Baxter et al. (2019)
 222 Mattingly and Carson (2021, p.7)
 223 Mattingly and Carson (2021, p.9)
 224 Engster (2012, pp.129-131)
 225 Forry et al. (2013, p.8)
 226 Horemans and van Lancker (2017, p.15)
 227 Nollenberger and Rodriguez-Planas (2015, p.133)
 228 Baker et al. (2021, p.14, p.19)
 229 Fortin et al. (2012, p.6)
 230 Engster (2012, p.132)
 231 Mattingly and Carson (2021, p.7)
 232 Horemans and van Lancker (2017, p.7)
 233 Paull and La Valle (2018, p.150)
 234 Engster (2012, pp.132-134)
 235 Horemans and van Lancker (2017, p.4, p.17)
 236 Horemans and van Lancker (2017, p.3)
 237 Hirsch and Valdez (2015, p.6)
 238 Horemans and van Lancker (2017, p.6)
 239 Gillespie and Khan (2016, p.11)
 240 Ananat et al. (2022); Baker et al. (2021); Engster (2012)
 241 Horemans and van Lancker (2017, p.9)
 242 Akgunduz and Plantenga (2018); Bezu and McCallum (2021); Carta and Rizzica (2015); Del Boca and Vuri,
 (2007); Viitanen (2005)
 243 Ananat et al. (2022); Baker et al. (2021)
 244 Bousselin (2022); Forry et al. (2013); Givord and Marbot (2015)
 245 Cebrian et al. (2019); Fervers and Kurowska (2022); Gennetian et al. (2004); Gillespie and Khan (2016); Havnes
 and Mogstad (2011); Lapniewska (2016); Stadelmann-Steffin (2008)
 246 de Henau (2017), de Henau (2022), de Henau et al. (2019); Fortin et al. (2012); Glover et al. (2018);
 Nollenberger and Rodríguez Planas (2011); Nollenberger and Rodríguez Planas (2015); Ravazzini (2018);
 Zimmert (2019)
 247 Gangl and Huber (2021)
 248 Anderson and Levine (1999)
 249 Baker et al. (2021)
 250 Ramasawmy (2015)
 251 Harrison et al. (2022)
 252 Lapniewska (2016, pp.5-6)
 253 Lapniewska (2016, p.2, p.9, p.12)
 254 Ramasawmy (2015, p.32)
 255 Op cit., Note 140 Hinchcliffe et al., 2021)
 256 Op cit., Note 140 (Hinchcliffe et al., 2021, p.39)
 257 Op cit., Note 140 (Hinchcliffe et al., 2021, p.62)
 258 Op cit., Note 140 (Hinchcliffe et al., 2021, p.62)
 259 Op cit., Note 140 (Hinchcliffe et al., 2021, p.64)
 260 Op cit., Note 140 (Hinchcliffe et al., 2021, p.65)
 261 Gennetian et al. (2004, p.732)
 262 Gennetian et al. (2004, p.741)

263 Gennetian et al. (2004, p.732)
 264 Schaefer et al. (2006)
 265 Fortin et al. (2012, p.9)
 266 Gillespie and Khan (2016, p.7)
 267 Bousselin (2022, p.510)
 268 Bousselin (2022, p.511)
 269 Carta and Rizzica (2015, p.29)
 270 Givord and Marbot (2015, p.110)
 271 Givord and Marbot (2015, p.107)
 272 Gangl and Huber (2021, p.2)
 273 Ravazzini (2018, p.2)
 274 Welsh Government (2021, p.17)
 275 Welsh Government (2021, p.19)
 276 Nollenberger and Rodriguez Planas (2011, p.29)
 277 Nollenberger and Rodriguez Planas (2015, p.134)
 278 Carta and Rizzica (2015, p.29)
 279 Forry et al. (2013, p.29)
 280 De Henau et al. (2019, pp.17-21)
 281 De Henau (2019, pp.11-13)
 282 De Henau (2019, p.13)
 283 De Henau (2022, p.15)
 284 Horemans and van Lancker (2017, p.8, p.18)
 285 Campbell et al. (2013)
 286 Paull and La Valle (2018, p.138)
 287 Schaefer et al. (2006)
 288 Lee, B. J., Goerge, R., Reidy, M., Kreader, J. L., Georges, A., Wagmiller, R. L., Jr., et al. (2004). Child care subsidy use and employment outcomes of TANF mothers during the early years of welfare reform: A threestate study. Chicago: University of Chicago, Chapin Hall Center for Children; Okuyama, K., & Weber, R. B. (2001). A view from four states and the District of Columbia: Parents receiving child care subsidies: Where do they work? Albany, OR: Linn- Benton Community College, Family Resources and Education Division.
 289 Zimmert (2019, p.18, p.22)
 290 Schaefer et al. (2006)
 291 Gennetian et al. (2001)
 292 Havnes and Mogstad (2011, p.1456)
 293 Havnes and Mogstad (2011, p.1461)
 294 Glover et al. (2019, p.86)
 295 Welsh Government (2021, p.18)
 296 Welsh Government (2021, p.19)
 297 Glover et al. (2019, p.16)
 298 Akgunduz and Platenga (2018)
 299 Baaker and van Vliet (2021, p.12)
 300 Ravazzini (2018, p.13)
 301 Anderson and Levine (1999, pp.32-33)
 302 Baker et al. (2021)
 303 Baaker and van Vliet (2021)
 304 Gangl and Huber (2021, p.2)

305 Bettendorf et al. (2015)
 306 Givord and Marbot (2015, p.109)
 307 De Henau (2019, p.14)
 308 Pascal et al. (2021, p.56)
 309 Carta and Rizzica (2015, p.25-26)
 310 Del Boca and Vuri (2007, p.825)
 311 Kawabata (2014)
 312 Kawabata (2014, p.50)
 313 Schaefer et al. (2006) refer to Tekin, E. (2004b). Single mothers working at night: Standard work, child care subsidies, and implications for welfare reform. *NBER Working Paper Series No. 10274*. Cambridge, MA: National Bureau of Economic Research.
 314 Gennetian et al. (2004, p.725)
 315 Cebrián et al. (2019, p.77)
 316 Gangl and Huber (2021, p.1)
 317 Felfe, C., Lechner, M., Thiemann, P. (2016). After-school care and parents' labor supply. *Labour Economics* 42, 64-75.
 318 Schaefer et al. (2006) refer to Lemke, R. J., Witte, A. D., Queralto, M., & Witt, R. (2000). Child care and the welfare to work transition. *NBER Working Paper Series No. 7583*. Cambridge, MA: National Bureau of Economic Research.
 319 Gillespie and Khan (2016, p.13)
 320 Givord and Marbot (2015, p.100)
 321 Zimmert (2019, p.18, p.22)
 322 Ravazzini (2018, p.1)
 323 Nollenberger, & Rodríguez-Planas (2015, p.129)
 324 Kawabata (2014)
 325 Schaefer et al. (2006) refer to Lemke, R. J., Witte, A. D., Queralto, M., & Witt, R. (2000). Child care and the welfare to work transition (*NBER Working Paper Series No. 7583*). Cambridge, MA: National Bureau of Economic Research.
 326 Del Boca and Vuri (2007, p.826)
 327 Bousselin (2022, p.513)
 328 Butler and Rutter (2016, p.4)
 329 Zimmert (2019, p.18)
 330 Cebrián et al. (2019, pp.73-77)
 331 In Anderson and Levine (1999), the employment rate of single mothers without a high school degree rose from 25% to 33%, although this remained far below other; In Houser and Dickert-Conlin (1998) a subsidy of 50% of the price of childcare was only anticipated to increase the labour force participation of single parents by 4.2%.. Houser, S., & Dickert- Conlin, S. (1998). The effects of aftertax wages, transfer payments, and child care expenses on labor market and transfer program participation (JCPR Working Paper No. 7). Chicago: Joint Center for Poverty Research.
 332 Carta and Rizzica (2015, p.29)
 333 Fortin et al. (2012, p.10, p.13)
 334 Nollenberger and Rodriguez Planas (2011, p.29)
 335 Fortin et al. (2012, p.10, p.13)
 336 Zimmert (2019, p.19)
 337 Paull and La Valle (2018, p.139)
 338 Welsh Government (2021, p.20)
 339 Paull and La Valle (2018, p.139)

340 Zimmert (2019, p.19)
 341 Gangl and Huber (2021)
 342 Nollenberger and Rodriguez Planas (2015, p.124)
 343 Cebrián et al. (2019, pp.73-77)
 344 Bousselin (2022, p.513)
 345 Baum, C. L., II. (2002). A dynamic analysis of the effect of childcare costs on the work decisions of low-income mothers with infants. *Demography*, 39(1), 139-164. In Baum (2002), their employment rate was estimated to increase to 62% from 53.8%.
 346 De Henau (2019, p.15)
 347 Cebrián et al. (2019, p.77)
 348 Del Boca and Vuri (2007, p.824)
 349 Givord and Marbot (2015, p.106)
 350 Ravazzini (2018, pp.8-9)
 351 Fervers and Kurowska (2022, p.8)
 352 Paull and La Valle (2018, p.139)
 353 Nollenberger and Rodriguez Planas (2015, p.124)
 354 Nollenberger and Rodriguez Planas (2015, p.134)
 355 Op cit., Note 342, Baum (2002). In Baum (2002), their employment rate was estimated to increase to 48.5% from 41%. In Tekin (2004), childcare subsidy increased the probability of single mothers working by 15.3 percentage points. Tekin, E. (2004a) Child care subsidy receipt, employment, and child care choices of single mothers. *NBER Working Paper Series No. 10459*. Cambridge, MA: National Bureau of Economic Research.
 356 Han, W., & Waldfogel, J. (2001). Child care costs and women's employment: A comparison of single and married mothers with pre-school-aged children. *Social Science Quarterly*, 82(3), 552-568.
 357 Ravazzini (2018, p.2)
 358 Paull and La Valle (2018, p.136)
 359 Carta and Rizzica (2015, p.29)
 360 Cebrián et al. (2019, p.77)
 361 Ravazzini (2018, p.2)
 362 Bousselin (2022)
 363 Zimmert (2019)
 364 Horemans and Van Lancker (2017)
 365 Ravazzini (2018, p.2)
 366 Paull and La Valle (2018, p.138)
 367 Paull and Valle (2018, p.138)
 368 Bousselin (2022, p.518)
 369 Givord and Marbot (2015, p.100)
 370 Cebrián et al. (2019, p.77)
 371 Hufkens et al. (2020, p.308)
 372 Glover et al. (2019, p.86)
 373 Horemans and Van Lancker (2017)
 374 Paull and La Valle (2018, pp.143-144)
 375 Carta and Rizzica (2015, p.29)
 376 Zimmert (2019, pp.3-4, 22)
 377 Flynn (2017, p.269)
 378 Flynn (2017, p.272)
 379 Pavolini and van Lancker (2018, p.886)

380 Cebrián et al. (2019, pp.70-71)
 381 Horemans and Van Lancker (2017)
 382 Hufkens et al. (2020, p.317)
 383 Waldfogel (2002, p.530-534)
 384 Waldfogel (2002, p.534)
 385 Ravazzini,(2018)
 386 Felfe, C. et al. (2015). Childcare and child development. *CESifo DICE Report*, 13(1), 16-19.
 387 Cornelissen, T., Dustmann, C., Raute, A., & Schönberg, U. (2018). Who benefits from universal child care? Estimating marginal returns to early child care attendance. *Journal of Political Economy*, 126(6), 2356-2409.
 388 Felfe, C., & Lalive, R. (2018). Does early child care affect children's development? *Journal of Public Economics*, 159, 33-53.
 389 Paull and La Valle (2018, p.145)
 390 Stewart and Waldfogel (2017)
 391 Campbell et al. (2013)
 392 Stewart and Waldfogel (2017, p.3)
 393 Butler and Rutter (2016, p.4)
 394 Campbell et al. (2013)
 395 De Henau (2017); De Henau (2022)
 396 De Henau et al. (2022) do the same for South Africa, Uruguay & Turkey, and compares the results to these UK findings
 397 Fortin et al. (2012)
 398 Fortin et al. (2012)
 399 Paull and Valle (2018, p.154)
 400 Paull and Valle (2018)
 401 Glover et al. (2018, p.112)
 402 Zimmert (2019)
 403 Paull and La Valle (2018, pp.145-146)
 404 Paull and Valle (2018, p.154)
 405 Skinner (2006, p.7)
 406 Hufkens et al. (2020, p.317)
 407 Fervers & Kurowska (2022); Cebrián et al. (2019)
 408 Butler and Rutter (2016, p.5)
 409 Stewart and Waldfogel (2017, p.5) present a similar recommendation in relation to the Childcare Offer to working families in England.
 410 Butler and Rutter (2016, p.6)
 411 Butler and Rutter (2016, p.5)
 412 Grant, M. J., & Booth, A. (2009). A Typology of Reviews: An analysis of 14 review types and associated methodologies. *Health information & Libraries Journal*, 26(2), pp.91-108.
 413 Mercer, T. & Lacey, P. (2021) *A Brief Introduction to Realist Evaluation*. London: Public Health England.