

# Does free childcare help parents work?

**IFS Briefing note BN189**

**Mike Brewer  
Sarah Cattan  
Claire Crawford  
Birgitta Rabe**

## Does free childcare help parents work?

**Mike Brewer, Sarah Cattan, Claire Crawford and Birgitta Rabe**

*Copy-edited by Judith Payne*

*Published by*

**The Institute for Fiscal Studies**

ISBN 978-1-911102-27-4

December 2016

The authors gratefully acknowledge funding from the Economic and Social Research Council through the Secondary Data Analysis Initiative under grant ES/K003232/1 (all), the ESRC Research Centre on Micro-Social Change at the University of Essex under grant number ES/L009153/1 (Brewer, Rabe), the ESRC Centre for the Microeconomic Analysis of Public Policy at the Institute for Fiscal Studies under grant number ES/M010147/1 (Cattan, Crawford), and the British Academy through Cattan's Postdoctoral Fellowship. They thank Joseph Altonji, Orazio Attanasio, Jo Blanden, Emilia Del Bono, Rachel Griffith, Costas Meghir, Imran Rasul and participants at various conferences, seminars and workshops for helpful comments.

## Executive summary

Free part-time childcare places for all 3- and 4-year-olds in England were introduced in the early 2000s. The government is now planning to extend this offer from 15 to 30 hours per week (still for 38 weeks of the year) for children in working families from September 2017. One of the aims of the policy is to enable parents to work more – but is it likely to achieve this aim? This briefing note draws on the findings of a new IFS working paper, ‘Free childcare and parents’ labour supply: is more better?’, by Mike Brewer, Sarah Cattan, Claire Crawford and Birgitta Rabe, to try to answer this question.

In this new work, the researchers compared what happened to the labour market outcomes of mothers and fathers as their children moved from being entitled to a free part-time nursery place (offering 15 hours of free childcare per week) to a full-time place at primary school (which effectively offers parents 30–35 hours of free childcare per week).

The research found no evidence that the work patterns of mothers with younger children, or those of fathers, were affected. There was evidence of an effect for mothers whose youngest child became eligible for free full-time care, but this was still relatively small: at the end of the first year of entitlement to free full-time care, mothers whose youngest child was eligible were found to be 5.7 percentage points more likely to be in the labour force and 3.5 percentage points more likely to be in work than mothers whose youngest child was at the end of their first year of part-time entitlement. This was equivalent to around 12,000 more mothers in work each year.

Should we infer from these results that the planned increase in entitlement to free care from 15 to 30 hours per week for 3- and 4-year-olds in working families in England will have a similarly small effect on parents’ labour supply? There are some reasons to think that the effects identified by the researchers might be smaller than the future impact of this policy: for example, the researchers examined the effects of moving to a very rigid form of full-time childcare – that delivered during school hours and only during term time – while the plans for the new policy suggest that the additional hours of free care could be taken more flexibly, across fewer than 5 days per week and more than 38 weeks per year. The fact that the additional hours are only available to working parents may also encourage more parents to move into work in order to become entitled to the extra care. But there are also reasons to think that the effects of the new policy might be smaller than those identified by the researchers: 30 hours is slightly less than the number of hours per week that children spend in school, and more mothers are in work now than they were at the time of the study.

Overall, it is difficult to judge what effect the proposed extension of free care from 15 to 30 hours per week for 3- and 4-year-olds in working families in England will have on parental labour supply, but the recent research conducted in England – together with the balance of evidence from the international literature – suggests that it is only likely to increase parental employment slightly.

Of course, the provision of additional free childcare is also likely to reduce the amount parents spend on childcare. But it will probably do so by far less than the amount the government will spend providing the extra care, because many parents use informal care (for which they do not have to pay) rather than paying for formal care to meet their childcare needs.

There are always trade-offs for governments when deciding how to spend their limited resources. If the main goals of the government's planned extension of the number of hours of free care for 3- and 4-year-olds are to increase parental labour supply and reduce childcare costs for working families, then the existing research suggests that it may achieve these aims to some extent. But to improve parents' labour market outcomes or increase their disposable income further, it might need to do more – for example, by providing similar levels of care outside term time.

# 1. Introduction

Most OECD countries have introduced policies over the last two decades that make childcare cheaper or more readily available, with the aim of helping parents to work or of securing better outcomes for children. Despite these efforts, the cost of childcare is still a big concern for many parents, potentially hindering their ability to work. In recent years, these concerns have led several countries to expand the generosity of their childcare subsidies – for example, by increasing the number of hours of free or subsidised care available – and many others to announce plans to do so.

England is one such country: having introduced free part-time childcare places for all 3- and 4-year-olds in the early 2000s, the government is now planning to extend this offer. Its intention is to increase from 15 to 30 the number of hours per week of free care that children from working families can access (for 38 weeks of the year) from September 2017.<sup>1</sup> The devolved governments in Scotland and Wales are planning to introduce more generous subsidies, with the Scottish government committed to offering 30 hours per week of free childcare to the parents of all 3- and 4-year-olds, not just those whose parents work, by 2021, and the Welsh government committed to offering 30 hours per week of free childcare to the working parents of 3- and 4-year-olds for 48 (rather than 38) weeks per year.

One of the reasons the government says it plans to increase the entitlement to free childcare in England is to enable parents to work more:

*The new entitlement to 30 hours free childcare is intended to support working parents with the cost of childcare and enable them, where they wish, to return to work or to work additional hours.*

Page 8 of policy statement accompanying Childcare Bill 2015<sup>2</sup>

Why might offering parents help to meet their childcare costs enable them to work more? One reason is that parents might not earn enough per hour (including travel expenses and other costs associated with work) to pay for an hour of childcare without the government's help (or they might only earn enough to take home a small amount more), so the subsidy might make work more financially rewarding for parents.

Can we therefore conclude that increasing the number of hours of free childcare available from 15 to 30 per week will definitely enable parents to work more? There are certainly reasons why it might: perhaps it is easier for parents to work when 30 hours of free childcare can be accessed in the same place, or perhaps it is only when a sufficiently large number of hours of free childcare are offered that the benefits of working exceed the fixed costs (such as travelling to and from work or having to buy a uniform). Because the

<sup>1</sup> The intentions for England were set out as part of the Childcare Bill in 2015. The additional 15 hours per week will be available to families where both parents are working (or the sole parent is working in a lone-parent family) and each parent earns, on average, at least £120 a week but no more than £100,000 per year (where £120 is the equivalent of 16 hours per week at the national living wage; parents under 25 would need to earn an amount no less than 16 times whichever rate of the national minimum wage applied to them).

<sup>2</sup> Source:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/482517/Childcare\\_Bill\\_Policy\\_Statement\\_12.03.2015.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/482517/Childcare_Bill_Policy_Statement_12.03.2015.pdf).

additional hours the government is proposing to offer will only be available to parents of 3- and 4-year-olds who are in work and earn above a certain amount, this might provide parents with further incentives to move into work or to increase the number of hours they work. If these factors are important, then we might expect more parents to work as a result of the policy change.

But there are also reasons why it might have only a small or even a negative effect. For example, if those closest to the labour market went back to work when their child was offered free part-time childcare, then the impact of an additional 15 hours of childcare could be smaller than the first 15 hours, because the parents who remain out of work might be those with strong preferences for not doing paid work while they have pre-school children, or who are less able to find work. It is even possible that, by reducing the amount working parents have to pay for childcare themselves, this could enable some to afford to work *less* rather than more.

The overall impact of this policy on parental labour supply will depend on which of these factors are more important for parents in England. We can get an indication of the likely impacts, though, by looking at results from a new IFS working paper, 'Free childcare and parents' labour supply: is more better?'.<sup>3</sup> In this paper, the researchers examined what happened to parents' working patterns in England when their 4-year-old moved from part-time nursery (when they were offered 15 hours per week of free childcare) to full-time school (which effectively offered their parents 30–35 hours of free childcare per week) during the 2000s.

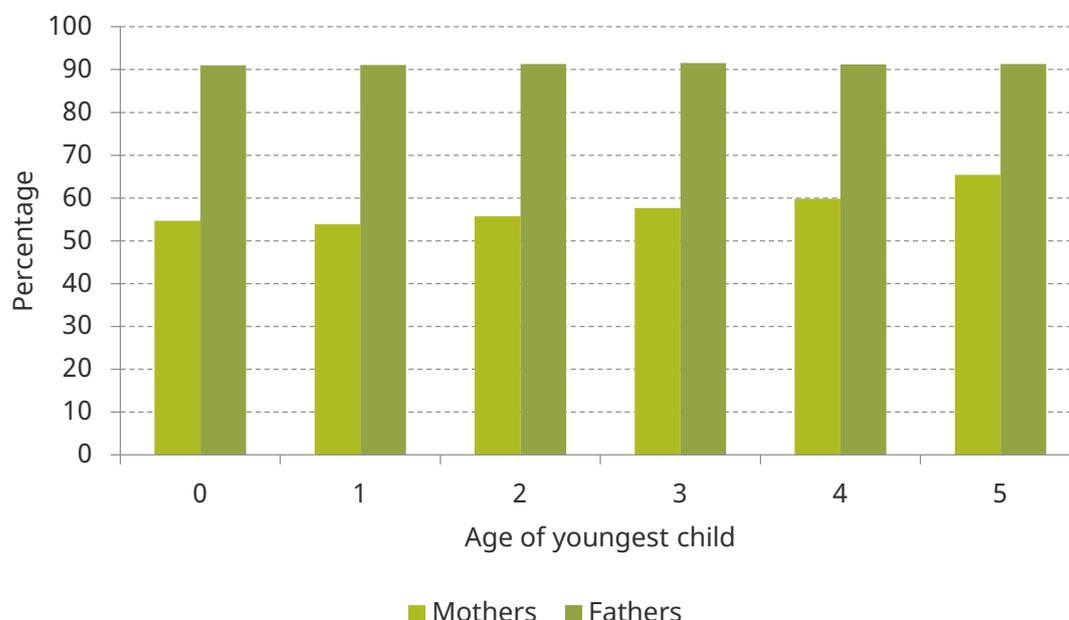
This briefing note discusses the implications of their research for the potential effects of the government's decision to offer 15 more hours of childcare per week to working parents of 3- and 4-year-olds. Section 2 briefly describes the policy context in England. Section 3 reports the main results in terms of childcare use and Section 4 the main results in terms of parents' work patterns. Section 5 discusses what conclusions we can draw from this research about the likely effects of the proposed policy in England.

<sup>3</sup> M. Brewer, S. Cattan, C. Crawford and B. Rabe, 'Free childcare and parents' labour supply: is more better?', IFS Working Paper W16/22, <https://www.ifs.org.uk/publications/8728>.

## 2. Policy context

Figure 1 shows that, in England, mothers are more likely to work as their youngest child gets older, while fathers' work decisions are unrelated to the age of their youngest child.

**Figure 1. Percentage of mothers and fathers in work, by age of youngest child**

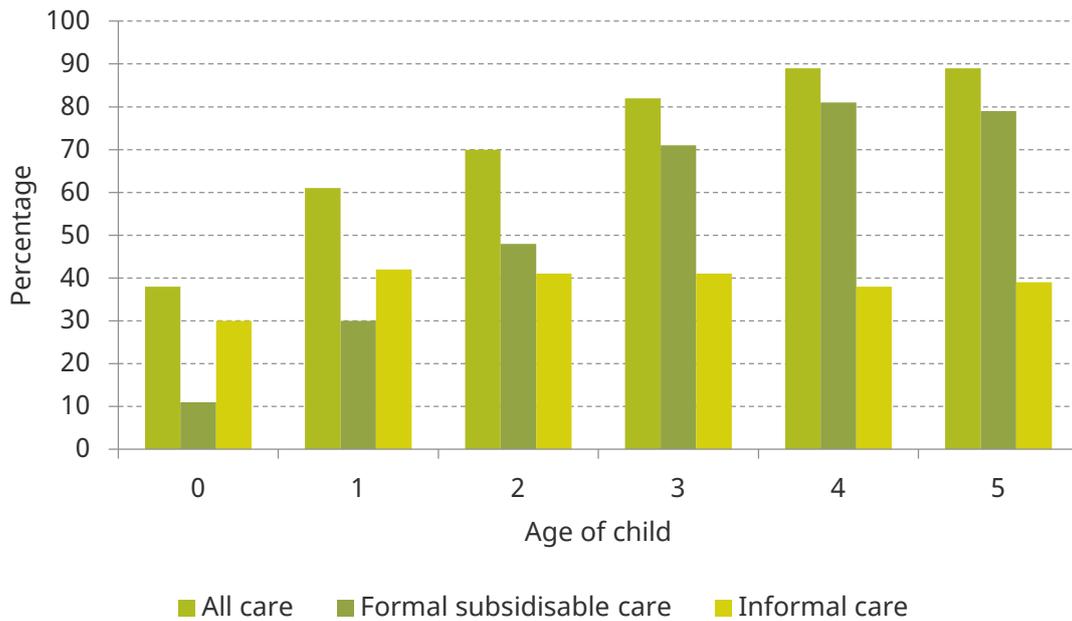


Note: These results are from table 2 in the working paper. They are based on a sample of mothers and their co-resident partners ('fathers') who had at least one child aged 0-6 when they were interviewed between January 2000 and December 2013 as part of the Labour Force Survey.

To help care for their children while they are at work, many parents use a combination of formal care – care offered in a group setting such as a nursery – for which they often have to pay, and informal care – care offered by family and friends – for which they may not.<sup>4</sup> Figures 2 and 3 show how the usage of these different types of childcare varies by the age of the child.

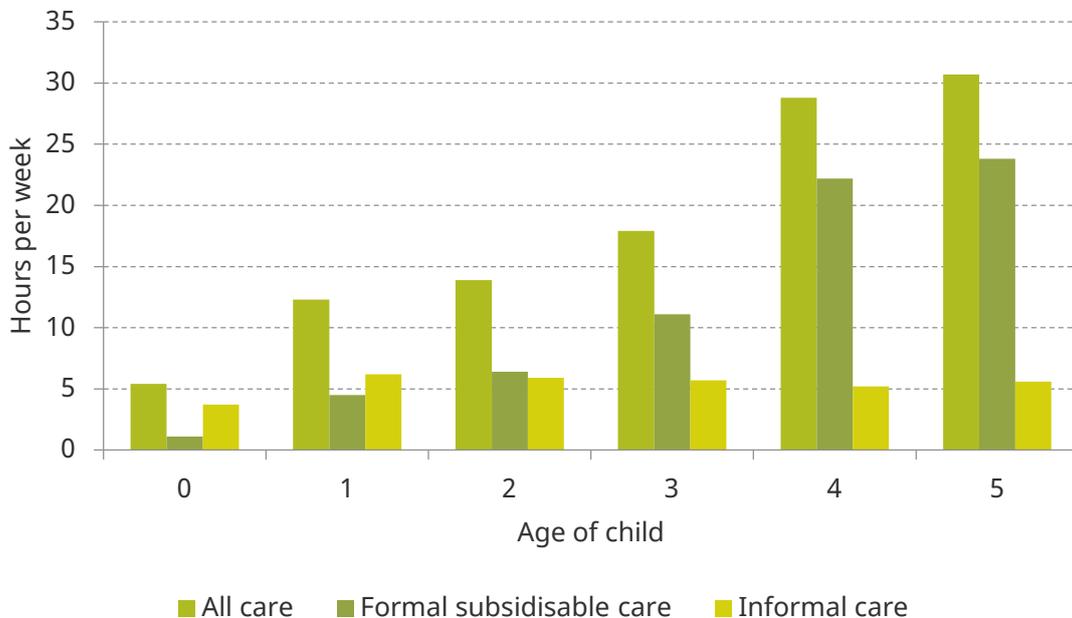
<sup>4</sup> See T. Huskinson, S. Hobden, D. Oliver, J. Keyes, M. Littlewood, J. Pye and S. Tipping, *Childcare and Early Years Survey of Parents 2014 to 2015*, Department for Education, 2016, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/516924/SFR09-2016\\_Childcare\\_and\\_Early\\_Years\\_Parents\\_Survey\\_2014-15\\_report.pdf.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/516924/SFR09-2016_Childcare_and_Early_Years_Parents_Survey_2014-15_report.pdf.pdf).

**Figure 2. Percentage of children accessing different types of childcare, by age**



Note: These results are based on a sample of children aged 2-7 living in families in England who were interviewed as part of the Family Resources Survey between April 2005 and March 2013. 'Subsidisable care' refers to the subset of types of formal care at which parents can take up their entitlement to a free part-time nursery place. It includes settings such as nurseries or playgroups, but excludes childminders and before- or after-school clubs.

**Figure 3. Average number of hours per week spent in different types of childcare, by age of child**



Note: See notes to Figure 2.

Amongst several potential explanations for the relationship between age of youngest child and the likelihood that mothers will work, shown in Figure 1, is the possibility that the cost and/or availability of childcare is preventing some mothers from entering work. To help alleviate these constraints, the government now offers several routes through which parents can receive help with their formal childcare costs:

- a refundable tax credit that subsidises up to 70% of spending on formal childcare amongst low- to middle-income working families, subject to weekly ceilings and to an income test (this is the childcare element of the working tax credit or the equivalent paid through universal credit);
- a scheme to allow employers to offer their employees childcare vouchers free of income tax and National Insurance contributions, which is due to be replaced by a similar Tax-Free Childcare scheme;<sup>5</sup>
- an entitlement to some free childcare for all 3- and 4-year-olds and, more recently, the poorest 40% of 2-year-olds. It is this policy – operating in England only – that the researchers focus on in their study.<sup>6</sup>

This entitlement to a number of hours of free childcare began to be rolled out for 4-year-olds in 1998 and has been in place for all 3- and 4-year-olds since 2004. When the policy was first introduced, it offered 2½ hours of free childcare per day (12½ hours per week) for 33 weeks a year. This was extended to 38 weeks a year in 2006 and to 15 hours a week in 2010. Since 2010, it can also be taken with greater flexibility: in some settings, families can now use the hours across a minimum of 3 days, making it easier to combine with work. The majority of 3- and 4-year-olds in England take up all the hours to which they are entitled each week.<sup>7</sup>

Children become eligible for a free part-time childcare place at the start of the term after they turn 3. This means that children born between 1 January and 31 March are eligible for a free place from 1 April of the year they turn 3; children born between 1 April and 31 August are eligible for a free place from 1 September of the year they turn 3; and children born between 1 September and 31 December are eligible from 1 January of the calendar year in which they turn 4. Children remain entitled to free part-time childcare until they enter full-time primary school (covering 30–35 hours a week, depending on school policy,

<sup>5</sup> There is a limit on the amount of childcare vouchers that can be claimed. Before April 2011, this amount was the same for all working parents, making it more valuable to those paying higher rates of tax. Since April 2011, the limit has been lower for new entrants to the scheme who are higher- or additional-rate taxpayers, thus approximately equalising the maximum tax advantage for all parents. For more information on the new Tax-Free Childcare scheme, see <https://www.gov.uk/government/news/tax-free-childcare-10-things-parents-should-know>.

<sup>6</sup> The first two policies are UK-wide, while the third applies to England only. Similar (but not identical) policies offering free care to pre-school children operate in the devolved nations, but the research considered only parents in England.

<sup>7</sup> In January 2015, 94% of 3-year-olds were taking up their free place. The majority of children who take up a place use all of the hours to which they are entitled each week: in January 2015, for example, 86% of 3-year-olds used between 13 and 15 hours, against a maximum entitlement of 15 hours a week. Source: Department for Education, 'Education provision: children under 5 years of age, January 2015', statistics on early years provision for children under 5 years in the local-authority-maintained, private, voluntary and independent sectors in England, <https://www.gov.uk/government/statistics/provision-for-children-under-5-years-of-age-january-2015>, Main Tables SFR20/2015 (accessed August 2016).

for 39 weeks a year), which most children in England do in the September after they turn 4.

To identify the impact of free childcare on parents' work patterns, the research exploited these date-of-birth cut-offs in entitlement to free part-time and full-time childcare, which mean that children born in different months gain entitlement to free care at different points in the year and at different ages. For example, children born one day apart on 31 August and 1 September 2011 would be eligible for free part-time nursery places 4 months apart (1 September 2014 versus 1 January 2015) and free full-time school places 12 months apart (1 September 2015 versus 1 September 2016).

If the only reason that parents whose children are born at different times of the year make different childcare or labour supply decisions is this variation in entitlement to free childcare, then these date-of-birth cut-offs allow the researchers to identify the effects of entitlement to free part-time and full-time childcare – and of moving from free part-time to free full-time care – on parents' labour market outcomes.

### 3. How do patterns of childcare use change as children become entitled to more free childcare?

Table 1 shows how children's use of childcare changes as they become entitled to free part-time and then free full-time childcare (as they start school). The first row shows the effect of being offered free part-time care relative to no free care and the second row shows the effect of being offered free full-time care relative to free part-time care. In both cases, the estimate refers to the effect at the end of the child's first year of entitlement to care.

**Table 1. Effect of a child's eligibility for free part-time or full-time childcare on use of childcare**

	(1)	(2)	(3)	(4)	(5)
	<i>Subsidisable care</i>			<i>Any childcare</i>	<i>Informal childcare</i>
	Any use	Weekly hours	Weekly spend	Weekly hours	Weekly hours
Impact of 3 <sup>rd</sup> term of free part-time care relative to no free care	<b>+16.9ppts</b>	<b>+3.3hrs</b>	-£4.30	<b>+1.6hrs</b>	<b>-3.6hrs</b>
Impact of 3 <sup>rd</sup> term of free full-time care relative to 3 <sup>rd</sup> term of free part-time care	<b>+11.6ppts</b>	<b>+2.4hrs</b>	<b>-£9.40</b>	+2.8hrs	+1.5hrs

Note: These results are a subset of table 3 in the working paper. They are based on a sample of children aged 2-7 living in families in England who were interviewed as part of the Family Resources Survey between April 2005 and March 2013. If the result is emboldened, it means that the effect is statistically significant at the 10% level, i.e. that we can be at least 90% sure that the true result is not zero.

Columns 1 and 2 show that children's use of subsidisable care – that is, the type of care in which free part-time places can be taken up, such as nurseries or playgroups – increases when they become entitled to free part-time care, and then rises further when they can go to school. Specifically, column 1 shows that there is an increase of 17 percentage points (ppts) in the proportion of children using subsidisable care when they become entitled to free part-time care (compared with 48% of 2-year-olds who use subsidisable care), and there is a further 12 percentage point increase when they become entitled to free full-time care. Similarly, column 2 shows that the amount of subsidisable care used increases by about 3 hours a week when children become entitled to free part-time care (compared with around 6½ hours per week of subsidisable care used by 2-year-olds) and by a further 2½ hours a week when they become entitled to free full-time care.

These results show that offering parents more free childcare does increase the amount of time children spend in subsidisable childcare, but by much less than the total number of additional free hours parents are offered. For example, when children become eligible for a free part-time nursery place, they are offered an additional 12½ or 15 hours of free care per week. But the actual time spent in subsidisable childcare has risen by only around 3

hours per week on average by the end of the first year of entitlement.<sup>8</sup> Alternatively, measured across the whole of the first year in which children are entitled to free part-time care, the research shows that for every 570 hours per year of free care offered to children, they only spend an additional 163 hours per year in subsidisable care, on average.<sup>9</sup> Table 1 also shows that the number of extra hours spent in subsidisable care or school when children become entitled to free full-time care is even smaller.

The main reason for this small response to free childcare is that some parents already pay for subsidisable care. Indeed, parents of 2-year-old children spend around £25 per week (in 2012 prices) on this kind of care, on average. Column 3 shows that the entitlement to free part-time care saves parents £4 a week (in 2012 prices) and that they save a further £9 a week when children become entitled to start school. Across the whole of the first year in which children are entitled to each type of care, this translates into savings of £320 per year (in 2016 prices) when children become entitled to free part-time care and a further £410 per year when children become entitled to free full-time care.<sup>10</sup>

These findings show that the use of subsidisable care does rise when parents are offered more hours of free care, but that the increase in usage is much lower than the number of additional hours they are offered. How do patterns of overall childcare use change? Column 4 shows how the number of hours spent in any form of childcare changes when children become entitled to more hours of free subsidisable care. There is a rise in the number of hours of childcare used when children become eligible for free part-time care, but the rise is even lower than the number of extra hours spent in subsidisable care.

This suggests that the free entitlement is partly 'crowding out' the use of other forms of childcare, one of which is informal care (care provided by family and friends). Column 5 confirms that children spend fewer hours in informal care as they become entitled to free part-time childcare. (The patterns for full-time care are less clear.)

Overall, these results suggest that childcare use does increase when parents are offered more hours of free care, but that the total amount of time children spend in childcare (and even the amount of time spent in subsidisable care) increases by much less than the number of extra hours of free childcare on offer. When 3-year-olds become entitled to 570 hours a year of free care, they only spend an additional 54 hours per year in childcare provided outside the immediate family, on average. When children become entitled to an additional 600–795 hours of free care when they start school, they spend just an additional 76 hours a year in childcare. And if overall childcare use changes little when parents can access free childcare, then it seems unlikely that we should expect free childcare to dramatically change parents' working patterns. We look at this in the next section.

<sup>8</sup> Free care of 15 hours a week for 38 weeks a year is just under 11 hours a week averaged across a year: this is the relevant number to consider when interpreting the results in Table 1, which reports the impact on childcare used in the previous week averaged across the year.

<sup>9</sup> This figure takes the average of the effects found in the first, second and third terms of entitlement to part-time care, which can be found in table 3 of the working paper.

<sup>10</sup> Again, these figures use the average of the effects found in the first, second and third terms of entitlement to part-time and full-time care, which can be found in table 3 of the working paper. We have also multiplied the results in the paper (replicated in Table 1), which were expressed in December 2012 prices, by 1.037 (based on the change in the CPI over this period) to put them into current prices.

## 4. How do parents' working patterns change as their children become entitled to more free childcare?

Table 2 shows how mothers change their working patterns as their children become entitled to free part-time and full-time childcare. The top panel shows results for all mothers with an eligible child and the bottom panel reports the impacts for mothers whose youngest child becomes eligible.

**Table 2. Effect of a child's eligibility for free childcare on mothers' labour market outcomes**

	(1) In labour force	(2) In work	(3) Weekly hours	(4) >0 & <16 hours	(5) ≥16 & <30 hours	(6) 30+ hours	(7) Looking for work
	<b>All mothers with an eligible child</b>						
Impact of 3 <sup>rd</sup> term of free part-time care relative to no free care	-0.4ppts	-0.2ppts	+0.0hrs	+0.0ppts	<b>-0.8ppts</b>	+0.6ppts	-0.3ppts
Impact of 3 <sup>rd</sup> term of free full-time care relative to 3 <sup>rd</sup> term of free part-time care	+0.3ppts	+0.5ppts	-0.0hrs	+0.6ppts	+0.5ppts	-0.6ppts	-0.4ppts
	<b>Mothers whose youngest child is eligible</b>						
Impact of 3 <sup>rd</sup> term of free part-time care relative to no free care	<b>+2.1ppts</b>	+0.7ppts	+0.0hrs	+1.0ppts	-1.0ppts	+0.8ppts	+1.0ppts
Impact of 3 <sup>rd</sup> term of free full-time care relative to 3 <sup>rd</sup> term of free part-time care	<b>+5.7ppts</b>	<b>+3.5ppts</b>	<b>+0.8hrs</b>	+1.3ppts	+0.4ppts	<b>+1.8ppts</b>	+0.5ppts

Note: These results are a subset of tables 4 and 5 in the working paper. If the result is emboldened, it means that the effect is statistically significant at the 10% level, i.e. that we can be at least 90% sure that the true result is not zero.

### Impact of entitlement to free part-time childcare

The top row of each panel reports how mothers' working patterns change when their child becomes entitled to free part-time childcare. These results suggest that having a child entitled to free part-time childcare has little or no impact on mothers' labour market outcomes. The bottom panel suggests that mothers whose youngest child is eligible for free part-time childcare are slightly more likely to be working or actively looking for work (which is what we mean by 'in labour force'), but there is no statistically significant

increase in the fraction who are in work. Overall, these results suggest that providing free part-time childcare is not a strong enough incentive for many more mothers to move into the labour force or to find a job (or that it takes them longer than a year to do so, something that the research could not investigate).

As discussed in Section 2, the amount of free part-time childcare available to parents was increased from 12½ to 15 hours a week in 2010, and at the same time parents could start using these free hours more flexibly (e.g. by using 5 hours a day for 3 days a week, rather than 3 hours a day for 5 days a week). This may have made it easier for families to combine with work, and the research did find (though it is not reported here) that the impact of entitlement to free part-time childcare on the working patterns of mothers whose youngest child became eligible was greater after 2010. This suggests that providing slightly more, and slightly more flexible, hours of free childcare does help more mothers to work. But the impact is still quite modest.

### Impact of entitlement to free full-time childcare

The bottom row of each panel of Table 2 reports how mothers' working patterns change when their children become entitled to free full-time childcare of about 6½ hours a day rather than free part-time childcare. There is little evidence of any significant impacts amongst all mothers (top panel), but the bottom panel shows that the impacts on mothers who have no younger children are larger, and more likely to be statistically significant (indicated by the figure being shown in bold). In particular, when their youngest child becomes eligible for free full-time care, the fraction of mothers working or looking for work increases by 5.7 percentage points (relative to mothers whose youngest child is eligible for free part-time care). This is equivalent to around a 9% increase from a baseline of 62%.<sup>11</sup> Of those, more than half (3.5 percentage points) move into work – mostly full-time work (of 30 or more hours per week).

The fact that the response to free childcare is concentrated amongst mothers who have no younger children has been found in many other academic studies from various countries.<sup>12</sup> It should not be surprising: if a mother still has a child under 3 who requires childcare, it is not very likely that offering that child's older sibling some free childcare will make it much easier for the mother to work. The research also found that the impacts were slightly stronger for lone mothers than for mothers in couples, which might reflect the fact that lone mothers tend to face greater constraints on their ability to work, and so free childcare might be more beneficial for them. It found no impact on fathers' work patterns as a result of their children becoming eligible for part-time or full-time care.

These estimates suggest that the effect of increasing entitlement to free childcare from part-time to full-time is more effective at increasing maternal labour supply than introducing free part-time childcare is. Nonetheless, the impact of moving from part-time to full-time childcare is relatively small and confined to mothers whose youngest child is

<sup>11</sup> This is the percentage of mothers whose youngest child is aged 3 who are in the labour force (see table 2 in the working paper).

<sup>12</sup> For a recent summary, see S. Cattan, 'Can universal preschool increase the labor supply of mothers?', *IZA World of Labor*, 2016, 312, <http://wol.iza.org/articles/can-universal-preschool-increase-labor-supply-of-mothers-1.pdf>.

eligible for the additional hours of free care. Indeed, we calculate that the extension of the subsidy from 3 to 6½ hours a day induced only 12,000 more mothers to work every year.<sup>13</sup>

<sup>13</sup> This is based on an estimate produced for us by the Office for National Statistics using the 2011 Census that there were 340,829 mothers in England in April 2011 whose youngest child was born between May 2006 and April 2007, i.e. whose youngest child was aged 4. For full details, contact the authors.

## 5. Discussion and conclusion

The research summarised in this briefing note explored how parents' working patterns changed during the 2000s when their children became entitled to free part-time or full-time childcare. It found that being offered free part-time childcare did little to help more parents to work, at least during the first year of entitlement.

The effects of increasing the number of hours of free childcare available from around 15 per week to around 30–35 per week – as children moved from part-time nursery into full-time school – were larger for mothers whose youngest child was eligible, but still relatively modest: at the end of the first year of entitlement to free full-time care, mothers whose youngest child was eligible were found to be 5.7 percentage points more likely to be in the labour force and 3.5 percentage points (around 6%) more likely to be in work than mothers whose youngest child was at the end of their first year of part-time entitlement.<sup>14</sup> This was equivalent to around 12,000 more mothers in work each year. The research found no evidence that the work patterns of mothers with younger children, or those of fathers, were affected.

There are at least two reasons why these impacts are relatively small. First, the analysis suggests that offering parents free childcare had only small impacts on the amount of childcare being used by parents; instead, parents reduced the number of hours of paid-for or informal childcare that they were already using. This suggests that although some parents use the increase in the free entitlement to take up more childcare, enabling them to move into work (or increase their hours of work), many working parents are already buying more hours of childcare than the part-time entitlement provides in order to cover them while they are at work; for these parents, more free childcare means they can spend less on childcare themselves, which in principle could even cause them to work less.

Second, the offer may not have been sufficiently generous or sufficiently flexible to enable many more parents to work. In Quebec, for example, where a similar reform was introduced in the late 1990s, parents of 0- to 4-year-olds could access up to 10 hours of subsidised childcare per day, for 38 weeks a year, whereas the offer of free full-time childcare that was analysed in England is for 6–6½ hours a day that can only be taken during school hours. Larger effects on mothers' labour market outcomes were found in Quebec – despite the fact that it had a similarly well-developed childcare market and similar maternal employment rates to those found in England – suggesting that the number of hours of childcare available per day may have been an important dimension of the policy's success.<sup>15</sup> The fact that free part-time childcare had more impact on mothers' working patterns after 2010, when slightly more hours per week were offered and could be taken up more flexibly, suggests that the same may also be true in England.

Should we infer from these results that the planned increase in entitlement to free care from 15 to 30 hours per week for 3- and 4-year-olds in working families in England from September 2017 will have a similarly modest effect on parents' labour supply? Although

<sup>14</sup> The 6% change is calculated using a base of 58%, which is the percentage of mothers whose youngest child is aged 3 who are in work (see table 2 in the working paper).

<sup>15</sup> See M. Baker, J. Gruber and K. Milligan, 'Universal child care, maternal labor supply, and family well-being', *Journal of Political Economy*, 2008, 116, 709–45. The fact that the policy also covered younger children may also have been important.

these results provide a good starting point, there are some important differences between the two policies that might affect their relative success:

- The research analysed the move from part-time nursery to full-time school, with the latter providing childcare in a rigid way that may make it difficult to combine with work. Children have to be at school from, roughly, 9am to 3:30pm, while standard working hours are, typically, 9am to 5pm. This means that working parents may still have to find (and potentially pay for) other care before and after school hours, which may be difficult to coordinate. By contrast, the government has said that the forthcoming entitlement to 30 hours per week of free care can be taken more flexibly, with parents able to access up to 10 hours of care per day between 6am and 8pm.<sup>16</sup> This may make it easier to combine with work and so might mean it has more of an impact on parents' working patterns.
- Similarly, the change in entitlement examined by the researchers focused on free childcare provided only during school term time. This clearly places a significant constraint on the policy's ability to remove financial barriers to work, as parents still have to find (and potentially pay for) childcare during school holidays. Although the total number of free hours available under the new policy will be the equivalent of 30 hours per week during term time, the guidance suggests that local authorities will be expected to work with childcare providers in their area to make provision available over a *minimum* of 38 weeks a year, thus potentially allowing some parents to use fewer hours per week over a greater number of weeks than is possible when children move to school. Again, this may make it easier to combine with work and so may mean that the future extension has more of an impact on parents' working patterns.
- Finally, because the additional hours are only available to working families in which each parent earns at least £120 a week (or slightly lower if aged under 25), the policy may provide an additional incentive – over and above the potential reduction in childcare costs – to move into work (or to increase their hours of work), in order to become eligible for these additional hours of free care. This may be another reason to think that the new policy might have greater effects on parents' labour market outcomes than the existing research found.

But there are also a number of reasons why we might think the future extension will have less of an impact on parents' working patterns than the research suggested:

- The proposed extension will offer fewer hours of free care than are typically provided by full-time education (30 rather than 30–35 hours per week during term time).
- The employment rate of mothers is higher now than it was during the 2000s. This may mean that today's out-of-work mothers are, on average, slightly less able or less willing to look for paid work before their children move into school than was the case a decade ago, perhaps indicating that they may be less responsive to the financial incentive on offer.

<sup>16</sup> See Department for Education, *30 Hour Free Childcare Entitlement: Delivery Model – Government Consultation Response*, 2016, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/565668/Government\\_response\\_-\\_30\\_hours\\_delivery\\_consultation.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/565668/Government_response_-_30_hours_delivery_consultation.pdf).

Overall, it is difficult to judge what effect the proposed extension of free care from 15 to 30 hours per week for 3- and 4-year-olds in working families in England will have on parents' work patterns, but the recent research conducted in England – together with the balance of evidence from the international literature – suggests that it is only likely to increase parental employment slightly. On the basis of existing evidence, it seems unlikely that the policy will significantly affect the labour supply decisions of fathers, or those of mothers who have other, younger children (i.e. aged under 3). It is possible that the impacts might be stronger than those found in the research described in this briefing note for mothers whose youngest child is eligible for additional free care, but these are only a fraction of the parents who will be affected by the policy.

The government is currently proposing that each additional hour of care will be funded at an average rate of £4.88 per hour. It has also suggested that it believes 390,000 3- and 4-year-olds will be eligible for the additional hours.<sup>17</sup> If the families of all of these children were to take up the policy, then this suggests it will cost the government nearly £1.1 billion per year – and this is assuming no additional families become eligible because they move into work (and earn a sufficient amount).<sup>18</sup> If increasing parental employment is the main goal of the policy, then there may be more cost-effective ways to achieve this aim.

Of course, in considering the merits of extending childcare subsidies, policymakers will take into account the other impacts that such policies may have. For example, the government has previously indicated that an important aim of this policy is to make childcare more affordable for working families.<sup>19</sup> The fact that the research found parents reduced spending on childcare by around £400 per year, on average, when their child moved from part-time nursery into full-time school may therefore be regarded as a worthwhile achievement in itself (and there are good reasons to think that the forthcoming extension will save parents more than this, because it is limited to working families, who are presumably more likely to be paying for additional care than families with at least one non-working parent).

It is worth noting, however, that this reduction in average spending for parents is far lower than the amount the government will spend per child (around £2,800).<sup>20</sup> This is likely to be because many working parents use some informal care in addition to (or instead of) paying for formal childcare. Furthermore, enabling children to spend more time in formal care may have benefits in terms of child development, although some studies find that children's behavioural outcomes are negatively associated with longer childcare

<sup>17</sup> See Department for Education, *Childcare Bill: Policy Statement*, 2015, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/482517/Childcare\\_Bill\\_Policy\\_Statement\\_12.03.2015.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/482517/Childcare_Bill_Policy_Statement_12.03.2015.pdf).

<sup>18</sup> Page 6 of the *Childcare Bill: Policy Statement* suggests that the combined cost of this extension and an increase in funding per hour for the existing entitlements for 2-, 3- and 4-year-olds would be around £1 billion, of which £300 million reflects the increase in funding per hour of existing entitlements. This suggests that the government believes the extension of hours from 15 to 30 per week during term time for the children of working parents in England will cost around £700 million per year. This may be because some of the estimated 390,000 eligible children will be in school and hence would already be effectively taking up their additional entitlement. But this assumption is not clear, at least to our knowledge, on the basis of figures that have been released to date.

<sup>19</sup> For example, former Education and Childcare Minister, Sam Gyimah, said at the Family Childcare Trust conference on 4 December 2015 that 'working families struggle to find high-quality, affordable childcare. That's why we are putting parents at the heart of our childcare offer and why we pledged to increase the free entitlement for 3- and 4-year-olds from 15 hours to 30 hours for working parents' (for full transcript, see <https://www.gov.uk/government/speeches/support-for-families-is-at-the-heart-of-our-agenda>).

<sup>20</sup> Again, this assumes that the additional 15 hours of care for 4-year-olds must be paid for on top of existing commitments, which may not be the case where at least some of those children are already in school.

attendance,<sup>21</sup> so the potentially positive effects arising from higher parental labour supply must be weighed against any potentially negative effects that may result from children spending longer in formal childcare settings.

There are always trade-offs for governments when deciding how to spend their limited resources. If the main goals of the government's planned extension of the number of hours of free care for 3- and 4-year-olds are to increase parental employment and reduce childcare costs for working families, then the existing research suggests that it may achieve these aims to some extent. But to improve parents' labour market outcomes or increase their disposable income further, even amongst parents of 3- and 4-year-olds, the government might need to do more – for example, by providing similar levels of care outside term time.

If the government wanted to maximise the cost-effectiveness of this type of childcare subsidy as a way to enable more mothers to combine paid work and family life, then it should consider offering more (flexible) support in a targeted way to a smaller number of parents for whom free childcare is most likely to make the biggest difference.

<sup>21</sup> See S. Loeb, M. Bridges, D. Bassok, B. Fuller and R. W. Rumberger, 'How much is too much? The influence of preschool centers on children's social and cognitive development', *Economics of Education Review*, 2007, 26, 52–66, and K. Sylva, E. Melhuish, P. Sammons, I. Siraj-Blatchford and B. Taggart, 'The Effective Provision of Pre-School Education (EPPE) project: findings from pre-school to end of Key Stage 1', 2004, <http://dera.ioe.ac.uk/18189/2/SSU-SF-2004-01.pdf>.

## Data annex

To estimate what happens to childcare use when a child becomes entitled to a free part-time or full-time childcare place, the researchers used data from the Family Resources Survey (FRS), a yearly repeated cross-sectional household survey that collects information on the incomes and circumstances of private households in the UK. The sample included children aged 2–7, living in families in England who are interviewed between April 2005 and March 2013. The outcomes of interest were weekly hours of use and weekly spend by parents (both including zeros) for any type of childcare and for three specific types of childcare: subsidisable care (i.e. care provided by the sorts of establishments where parents can take up their entitlement to free part-time childcare, which will typically be day nurseries and also state-run infant or primary schools), other formal but non-subsidisable care (such as care provided by childminders and by clubs that run in school holidays or before or after the school day), and informal care (time spent being cared for by family members other than the resident parents, or by friends, or by unregistered childminders or nannies).<sup>22</sup> The results reported in this note come from linear regressions that also controlled for a rich set of characteristics of the mother, father and children in the household.

To estimate what happens to parents' working patterns when their children become entitled to a free part-time or full-time childcare place, the researchers used the Labour Force Survey (LFS). The LFS is a large-scale household survey with a rotating panel structure, which means that households are interviewed up to five times (once per quarter) over a 12-month period. The sample included any mother with at least one child aged 0 to 6 at the time of the interview (up to the end of that child's second year in school), interviewed between 2000 and 2013. The analysis of fathers used the male partners of these mothers. The outcomes of interest were indicators for the mother's labour force participation, employment status, whether she engages in job search whilst unemployed or inactive, and for working 1–15 hours, 16–29 hours, and 30 or more hours per week. The outcomes relating to hours of work take the value 0 if the mother is not in work. The job search outcome takes the value 0 if the mother is in work. The results reported in this note come from linear regressions that included a mother-level fixed effect: this effectively controls for all characteristics of the mother that do not change over time. The researchers also controlled for whether the mother had a partner at the time of the interview, a full set of dummies for the age in months of the youngest child, four variables measuring the number of children in the age bands 0–2, 3–4, 5–9 and 10–15 years, and the quarter of interview.

<sup>22</sup> Note that the distinction between subsidisable and non-subsidisable care here refers specifically to settings where parents can or cannot take up their free part-time childcare place. Parents can use other types of childcare subsidies – such as employee vouchers – to help fund care at a broader range of settings.