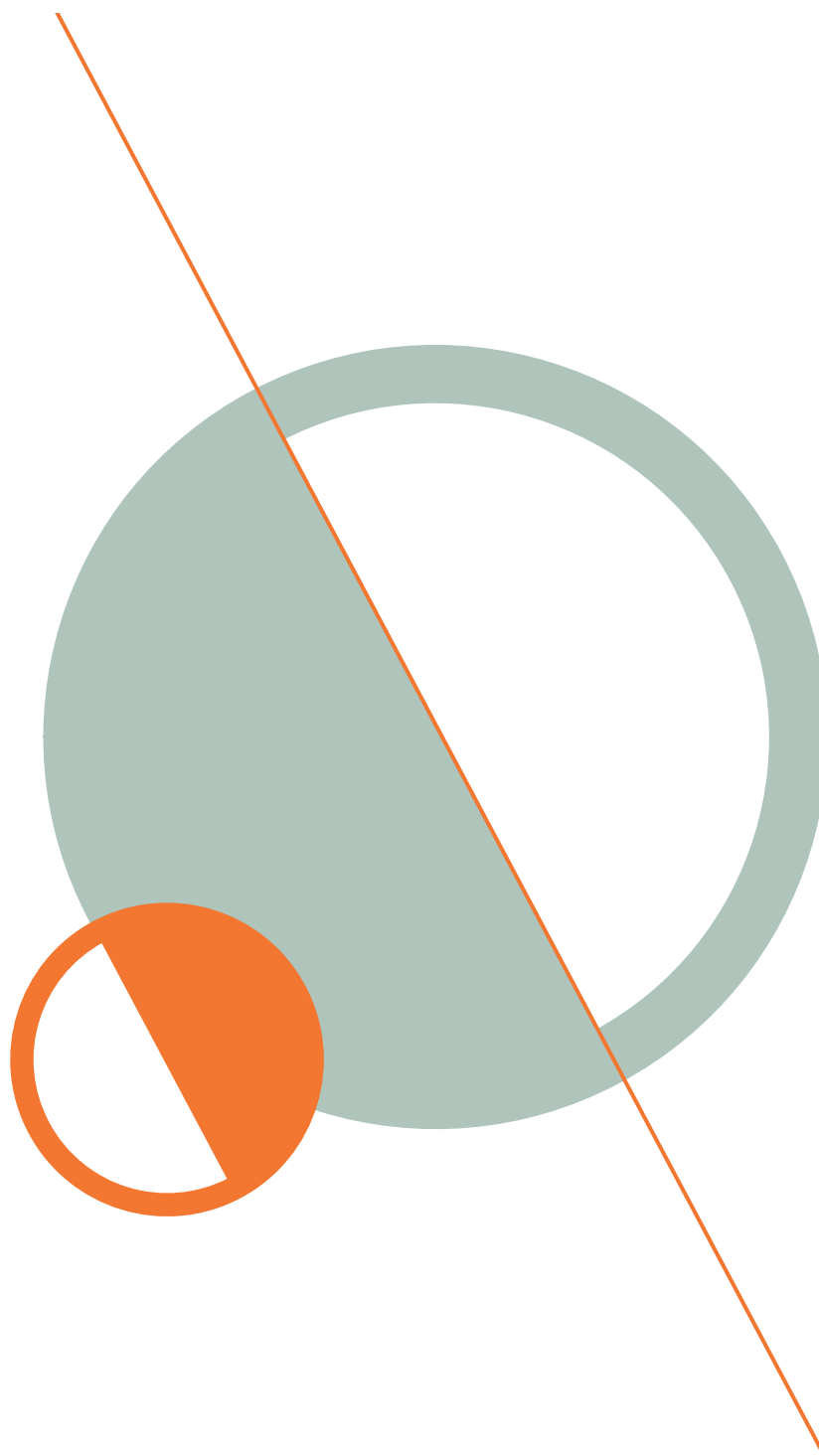


BRIEFING



MAKING THE CASE FOR UNIVERSAL CHILDCARE

Dalia Ben-Galim

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ABOUT THE AUTHOR

Dalia Ben-Galim is associate director for family, community and work at IPPR.

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ABOUT IPPR

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IPPR
4th Floor
14 Buckingham Street
London WC2N 6DF
T: +44 (0)20 7470 6100
E: info@ippr.org
www.ippr.org
Registered charity no. 800065

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BOLD IDEAS
for CHANGE

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Introduction

This paper makes the economic case for universal childcare for preschool-aged children. On the basis of new cost-benefit analysis, we show that universal childcare pays a return to the government of £20,050 (over four years) in terms of tax revenue minus the cost of childcare for every woman who returns to full-time employment after one year of maternity leave. We therefore argue that the provision of universal childcare should be a strategic priority for public service and welfare reform in the UK.

Throughout the New Labour years, significant resources were spent on early years and childcare provision, child benefits, and parental leave entitlements. These helped reduce child poverty and increase maternal employment rates, and enabled fathers to become more actively engaged in their children's lives. The Coalition government has built on this agenda in some areas – such as the introduction of 15 hours free childcare for disadvantaged two-year-olds – while cutting back in others, such as spending on the childcare element of the tax credit system. The recent autumn statement continued this approach, with free early years places for a further 130,000 young children, off-set by a reduction in tax credit spending of well over a billion a year. In this context, this paper makes the case for policymakers to prioritise universal childcare in the coming years.

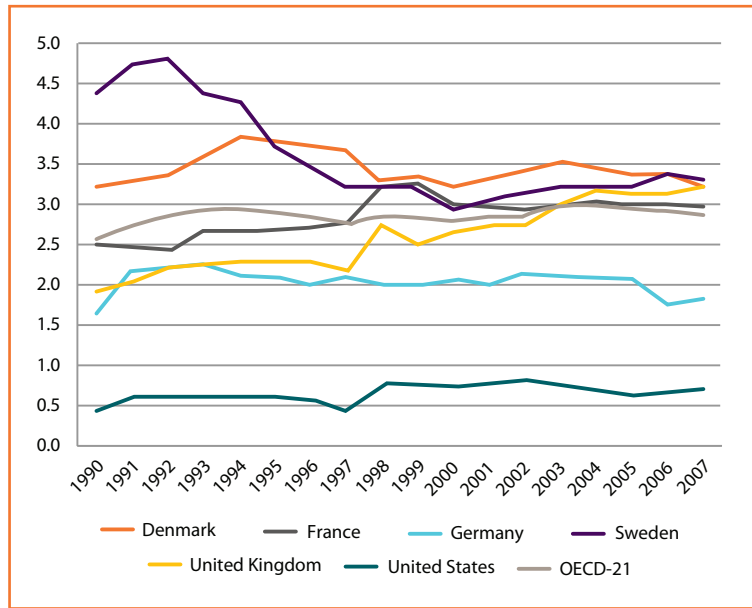
After 1997, significant investment was made in services and benefits for families with children...

In 1997, when the Labour government came to power, investment in early years services and income transfers to families with children was relatively low. Inequality had risen since the 1980s, one in four children was living in poverty and early years provision was patchy at best. Consequently, explicit policy choices were made to prioritise spending on children, through increased provision of childcare and free nursery education, the introduction of Sure Start, and tax credits for families.

Figure 1 (over) shows UK spending on family benefits in cash and services rising significantly as a percentage of GDP between 1997 and 2007. A sharp rise can be observed early in the Labour administration. It also shows that this investment shifted the UK closer towards other OECD countries, such as Sweden and Denmark, which have traditionally invested heavily in the early years and, as a result, have lower rates of child poverty and higher rates of social mobility. Compared to other OECD countries, the UK now invests considerable resources in services and benefits for children.

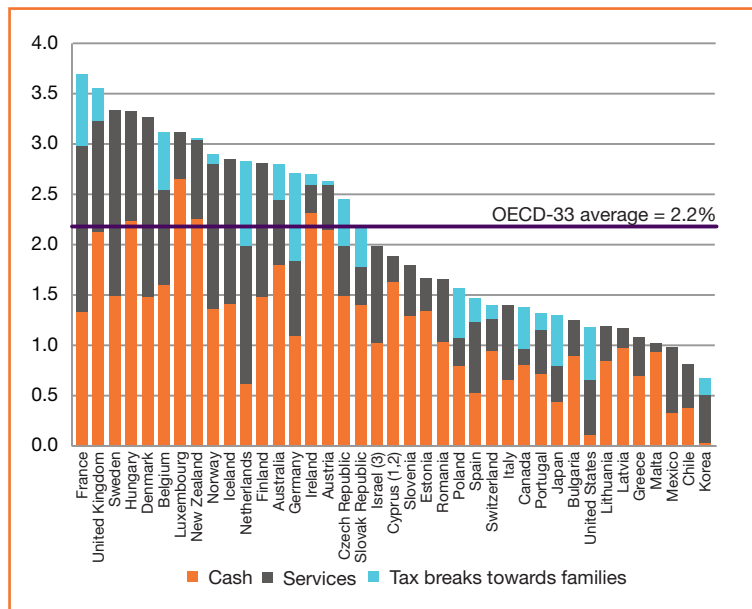
The Labour government's strategy comprised three main strands: making work pay; investing in childcare services; and changing the tax and benefit system to provide additional financial support to families with children (Waldfogel 2010). As figure 2 (over) illustrates, much of this investment was focused on income transfers (through tax credits) to address very high levels of child poverty.

Figure 1
Public spending on family benefits in cash and services, percentage of GDP, 1990–2007



Source: Carmen Heurta 2011. Data from *Doing Better for Families*, OECD, Paris.

Figure 2
Public spending on family benefits in cash, services and tax measures, percentage of GDP, 2007



Source: Data from OECD database

The evidence shows the extent to which this investment made a substantive difference to low- and middle-income households. Table 1 (over) outlines the increase in benefit receipts by household types, showing significant rises for low-income families. Reflecting a progressive universalist policy agenda, these income transfers extended up the income ladder, and supported working families, as well as those out of work.

Table 1
Average benefit receipts
by household type and
earnings (per week)

	Non-earner	Up to £150	£150 to £300	Over £300
Couple with children				
1997–99	£251	£163	£83	£35
2007–09	£274	£202	£138	£57
% change	9%	24%	66%	61%
Single with children				
1997–99	£209	£150	£97	£47
2007–09	£245	£186	£139	£69
% change	17%	24%	43%	46%

Source: Family resources survey, real benefit incomes in 2008 prices, from Dickens 2011: 10

In assessing the factors that contributed most to reducing levels of relative and absolute child poverty, government benefits account for almost 8 percentage points in reducing relative poverty and almost 12 percentage points of the reduction in absolute poverty (see table 2).

Further disaggregation shows the impact for different family types: Dickens' analysis shows that for children living in couple households, government benefits account for a 4.6 percentage point decrease in relative child poverty and 7.5 percentage points for absolute poverty. The numbers are even greater for children in single-parent households at 16.8 and 23.9 percentage points respectively (Dickens 2011).

Table 2
Factors contributing to
reducing child poverty
rates

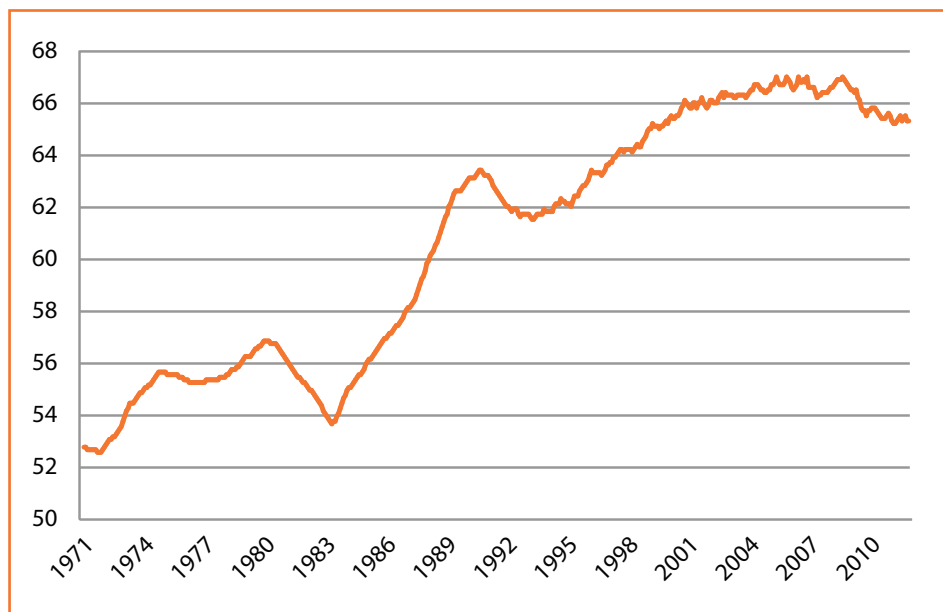
	Relative poverty (%)	Absolute poverty (%)
Poverty in 1997/98	26.2	26.2
+ demographics	+2.1	-2.9
+ aggregate wage levels	+3.7	-1.2
+ inequality of wages	-1.0	+0.3
+ work patterns	-1.9	-1.1
+ government benefits	-7.9	-11.9
+ taxes	-0.1	+1.1
= poverty in 2008/09	21.1	10.5

Source: Dickens' calculations from family resources survey, from Dickens 2011: 13

Spending on childcare provision also rose, but by a lower factor. The National Childcare Strategy (NCS) launched in 1998 emphasised the need to intervene in what had been almost exclusively a market-led service by focusing on quality, cost and availability of childcare. As envisaged in the NCS, Sure Start Local Programmes were introduced in 1999. These marked a significant shift in publicly funded (but not necessarily publicly delivered) early years provision and set the foundations for the development of children's centres throughout the country. By the mid-2000s, children aged 3 and 4 were guaranteed 12.5 hours of free early years provision, rising to 15 hours in 2010.

The employment rate for women continued to rise during this period (figure 3), only starting to decline as the recession hit the country.

Figure 3
Female employment rate,
16–64 years, 1971–2011



Source: Data from ONS

But there are still gaps in provision for families and children...

Despite this increased investment and reform over the Labour government's years in power, challenges remain in services for children. Childcare costs are high, provision is not universally available and the quality of childcare places is too variable.¹ Additionally, female unemployment is increasing, the pay penalty for motherhood is still large, and parental leave entitlements are skewed towards mothers staying at home. Reform in these areas is vital if the UK is genuinely going to advance towards a more socially just society.

Universal childcare should be at the heart of our ambitions for the welfare state and public services in the 21st century – meeting the real needs of families and helping to protect them against the most significant risks they face.

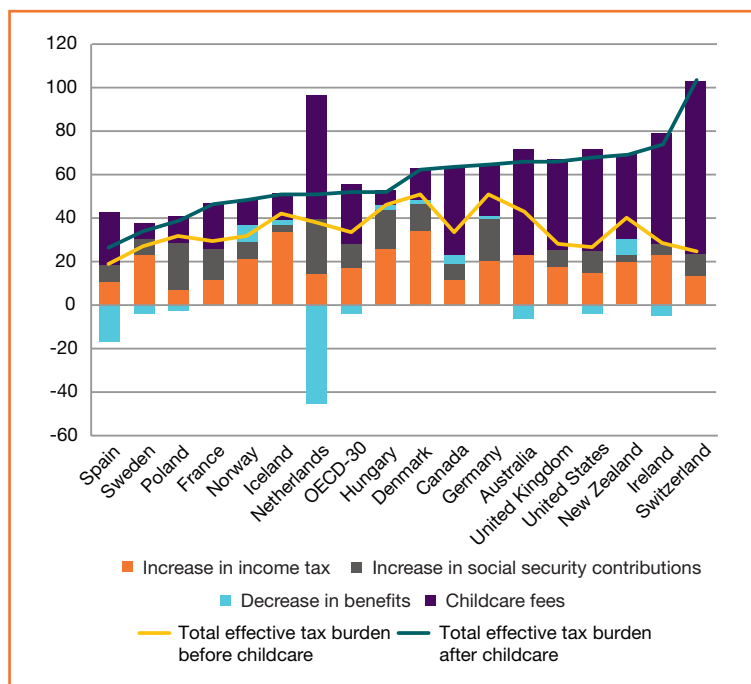
The high cost of childcare in the UK constrains choices for many parents – particularly mothers. Across the OECD, a dual-earner family (where the man and woman earn average wages) will spend 12 per cent of their family income on childcare. In the UK, this dual-earner family will spend 27 per cent of their family income on childcare, the second highest rate in the OECD (2011).²

Parental decisions on whether work pays are heavily influenced by childcare costs – particularly for low-income families. Across the OECD, parents pay an effective tax rate before childcare costs of 34 per cent and after childcare costs of 52 per cent. In the UK, while the effective tax rate before childcare costs is lower than the OECD average at 27 per cent, it is significantly higher after childcare costs at 68 per cent (figure 4 over).

1 See Ben-Galim 2011b for discussion of these challenges.

2 In Switzerland, this is higher at 51 per cent.

Figure 4
Tax burden before and after childcare costs



Note: Both parents earn 100% of average earnings, for families with two children aged 2 and 3. Source: Carmen Huerta 2011, data from OECD 2011.

And cuts to childcare tax credits will put more pressure on family budgets...

The current economic crisis is placing even more pressure on families as childcare costs rise alongside other living costs. The cost of childcare for a child aged 2 years and over has increased by 4.8 per cent since last year (Daycare Trust 2011). With annual price increases outstripping wages, this is making childcare unaffordable for many families. For many, wages remain frozen and, for some, hours have been cut back. In addition, the amount of support that low-income working families can claim from the tax credit system was cut from 80 per cent to 70 per cent of childcare costs in April 2011. The Resolution Foundation (2010) has estimated that working families will, on average, lose £436 a year in support as a result of this single change. The squeeze on many family incomes means that it may be more economical for parents – and in particular mothers who are often paid less – to leave the labour market. This not only has an impact on women’s long-term career prospects, but can also have an impact on children.

The government has committed an extra £300 million to supporting childcare costs through the universal credit (DWP 2011). This will support second earners who work less than 16 hours a week, which gives important encouragement to dual-earner families. But this increased support will not compensate for cuts to the levels of tax credit entitlements, especially given the decision by the chancellor announced in the autumn statement to cut expenditure on tax credits by a further £1.3 billion a year.

There are also hints that the government is considering making childcare fully tax-deductible (Forsyth 2011). Although details are yet to emerge of how this might work, a policy of this design is likely to be expensive to administer and subject to potential fraud.

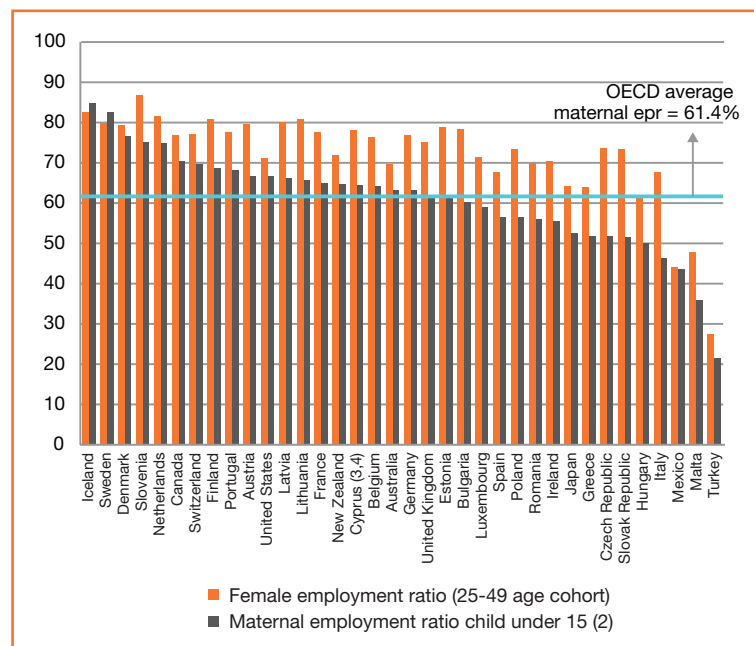
More importantly, it would be regressive, as tax reliefs give greater benefits to those who pay more tax (Pearce 2011).

The case for universal childcare...

Affordable, universal childcare is associated with higher female employment rates, particularly for mothers. Boosting maternal employment rates not only increases family income, and maintains a woman's connection to the labour market, but also increases the tax base, generating a positive cost-benefit return to the exchequer.

Compared to other OECD countries, the UK has relatively high female employment rates. But the gap between the rates of female employment (25 to 49 age cohort) and maternal employment (women with children under the age of 15) is higher than in other OECD countries. Countries that have higher maternal employment rates, such as the Scandinavian countries, tend to have affordable and high-quality childcare provision alongside comprehensive parental leave policies (Moss 2011). In Iceland and Sweden, the maternal employment rate is actually higher than the female employment rate (see figure 5).³

Figure 5
Maternal employment rates compared to female employment rates, 2008

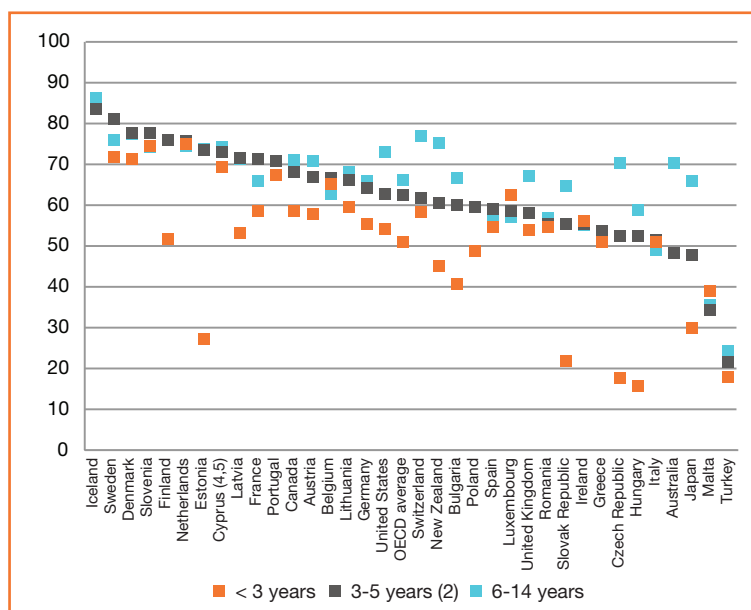


There is consistent evidence of a 'motherhood penalty' in the UK. Becoming a mother is the most important factor in explaining gender inequalities in the labour market, with short- and long-term career penalties in earnings for women who have children (Equalities Review 2007, Rake 2000, Manning and Petrongolo 2008). For workers under the age of 30 there is almost no difference in hourly earnings for men and women, whether they work full-time or part-time. However, there is a significant gap for 30- to 39-year-olds and even larger gaps for 40- to 49-year-olds and 50- to 59-year-olds – and these gaps are wider still for those working part-time. This is consistent with the claim that there is a pay penalty for becoming a mother.

³ Figure 5 shows data for mothers in employment as a percentage of the population of mothers with at least one child aged under 15 living at home. These employment/population ratios are compared with the employment/population ratio for women aged between 25 and 49, the age cohort typically associated with rearing young children.

Figure 6 illustrates maternal employment rates by age of a woman's youngest child. The general pattern highlighted is that, in countries where there is a comprehensive parental leave scheme and universal and affordable childcare, maternal employment rates are higher. In the UK, women's employment rates return to pre-birth rates once their youngest dependent child is of school age. This poses questions about employment choices and preferences, availability of childcare, and the structure and quality of work.

Figure 6
Maternal employment rate by age of youngest child, OECD countries



Sharing parental leave between men and women is also critical ...

Work-life balance policies also have a significant impact on the employment and care choices for parents. Until 2011, women were entitled to 12 months' maternity leave – with nine months paid⁴ and three months unpaid, and men were entitled to two weeks' paid⁵ paternity leave. Since April 2011, fathers have been entitled to additional paternity leave (APL) for up to 26 weeks if the mother has returned to work – that is, the mother can transfer her remaining leave to the father. It is too early to know take-up rates of this APL. But the fact that women earn less than men, and the fact that the mother has to transfer it to the father (rather than it being a separate entitlement for the father) means that mothers are more likely to take up leave than fathers.⁶

The introduction of paid paternity leave in 2003 has meant that fathers are taking more time off around the birth of their children than in previous decades. The latest data show that 91 per cent of fathers took some time off after the birth of their children.

4 For the first six weeks, statutory maternity pay is equal to 90 per cent of average gross weekly earnings with no upper limit. For the remaining 33 weeks, it is paid at the lower rate of 90 per cent of average gross weekly earnings and the standard rate of £124.88. http://www.direct.gov.uk/en/MoneyTaxAndBenefits/BenefitsTaxCreditsAndOtherSupport/Expectingorbringingupchildren/DG_10018741.

5 If average gross weekly earnings are £97 or more, ordinary statutory paternity pay is paid for one or two consecutive weeks at the lower rate of 90 per cent of average gross weekly earnings or £124.88. http://www.direct.gov.uk/en/MoneyTaxAndBenefits/BenefitsTaxCreditsAndOtherSupport/Expectingorbringingupchildren/DG_10018750.

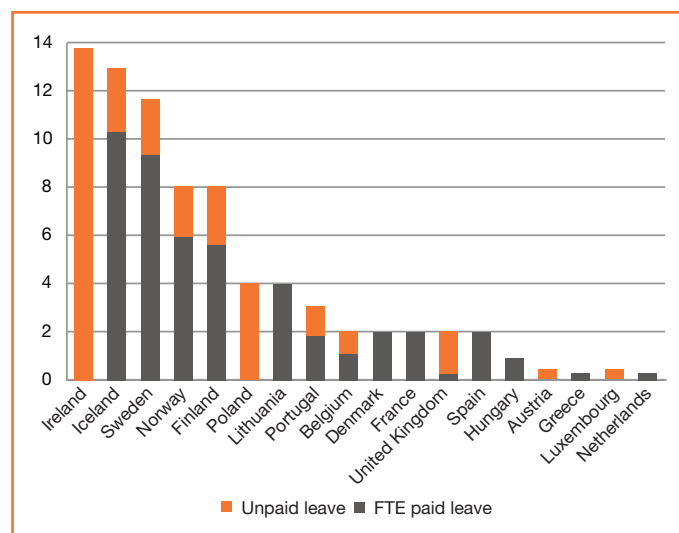
6 Same-sex couples are entitled to the same leave, with one parent able to take 'maternity leave' and the other parent 'paternity leave'. The same provision is also available for parents who are adopting.

Even though more are taking paternity leave (73 per cent used some paternity leave), many are still relying on annual leave or occupational terms and conditions rather than statutory paternity pay because of the low wage replacement level (Chanfreau et al 2011). There is evidence to show that time spent by fathers with their newborn children can be instrumental in securing lasting bonds, and that this can help fathers to stay in contact with their children, even if they separate from the children's mother (Stanley 2005).

In contrast, unpaid parental leave has relatively low take-up, with only 1 per cent of all employees, or 6 per cent of all parents using it (Hooker et al 2007). As pay is a primary factor in decision-making, it is the lack of earnings replacement that reduces the take-up of parental leave, particularly for fathers.

To enable more genuine choices for men and women to work and care, IPPR has long argued that flexible work needs to be extended to everyone, that paid parental leave needs to follow a shorter maternity leave entitlement and that fathers need a separate entitlement to a 'daddy leave' (Ben-Galim 2011a). Figure 7 shows the difference in paid paternity leave across some OECD countries. Although the UK offers two weeks' paid paternity leave, the wage replacement rate is low compared to other countries and this makes a difference to both women's labour market participation rates and fathers' time with their children.

Figure 7
Paternity leave in comparative perspective



There is a very strong economic case for universal childcare...

IPPR's analysis shows that there is a net return to the government of £20,050 (over four years) in terms of tax revenue minus the cost of childcare for every woman who returns to full-time employment after one year of maternity leave.⁷

The first calculation⁸ in table 3 below provides a simple model that estimates the costs and benefits of universal childcare. Our analysis assumes that a woman has a baby at age 30 and takes a year off as maternity leave (which is the current entitlement). It is then assumed that she returns to full-time employment, earning the median income, and children receive 25 hours of childcare (formal and informal).

⁷ See technical annex for fuller explanation of calculation.

⁸ We have rounded up/down costs to the nearest £10 for all calculations.

Table 3
Basic model: estimated costs and benefits of universal childcare

Costs	
(a) Costs of childcare (25 hours per week for 4 years)	£14,000
Benefits	
(b) Mother's income over 4 years	£103,500
(c) Total additional tax to exchequer (national insurance and income tax)	£34,050
Net return to the exchequer (c)–(a)	£20,050

The second calculation in table 4 begins to incorporate some additional stylised assumptions that relate to current maternal employment rates as well as hourly earnings, recognising that not all mothers who return to work after maternity leave go back full-time.

We estimated the average extra tax revenue that will accrue from a mother returning to work based on the full distribution of income and hours worked, including those who will not pay any tax (see Chanfreau et al 2011).⁹ Data from the latest study on maternity leave estimates that 77 per cent of women who were in work before the birth of their child returned within 12 to 18 months (ibid). Based on the distribution of their working hours and hourly pay, we have calculated that one in five working mothers will not earn enough to pay tax or national insurance contributions (see technical annex).

Table 4
Expanded model: estimated costs and benefits of universal childcare

Costs	
(a) Costs of childcare (25 hours per week for 4 years) ¹⁰	£14,000
Benefits	
(b) Mother's income over 4 years	£70,340
(c) Total additional tax to exchequer (national insurance and income tax)	£18,860
Net return to the exchequer (c)–(a)	£4,860

Even after accounting for different work patterns, as well as hourly income rates, the net benefit to the exchequer is still £4,860 per mother who is in paid employment. This does not include extra VAT that the mother might also pay using her increased earning power.

While this estimate is certainly new in the UK, it is useful to look at international comparisons. Gosta Esping-Andersen (2009) presents a return of €37,000 to the Danish exchequer over the course of a woman's lifetime through highly subsidised, universal childcare and comprehensive parental leave policies. His assumptions include that the woman has two children, is in continuous employment (except for maternity leave periods), that her wage is 67 per cent of average wages and she continues working until she is 60. This, he argues mitigates the 'motherhood penalty', and creates better labour market attachment for women. He further cites the benefits of good quality universal childcare in preparing children for school.

⁹ See technical annex for fuller explanation of calculation.

¹⁰ We have accounted for 25 hours of childcare costs which perhaps over-estimates the actual cost for some mothers who work less than full-time.

The provincial government of Quebec also provides universal early years education which has boosted maternal employment rates and is changing the way that early years services are being designed and utilised (see boxed text).

A case study of Quebec – universal early years

In 1997 the province of Quebec introduced a universal early childhood education and care policy. Since 2000, heavily subsidised childcare for all children aged between 0 and 4 has been available, initially costing parents \$5 a day and increasing to \$7 in 2004.¹¹ This policy was designed side by side with enhanced parental leave provision. The aims of this policy include boosting mothers' labour market participation rates as well as enhancing personal development and educational outcomes for children. A decade on, a number of evaluations have been published which are showing gains against these objectives, while also highlighting areas for improvement (Fairholm 2011, Fortin et al 2011, Lefebvre et al 2011).

In 2010/11, the cost to the Quebec government of providing this universal offer was \$2.1 billion or \$10,000 (£6,180) per subsidised place (Fortin et al 2011). Between 1996 and 2008 the maternal employment rate for women with children under 6 in Quebec increased by 11 percentage points to 74 per cent,¹² with a significant proportion of the increase from women with lower-level qualifications. With stronger attachment to the labour market, these women are likely to remain in work for longer, generating longer-term gains.

Canadian analysts suggest that this increase adds 3.8 per cent to women's employment rates in Quebec and 1.7 per cent to Quebec's GDP (ibid). Multiplier effects, such as those from increased labour market participation and increased household spending, are also shown as beneficial and contributing to these wider economic gains (Fairholm 2011). In fact, childcare provision is the highest ranking employment multiplier.

In addition to increasing women's employment and GDP, Fortin et al (2011) suggest that, for every dollar spent, the Quebec government gets \$1.05. The federal government accrues 0.44 for every dollar the Quebec government spends.¹³ For the Quebec government, this universal offer is self-financing. But it also creates a larger tax base (particularly for the federal government), reducing government support required in benefits (Lefebvre et al 2011).

The universal nature of provision is showing mixed outcomes for children in terms of preparedness for school and cognitive development (Fairholm 2011, Lefebvre et al 2011). While there are many positive effects, some of the more negative outcomes are likely to be explained by the incentive of low-cost, all-day care for children of all ages. More research is being undertaken to better understand how provision can be modified to ensure that better outcomes are more consistent across a broader range of indicators.

11 Approximately £3–4 a day.

12 For women with school-age children, the maternal employment rate has increased by 14 percentage points.

13 Note that this is a provincial initiative, so the federal government does not provide investment.

And it's not only an economic return...

While this paper is primarily focused on making the economic case for universal childcare, it is also important to recognise the impact that good-quality early learning can have on wider outcomes for children. Academic evidence illustrates the importance of early years policy in improving a range of childhood and adult outcomes, particularly for poorer children.

The large-scale Effective Provision of Pre-School Education study (EPPE, 1997–2004) found that children who attended high-quality early years provision achieve higher results in language, reading and numeracy, even once family background had been accounted for (Sylva et al 2004). Furthermore, it found that children from deprived backgrounds benefited most from this type of provision.

In addition, analysis undertaken for the Joseph Rowntree Foundation has estimated that getting early years provision right – in terms of providing access to affordable, high-quality early years education and childcare – could move between one-sixth and half of children out of poverty (Waldfogel and Garnham 2008). Like any policy, it is important to recognise that early years policies by themselves will not eradicate child poverty – nevertheless, they have a critical role in achieving that goal.

Current levels of funding and provision suggest that radical change is required if the UK is genuinely to transform its early years sector. This calls for a shift in how the early years sector is valued, rethinking the current market model and prioritising the sector over the long term. There are compelling reasons for doing this: as this research and wider academic evidence shows, there are significant short- and long-term returns from investment in the early years, and a clear link between outcomes for children and the quality of the workforce.

The current fiscal climate provides an opportunity to think more innovatively about recruitment into the early years workforce (Ben-Galim 2011b). There are thousands of skilled graduates seeking work who might consider the opportunity to train as early years professionals or to gain experience in the sector while preparing for future career choices. We recommend that the government reinstate the long-term commitment to having an early years professional in every children's centre. In the short term, the priority should be to ensure that every setting offering places to disadvantaged two-year-olds is led by graduate-level staff. Without this guarantee of quality, resources spent on expanding free nursery places will largely be wasted. In addition, building on the runaway success of the existing Teach First graduate recruitment scheme in schools (Muijs et al 2010), the government should pilot a new 'Teach Early Years First' programme. This should include a high level of competition for entry and a rigorous selection process, to increase the status of the profession, and work in partnership with local authorities and children's centres in particular. This would also offer opportunities to graduates struggling to enter the labour market.

How can we pay for universal childcare?

Our analysis shows that improved childcare pays a significant return to the government in higher tax revenue. But resources still need to be found upfront to invest in expanding childcare provision. And given the UK's current fiscal position, it would be remiss not to recognise the cost implications of this proposal.

The government already funds 15 hours of free childcare for three- and four-year-olds, at a cost in 2010/11 of £1.9 billion. Prior to the autumn statement, £380 million had been allocated to extend this entitlement to the 20 per cent most disadvantaged two-year-olds, and in that statement the chancellor committed a further £455 million to expand the offer.

As a first step towards universal provision, an additional £3 billion on top of the £2.735 billion in already-allocated funding would make it possible to offer 15 hours of free childcare to all one- and two-year-olds. This is based on an estimated cost of extending coverage to 100 per cent of two-year-olds of £1.9 billion (the government's initial £380 million for 20 per cent multiplied by five), and also assumes the same total cost to extend coverage to all one-year-olds (for whom there is currently no existing provision or funding).¹⁴

Beyond this, we estimate the additional cost to increase the number of hours of childcare provided from 15 to 25 a week for all children aged between one and four at £3.735 billion. This proportionately uprated cost is highly likely to be an overestimate, as there will be economies of scale in extending the hours offered, given that premises and other overheads are already funded within the initial 15-hour offer.

In the first instance, we could make better use of existing spending on childcare and child benefits, shifting the emphasis towards services and away from cash transfers. We should also create a single, integrated funding system for childcare that merges tax credit provision and the tax relief provided for childcare vouchers, removing childcare from the universal credit. This single system could be designed to ensure support for all parents while offering the greatest amount to those on low incomes. It could function as a top-up in childcare support that is additional to any universal entitlement to free, part-time nursery places. Priority could go in the first instance to support for families with children under school age.

In other IPPR publications, we have argued that childcare should take priority over other welfare benefits, such as the winter fuel allowance or free bus passes for pensioners. We argue that the welfare state should be reformed to focus on fewer, simpler entitlements that matter most to individuals over the course of their lives, and less on small, additional benefits that mean less to people, even in tougher times (Purnell 2011a, 2011b).

Another possible realignment of current funding lies in IPPR's proposal to replace inheritance tax with a capital receipts tax (Dolphin 2010). This progressive tax could generate £1 billion more for the exchequer than the current tax does, and these proceeds could be invested in early years provision. Others are similarly working on proposals that could generate additional revenue; for example, CentreForum has recently presented an argument for restricting pension tax relief to the basic rate of 20 per cent that it estimates could generate £7 billion per annum (Newby 2011). This highlights that there are indeed choices for the government to make, even in these difficult economic times.

Conclusion

Almost every week there is a new headline about childcare and debate about how political parties can best cultivate the 'women's vote'. And while childcare is wider than simply a 'women's issue', this media coverage means that it will remain topical and political.

Childcare provision in the UK does not generate high enough social and economic returns. Our analysis shows that childcare can be affordable and a priority, even in times of stalled economic growth.

There is a strong economic and social case for universal early years provision. High-quality early years provision delivers a net financial return to the Treasury as well as delivering better outcomes for children, families and society. Universal provision can also

¹⁴ Costs will decrease as scale increases, and provision is less costly when extended through socioeconomic groups – so £1.9 billion is an upper estimate.

enable families to better balance work and caring responsibilities and, in so doing, help to promote higher employment rates and reduce gender inequalities. Universal early years provision is a key foundation of policy frameworks for achieving social justice more widely.

Technical annex

This technical annex presents background and details for tables 3 and 4. The model used estimates the returns to the exchequer, representing the costs and benefits associated with providing universal childcare.

Table TA1 (Table 3)
Basic model: estimated costs and benefits of universal childcare

Costs	
(a) Costs of childcare (25 hours per week for 4 years)	£14,000
Benefits	
(b) Mother's income over 4 years	£103,500
(c) Total additional tax to exchequer (national insurance and income tax)	£34,050
Net return to the exchequer (c)–(a)	£20,050

Note: Costs are rounded to the nearest £10.

We are calculating the net benefit /cost to the exchequer. There are additional benefits not included in the returns, such as the additional income a mother gains from four years of employment.

For the purposes of these calculations, the following stylised assumptions have been made:

- The woman represented in this model is 30 years old. This is based on data that in 2010 the (standardised) average age of mothers for all births was 29.8 years (ONS 2011).
- The woman has taken one year of maternity leave. As outlined above the maternity leave entitlement is currently one year.
- Following maternity leave, we assume that the child is provided with 25 hours per week of childcare for the subsequent four years. This is based on the literature of childcare use and costs. For example: that, on average, preschool children spend an average of 5.9 hours a day in childcare, parents in paid employment tend to use more childcare and parents tend to use a combination of formal and informal childcare provision (Smith et al 2010; Chanfreau et al 2011)
- For the purposes of illustrating the returns to the exchequer, this simple model does not account for the additional tax credits/benefits that would influence costs/benefits.

Estimated costs and benefits of universal childcare

Costs of childcare

- The model assumes that the state will cover the costs of childcare for four years (from when the child is aged 1 to 5). The first two years of childcare are assumed to be the English regional average of £5,044 per annum (Daycare Trust 2011). From age 3, the child is entitled to 15 hours of childcare provided by the state for 38 weeks. So the additional costs of providing childcare for when children are aged 3 and 4 is assumed to be 40 per cent of the costs of childcare for children aged over 2. That is, assuming parents use 25 hours of childcare, the additional cost will only need to cover an extra 10 hours (over 52 weeks). This comes to £1,960 per year for 25 hours per week, based on our calculation of the figures published by the Daycare Trust.

Benefits (mother's income and total additional tax to the exchequer)

- Benefits to the exchequer include the additional tax generated from mothers entering the workforce after maternity leave. The additional tax generated is derived from

income tax, and national insurance from both employer and employee. The median income used in this model is from the annual survey of hours and earnings for 30- to 39-year-old, full-time earning females

For table 4, we add in further estimates based on maternal employment rates and income.

Table TA2 (Table 4)
Expanded model:
estimated costs and
benefits of universal
childcare

Costs	
(a) Costs of childcare (25 hours per week for 4 years)	£14,000
Benefits	
(b) Mother's income over 4 years	£70,340
(c) Total additional tax to exchequer (national insurance and income tax)	£18,860
Net return to the exchequer (c)–(a)	£4,860

Note: Costs are rounded to the nearest £10.

The second calculation begins to incorporate some additional assumptions that relate to current maternal employment rates as well as hourly earnings. Not all women who go back to work go back full-time after maternity leave.

In table 4, we estimate the average extra tax revenues that will accrue from a mother returning to work, based on the full distribution of income and hours worked, including those who will not pay anything (Chanfreau et al 2011). Data from the latest study on maternity leave estimates that 77 per cent of women who were in work before the birth of their child returned within 12 to 18 months (ibid). Based on the distribution of their working hours and hourly pay, we have calculated that 21 per cent of mothers will not earn enough to pay tax or national insurance contributions.

Costs of childcare

- The costs are the same as for table 3 above.

Benefits

- Benefits to the exchequer include the additional tax generated from mothers entering the workforce after maternity leave. The additional tax generated is derived from income tax, and national insurance from both employer and employee. The mean income used in the model is calculated from Department for Work and Pensions (DWP) data (published in Chanfreau et al 2011). The average of those earning enough to pay tax (both part-time and full-time workers) is circa £17,500.

It is important to note that our estimates indicate that 21 per cent of women do not earn enough to pay taxes and national insurance. This is based on IPPR calculations informed by tables 5.9 and 5.10 in Natcen's most recent publication for the DWP (Chanfreau et al 2011) and on additional analysis provided by NatCen (see table TA3 below) which shows the distribution of hours and income for women returnees.

Table TA3
Mothers' weekly working hours and hourly rate (after birth) and hourly rate before birth

		Hourly gross pay before birth			Total number of women working
		Less than £7.49	£7.50–£12.99	More than £13	
Working hours and pay after birth	Working 1–29 hours, earning less than £7.49	58%	6%	2%	20%
	Working 1–29 hours, earning £7.50–£12.99	11%	45%	4%	20%
	Working 1–29 hours, earning more than £13	3%	10%	47%	21%
	Working 30 hours or more earning less than £7.49	24%	2%	0%	8%
	Working 30 hours or more, earning £7.50–£12.99	3%	34%	2%	13%
	Working 30 hours or more, earning more than £13	1%	3%	45%	17%

Base: Mothers who returned to work

Source: *Maternity and Paternity Rights and Women Returners Survey 2009/10*. Additional analysis kindly provided by Natcen.

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