TOUCH STONE EXTRA

Pay and Parenthood

An analysis of wage inequality between mums and dads

by Giselle Cory and Alfie Stirling

Contents

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Executive summary

The UK has a large gender pay gap, with women earning a fifth less than men on average, and a tenth less for those in full-time work. We analyse the association between parenthood and wages for those in full-time employment, and find that parenthood has a distinct wage 'penalty' for women, and a wage 'bonus' for men.

We find that mothers who are working full-time experience a wage 'penalty', earning 11 per cent less than women without children who are working full-time at age 42. When variations in personal characteristics – such as education, region and occupational social class – are taken into account, this penalty falls to 7 per cent.

The motherhood wage penalty is entirely associated with mothers who had their first child when they were under 33. These mothers earned 15 per cent less than similar childless women at age 42. By contrast, mothers whose first birth was at 33 or older experience a wage 'bonus' of 12 per cent compared to similar women who hadn't had children.

Conversely, fathers who work full time experience a wage 'bonus', earning 22 per cent more than similar men without children who are working full-time at age 42. When personal characteristics – such as education, region and occupational social class – are taken into account, this bonus falls slightly to 21 per cent.

Though mothers experience a large wage penalty, it is not only women with children that experience differences in pay. Overall, full-time women earn 34 per cent less than similar full-time men at age 42. This pay gap is largely associated with the impact of parenthood on earnings – women with children earning less than those without children, and men with children earning more than those without – but there is also a significant gender pay gap of 12 per cent between childless men and women at age 42.

Policy implications

Policy to reconcile work and family life has not stood still, yet it has not kept pace with the sweeping changes that have taken place in Britain over the last 40 years. Improvements in childcare support and the introduction of shared parental leave have been a welcome change but policy in both areas could be significantly improved to better help families. Childcare provision is still insufficient in most Local Authorities, while shared parental leave will have a limited impact in its current form. Other recent changes have been regressive, such as the poor work incentives faced by second earners – who are mostly female – on low wages in low-income households under Universal Credit, and the reduced access to justice for those who face discrimination or unfair treatment at work because of pregnancy, maternity/parental leave or their family responsibilities. We suggest the following package of policy interventions.

Equal parenting from day one

Mothers are still much more likely than fathers to be primary carers for dependent children, and in turn are much more likely to have periods of part-time work. The motherhood pay penalty is likely to be a result, in part, of the wage scarring associated with previous part-time work. To equalise access to, and the benefits of, paid work we need to encourage a more equal distribution of caring responsibilities. Examples from other countries of more equitable parental leave systems, with rights to better paid leave for fathers, show that they can lead to lasting changes in how children are cared for. The UK should learn lessons from the countries where fathers are taking considerably more time off work to care for young children and introduce a more equitable parental leave system, which includes a dedicated 'use it or lose it' right to well-paid parental leave for fathers.

Better childcare support

Mothers are kept out of work, or forced into part-time work, when childcare is expensive or is too inflexible to fit around working hours. The government should ensure that all parents have access to affordable, flexible and high-quality childcare, particularly for one- and two-year-olds.

Transparency and justice at work

Given the significant part of the gender pay gap that results from changes in employment and earnings patterns after parenthood, employers should be required to report information that is likely to give an insight into how well they support working parents (building on reporting under section 78 of the 2010 Equality Act). Such indicators could include the number of women returning from maternity leave; the average hourly pay of part-time work compared to full-time work and the proportion of eligible male employees taking up shared parental leave.

Where discrimination linked to pregnancy or family responsibilities persists, access to justice is paramount. Tribunal fees should be reviewed to ensure they are no longer a barrier to justice.

Equal access to the labour market

For the large majority of mothers of dependent children who are primary carers, access to jobs relies on the availability of high-quality, flexible working opportunities. Yet at present supply falls far short of demand. This leads some to make a wage-flexibility trade-off, often resulting in skill under-utilisation, poorer pay and fewer progression opportunities than were available to them before they became a parent. The UK should make efforts to increase the supply of flexible working opportunities in good quality jobs in order to meet demand, for example, by moving to a system of 'flexible by default' recruitment, whereby jobs are assumed to be available on a flexible basis unless business reasons do not allow.

Clarifying in legislation that the right to request flexible working can be used to ask for an increase in hours, thereby making the right to request a two-way street, would also help encourage greater movement from part-time to full-time roles for those who want it when caring responsibilities are not so intense.

Ensuring mothers are able to work if they want to, and are fairly paid for that work, is one of the main routes to improving living standards for families in the UK. Dual-earning (for couple households) or employment (for single parent households) is the surest route out of poverty for families, and women's income in particular has become an increasingly important component of income among low-to-middle-income households. Enabling mothers to work or to increase their hours if they want to, also has considerable benefits for the Treasury. Increasing maternal employment by only five percentage points would be worth £750m annually in increased tax revenue and reduced benefit spending.

1 Introduction

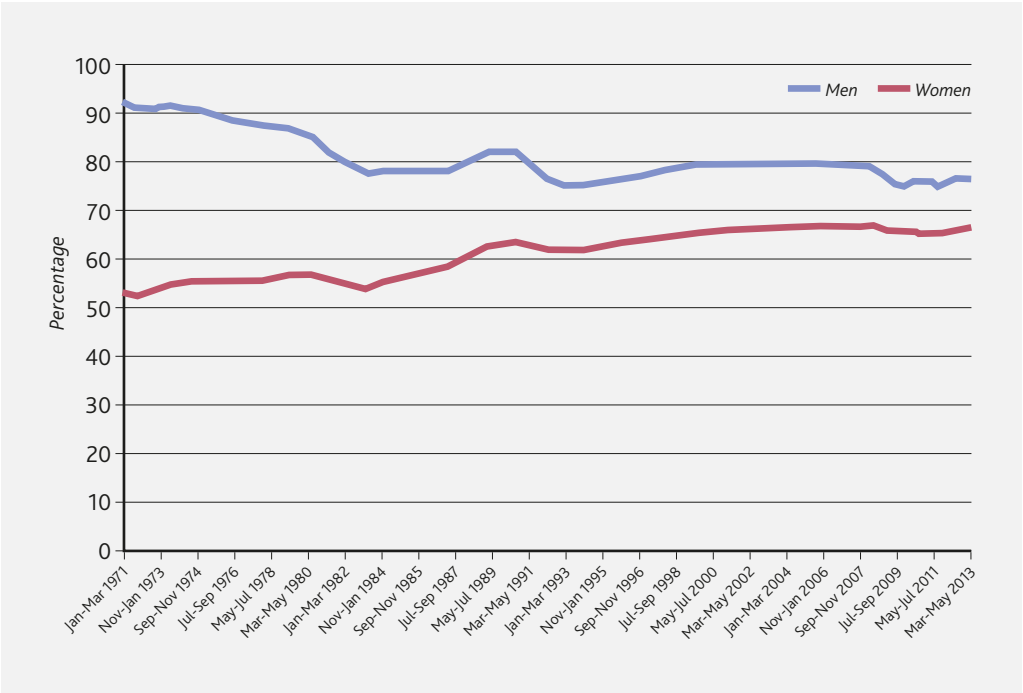
There has been great progress in gender equality over the last few decades; access to education, labour market participation and attitudes towards gender roles have all moved in a direction of greater equality. But inequalities remain, particularly gender gaps in employment and imbalances in time spent on unpaid work. Parenting remains a particular sticking point, with mothers continuing to do the bulk of unpaid work and childcare, even when paid employment is taken into account (Miranda 2011). In this chapter, we explore the changing nature of work and family life, and the interaction between the two.

The changing labour market

Male and female employment rates have converged since the 1970s. The pace of convergence was fastest in the period up to 1990, driven by both a falling male employment rate as well as increasing proportions of women in work, roughly in equal measure (ONS 2013; see Figure 1). The drivers behind increasing female labour market participation – albeit concentrated in the part-time labour market – are multiple.

Firstly, the UK has undergone significant social change. Women's roles have gone from the private to the public realm, moving out of the home into the workplace. Expectations about gender roles are shifting, as the model of a single male breadwinner and female caregiver becomes less prevalent. The British Social Attitudes survey shows that 62 per cent of respondents agree that men and women should contribute to household income, while just 13 per cent agree that a man's job is to earn money and a woman's job is to look after the home and family (Scott and Clery 2013).

Figure 1: Employment rates by gender, 1971–2013



Source: ONS 2013

Social change has run alongside trends in earnings and living costs that have made dual-earning a necessity for many (couple) households. In nearly seven in ten couple households with dependent children, both parents are in work (ONS 2014a). For those with dependent children, the dual-earner model often translates to men working full-time and women working part-time; this is by far the most common set-up in couple families of working age today (*ibid.*).

The law has also fuelled positive change. Trends in the workplace followed significant legislative intervention by government aimed at reducing gender discrimination at work, such as the Equal Pay Act (1970) to tackle discriminatory pay rates, the Sex Discrimination Act (1975) to enforce greater equality of employment opportunity, and the Employment Protection Act (1975) that made it illegal for women to lose their job due to pregnancy and introduced a right to paid maternity leave, which has been significantly improved in more recent decades.

Lastly, globalisation, and the associated rise and fall of industries in the UK, has reshaped the labour market. The decline of the manufacturing sector, which was composed of largely male dominated roles, has coincided with the rise in service sector jobs, where women make up a larger proportion of the workforce (Dolphin *et al.* 2011).

But despite this convergence of employment rates between the sexes, there remain large inequalities in labour market participation between men and women. Women are still less likely to be in paid work than men, with employment rates of 69 and 78 per cent respectively. This employment gap shows little sign of disappearing (ONS 2013). Of those in work, part-time jobs remain far more common for women than for men, with women making up three quarters of the part-time workforce (Stewart and Bivand 2016). Though some women will be well-suited to their part-time role, in general the part-time labour

market suppresses hourly earnings compared to similar full-time roles, under-utilises workers' skills (*ibid.*) and offers few progression routes into better paid, better quality roles (D'Arcy and Hurrell 2014). Partly because of this, women are underrepresented at senior ranks and in high-skill professions, despite being equally qualified as men (ONS 2013).

The changing shape of families

Changing patterns in male and female employment have run alongside evolving trends in family formation and childbearing. That women are having children later is perhaps the most noteworthy of these changes. The proportion of women having children over the age of 35 has more than doubled, from 8 per cent in 1970 to 21 per cent in 2014. Indeed, 2014 was the first year since records began (1938) that women aged 35 or older were more likely to give birth than women under the age of 25 (ONS 2015a). This trend is not homogenous across the population of the UK. During the latter half of the 1990s, the average age of new mothers whose fathers were employed in low- or un-skilled occupations appears to have been lower, and risen more slowly, than women born into other social class households (Finch 2004).

Family formation also varies between regions in the UK, with fertility rates reflecting both socio-economic patterns and ethnicity. For example, fertility rates are higher in areas where there are greater concentrations of lower social class households, and where there are larger populations of women born in India, Pakistan, Bangladesh and sub-Saharan Africa (ONS 2014b). However, clustered ethnic groups within large cities tended to have children later, and to have fewer, compared with women in rural areas (Centre for Population Change 2013).

The increased propensity to have fewer children within certain geographies, cultures and social classes may also be linked to the increasing numbers of women who are not having children altogether. It has previously been suggested that by 2018 almost a quarter (23 per cent) of women in the UK will reach the age of 45 without having a child (Finch 2004). This family type is particularly clustered among those with higher levels of education: tertiary-educated women are twice as likely to remain childless than women with low levels of education (Berrington 2015).

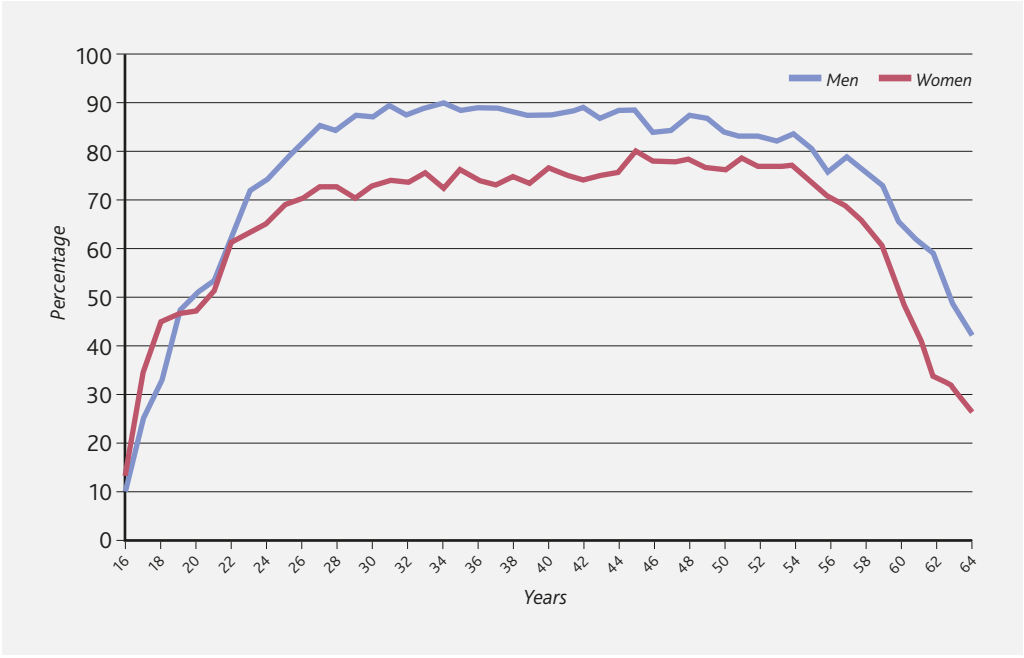
Family and work

Employment among parents of dependent children is high. In 2014, 88 per cent of working-age families had at least one parent in work, the highest proportion since records began in 1996 (ONS 2014a). Dual-earner households are now the norm among couple families, with more than two-thirds having both parents in work. But it has been single parents who have driven the rise in parental employment. Over the last two decades employment among single parents – mostly women – has risen dramatically, from 47 per cent in 1996 to 66 per cent in 2014. Despite this rapid increase, single parents are still less than half as likely as couple parents to be in work when their children are under the age of five (ONS 2014a).

Across the UK, mothers are more likely to be in work than women without children. 68.6 per cent of mothers are in work, compared to 66.0 per cent of women without dependent children. But maternal employment rates, like employment rates more generally, vary considerably across the UK. Mothers are least likely to work in London, where 60.7 per cent of mothers of dependent children are in work. However, maternal employment is highest in the surrounding regions: in the South West and South East, 73.2 and 72.4 per cent of mothers are in work respectively (ONS 2014a).

Yet for both single women and those in a couple, motherhood still has a considerable impact on work patterns. In 2013, employment rates for men and women were broadly similar up to the age of around 23 (See Figure 2). After this point, a gap emerges for women in their late twenties and early thirties, and becomes smaller but still substantial for women in their thirties and early forties.

Figure 2: Employment rates for men and women by age, 2013

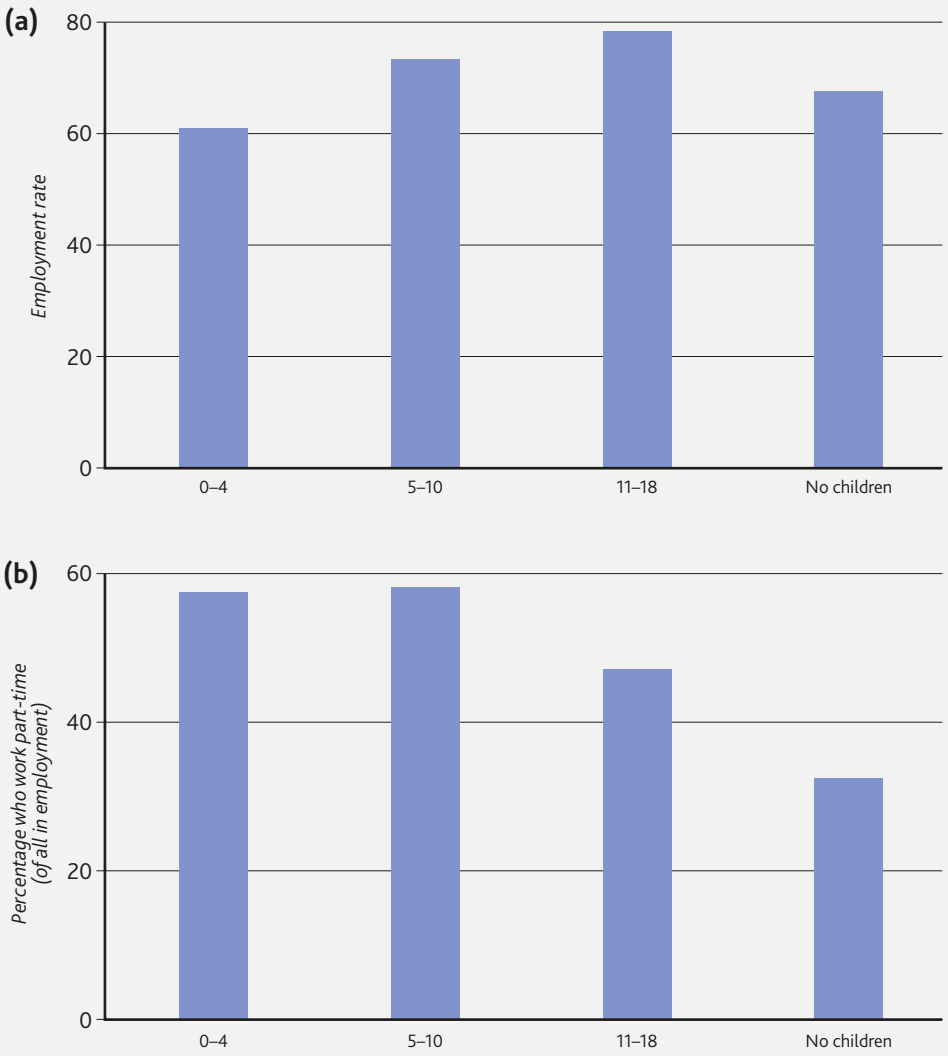


Source: ONS 2013

Maternal employment patterns are linked to the age of the mother's youngest child, with mothers of older children more likely to be in work. Employment rates of mothers rise from 61 per cent for those with a youngest child of pre-school age (under five) to 78 per cent for mothers with a youngest child of secondary school age (11–18 years old) (See Figure 3a).

Mothers are much more likely to work part-time than women without children, but the prevalence of part-time work is also related to the age of the mother's youngest child. As Figure 3b shows, 58 per cent of working mothers with a youngest child of pre-school age work part-time. For working mothers with a youngest child in secondary school, this figure drops to 47 per cent. Conversely, for fathers parenthood appears to have very little impact on the employment and propensity to work full-time (EHRC 2009).

Figure 3: (a) Employment rates and (b) proportions working part-time for women with and without dependent children, 2014



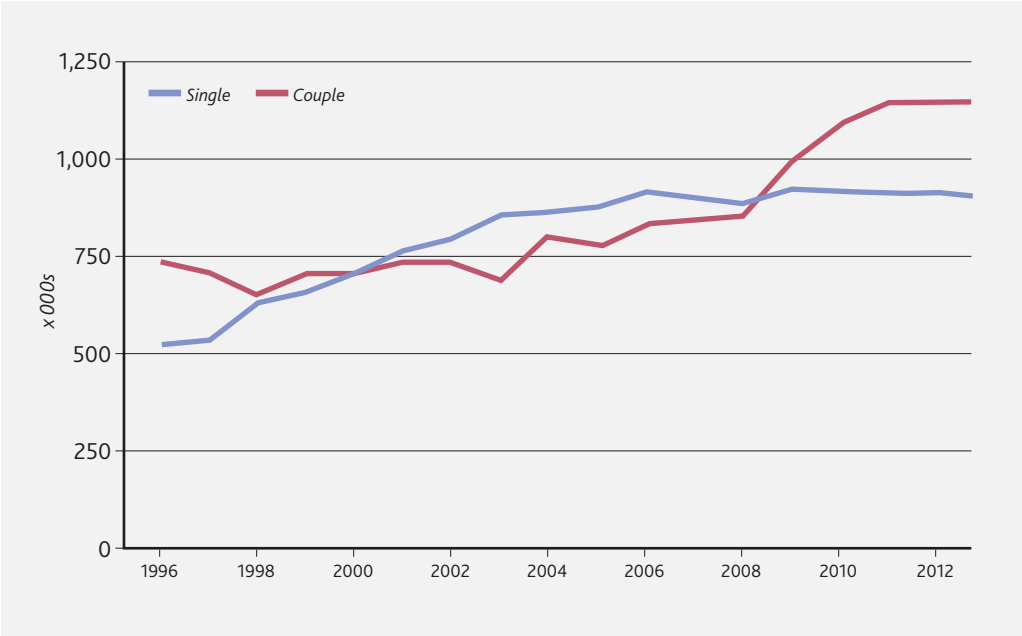
Source: ONS 2014a

Despite continuing gender gaps in employment, women's earnings have become an increasingly important component of household income, particularly for low-to-middle income households (Brewer and Wren-Lewis 2011). One in three (33 per cent) mothers in working families are now the main breadwinner,[1] compared to less than one in four (23 per cent) in 1996. These maternal breadwinners – of which there are two million in Britain – are more likely to be in low-income families, and have older children than other mothers (Cory and Stirling 2015).

1 We define maternal breadwinning as a mother who earns 50 per cent or more of their family's household salary. For a more detailed definition and discussion, see Cory and Stirling 2015

This rise in maternal breadwinning was largely due to increasing numbers of single mothers in work until the onset of the financial crisis in 2008. At this time, it was mothers in couple families who began to drive this trend (*ibid.*; see Figure 4). Though the proportion of children living in single parent families has remained broadly constant over the last decade, the proportion of working single parents rose from 57 per cent to 71 per cent. The comparable figures for couple households were 87 and 92 per cent (ONS 2014a).[2]

Figure 4: Number of maternal breadwinning households by household type, Great Britain, 1996–2013



Source: Cory Stirling 2015; analysis uses the Family Resources Survey (DWP)

There is a fragile and sometimes fraught balancing act between paid work and care. This is particularly felt by mothers, who remain the primary caregivers in the vast majority of families – despite rises in dual-earning households and maternal breadwinning. In three out of four families with dependent children, women still hold primary responsibility for childcare (Social Issues Research Centre (SIRC) 2011), and in 90 per cent of cases where relationships that have produced children breakdown, women take on the primary care duties (Smallwood and Wilson 2007). Traditional gender roles are so ingrained that women still do most of the care and domestic tasks when they are working full-time and their partner is unemployed (Miranda 2011; Tichenor 2005). Moreover, having children appears to intensify unequal distributions of domestic labour. Women in Britain experience a greater change in domestic work after birth of a child than male partners (Schober 2010; Kan 2012). These imbalances remain even when paid work is taken into account (Miranda 2011).

But there are some signs of change. Among women without children born in 1958, 22 per cent reported that their partners share domestic duties equally, while for women born in 1970 it was 30 per cent (Lanning *et al.* 2013). Within families, fathers are spending more time on childcare in particular. Between 1975 and 1997, the average time spent by fathers

2 For the most part this will have been driven by employment among parents, however this increase will also include children over the age of 16 in these families also finding work

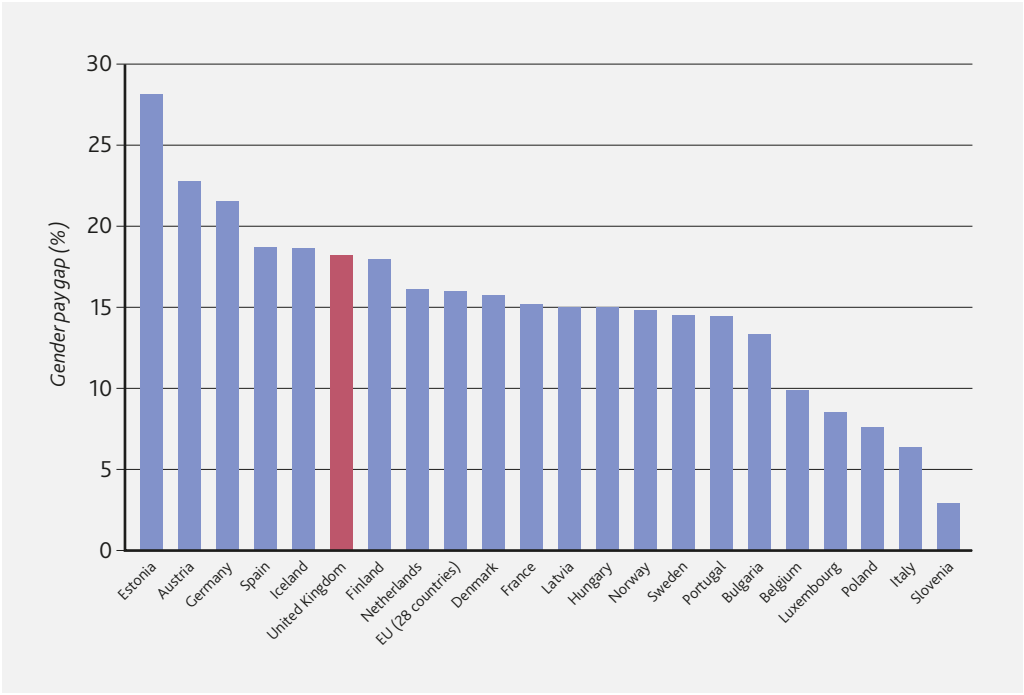
on childcare during a working day rose from 15 minutes to two hours (Burgess 2011). By the 2000s, one in four fathers were spending over 28 hours a week with their children (Smith and Williams 2007). There appears to be an appetite for further change: nearly 50 per cent of fathers say they want to spend more time with their children (Ellison ***et al.*** 2009).

The gender pay gap

In addition to a gender gap in employment, there is also a continuing gender pay gap. The disparity in pay is significant and stubborn, at 9.4 per cent for full-time employees and 19.2 per cent for all employees.[3] The pay gap is largest for older generations (ONS 2015b).

The pay gap in the UK is larger than the average across the EU (OECD 2016). Figure 5 shows the gender pay gap in selected OECD countries in 2014 (where data is available). It is important to note that though a small gender pay gap is a necessity for gender equality, it is not a sufficient pre-condition as a small gender pay gap does not necessarily equate to more equality in the labour market. For example, though the gap is relatively small in countries such as Italy and Poland, these nations have comparatively low female employment rates.

Figure 5: Gender pay gap for all employees, selected OECD countries, 2014

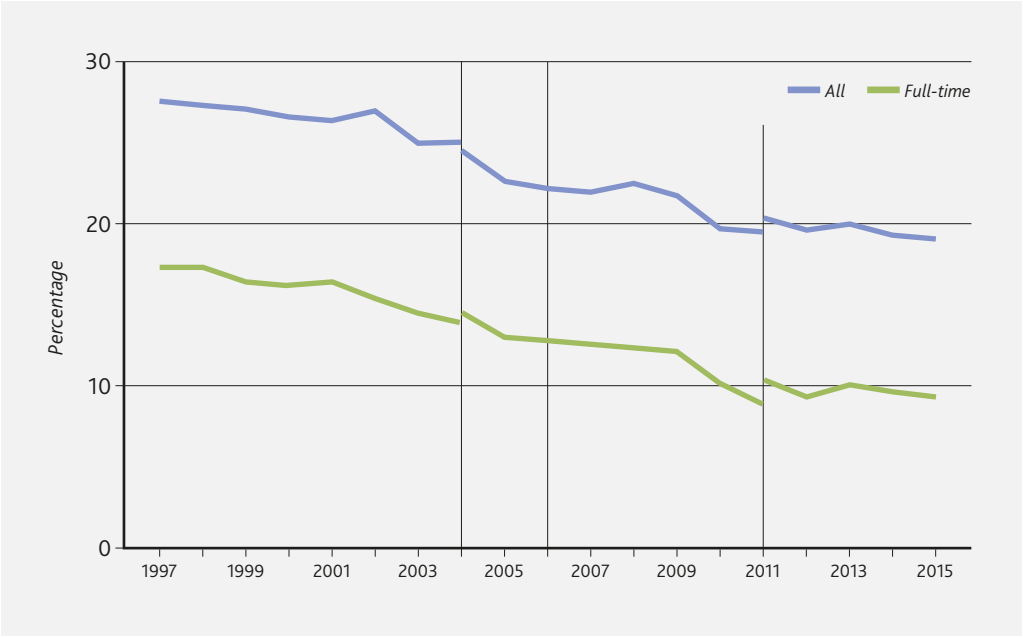


Source: OECD 2016

Like the gender gap in employment, the pay gap has closed only marginally in recent years in the UK (See Figure 6). Between 2000 and 2010, it fell faster than many other OECD countries, but progress has stalled since 2010 (OECD 2016).

3 The method used for measuring the gender pay gap by the ONS and OECD compares median earnings for men and women. This method sees the gender pay gap estimated in terms of the difference in gross hourly earnings excluding overtime for all men and women in employment and taken at their respective medians, divided by median gross hourly earnings for men.

Figure 6: The gender pay gap (median gross hourly earnings excl. overtime), UK, April 1997 to 2015



Source: ONS 2015b

The gender pay gap is smallest for those with the lowest earnings, and it is for these individuals that the gap fell fastest between 1997 and 2013. In 2013, the gender pay gap for those in the lowest earnings decile was 7 per cent, having fallen by over a half from 19 per cent in 1997. In contrast, for those in the top earnings decile, the gender pay gap fell by less than a fifth, from 27 per cent in 1997 to 23 per cent in 2013 (DCMS 2014).Though the rapid reduction in the size of the pay gap among lower earners sounds promising, it is the result of both positive and negative trends. The increasing importance of women's earnings as a share of household income, particularly among poorer households, is a result of declining male earnings as well as rising female earnings and labour market participation (Whittaker 2013).

Motherhood also brings its own distinct wage penalty, as we have found in this research. Chapter 2 presents analysis of the 1970 British cohort study showing some mothers earn less than similar women without children, while fathers earn more than similar men without children. In Chapter 3 we explore the underlying reasons for these wage differentials and draw out policy implications for the UK.

Methodology

Data sources

The analysis that follows uses cohort studies to evaluate associations between parenthood and wages further on in a mother's life. This analysis is assessing the difference in pay between mothers and childless women, and the difference in pay between fathers and childless men. This is separate from the gender pay gap, which looks at the gap ***between*** genders.

We use the 1970 British Cohort Study (BCS) to assess the long standing impact of having children on earnings for men and women at the age of 42. The BCS collects data on the lives of 17,000 people born in Great Britain in a single week in 1970. The study conducts a survey every four to five years, with the most recent set of interviews carried out in 2012.

Where possible, and in order to compare results and test for reliability, we examine data taken from individuals (also at the age of 42) in the 1958 National Child Development Study (NCDS). The NCDS is a similar study to the BCS, tracking the lives of 17,000 participants all born during a single week in 1958.

Regression modelling

We model the impact of parenthood on earnings using gross weekly earnings for those in full-time employment as our dependent variable. The BCS does not record hourly wages or details of hours worked (beyond a full-time/part-time binary[4]), so earnings from those in full-time employment provides the best proxy for remuneration in exchange for a consistent unit of time. The limitation with this approach is that it does not take into account variations in hours above the 30 hour threshold.

We remove cases where the individual is working full-time (either employed or self-employed) but earning less than the 30 hours at the national minimum wage at the 2011–12 level of £6.08. These cases are likely to be anomalous, as the respondents have reported being in full-time employment (none of these cases are in self-employment, where low earnings would be more easily explained) yet they earned less than the national minimum wage, with some earning as little as a few pounds a week. If the data is accurate, these individuals are likely to sit outside the formal labour market and therefore are not representative of wider trends in labour market participation and earnings. Though there are not many of these cases, they skew the results heavily. As they are either incorrect or not pertinent to this investigation, they have been excluded from the analysis.

For the purposes of the regression modelling, earnings[5] are also converted into its natural logarithm form. This is to eliminate any skew in the variable so it can be analysed in linear form, and to allow interpretation of the regression coefficient in percentage terms.

Using data from various sweeps we set up OLS regression models to test for correlations between key explanatory variables and weekly earnings at the age of 42, within various socio-economic and demographic sub-groups of the population. Our key independent variables of interest include:

- being a biological parent
- number of biological children
- age at the birth of first child
- relationship status at the birth of first child
- being a partner of a biological parent.

4 BCS defines full-time work as 30 or more hours per week, and part-time as less than 30 hours

5 We define weekly earnings in gross terms

We define being a parent as having a biological child. Parents of all kinds, including foster and adoptive parents, are also relevant to the questions we seek to address. However, limited sample size in the BCS and NCDS mean it is not possible to draw robust, statistical conclusions for these families at the level of detail required for this study.

Relationship at first birth is defined in terms of whether or not a parent was living with a partner or spouse in the year in which their first child was born.

To test associations between parenthood and earnings for men and women (respectively), we also examined the effect of being a parent on the earnings of their partners[6] at the age of 42. This enables us to see whether the dynamics for men and women in society as a whole are mirrored within the family unit. However, this also had important limitations, as sample size constraints meant we could not restrict our analysis to partners who had been cohabiting for the duration of parenthood. Therefore parents included in our analysis are not necessarily living with their dependent children.

We ran models for men and women separately, both for the population as a whole and for specific sub-groups. We use the following variables as control factors where appropriate:

- occupational social class and father's (of the study participant) occupational social class, aggregated to 'professional' and 'non-professional'
- qualification level, aggregated to 'degree' and 'non-degree' educated
- region of residence by government office region
- occupational sector clusters, broken down between those working in education and health roles, and those working in roles in manufacturing, construction and wholesale and retail trade
- sex
- in some models we also control for parenting characteristics such as age of first birth and number of children.

6 Partners earnings are defined in net terms, rather than gross

2 Findings

Key findings

- Mothers who are working full-time experience a wage 'penalty', earning 11 per cent less than women without children who are working full-time at age 42. When variations in personal characteristics – such as education, region and occupational social class – are taken into account, this penalty falls to 7 per cent.
- The motherhood wage penalty is entirely associated with mothers who had their first child when they were under 33. These mothers earned 15 per cent less than similar childless women at age 42. By contrast, mothers whose first birth was at 33 or older experience a wage 'bonus' of 12 per cent compared to similar women who hadn't had children.
- Fathers who work full-time experience a wage 'bonus', earning 22 per cent more than similar men without children who are working full-time at age 42. When personal characteristics – such as education, region and occupational social class – are taken into account, this bonus falls slightly to 21 per cent.
- Wage differentials by number of children do not appear to be significant for mothers. However, fathers that have two or more children earn 9 per cent more than similar fathers with just one child.
- Overall, full-time women earn 34 per cent less than similar full-time men at age 42. This penalty is largely – but not entirely – associated with the impact of parenthood on earnings (whereby women earn less and men earn more). However, there was still a significant gender pay gap of 12 per cent for childless men and women at age 42.

The motherhood penalty

Our analysis models the difference in earnings between mothers who work full-time and women without children who also work full-time.[7] We find that mothers experience a wage 'penalty', earning 11 per cent less on average than women without children.

This 'raw' earnings difference tells us the total average difference in earnings between mothers and childless women. However, we can also take into account other factors that impact on earnings, such as education, occupational social class, sector of employment and region of residence. Controlling for these factors is vital in isolating the pay penalty

7 Full-time work is defined as more than 30 hours a week. Findings refer to respondents of the 1970 British Cohort Study at age 42, unless otherwise specified

associated with motherhood, rather than the impact of, for example, qualifications on earnings (see the methodology for further details). When controlling for personal characteristics, we find that mothers experience a wage 'penalty', earning 7 per cent less than similar women without children.

The control factors that have the largest impact on the motherhood penalty are occupational social class, both of the respondent and the respondent's father, and qualification level. Though the modelling controls for a range of personal characteristics, it does not include all possible contributing factors to differences in earnings at age 42 between mothers and childless women, such as work and relationship histories. A full list of control factors used in this model is given in the methodology.

We also undertook a similar analysis using an earlier cohort, the 1958 National Child Development Study. This enables us to analyse correlations between parenthood and wages for a cohort that turned 42 in 2000, 12 years before the BCS respondents. We found a motherhood penalty of 13 per cent for this cohort, when controlling for a similar set of personal characteristics. This suggests the motherhood penalty for women at 42 years of age fell between 2000 and 2012, from 13 to 7 per cent. However, methodological differences between the NCDS and BCS make direct comparison difficult, and therefore trends should not be inferred from these two data points alone.

Though this analysis focuses on the impact of parenthood, there is a large overall gender pay gap in this cohort. Overall, full-time women earn 34 per cent less than similar full-time men at age 42. This pay gap is largely – but not entirely – associated with parenthood. Mothers who are working full time earn on average 42 per cent less than fathers who are working full time. Among non-parents, this gender pay gap falls to 12 per cent.

Part-time work

Our analysis focuses only on those individuals who were in full-time work (employed or self-employed) at age 42. Therefore the findings should be interpreted as presenting the wage effects associated with parenthood for these workers – rather than the broader labour market effects of becoming a parent for all workers. This consideration is particularly pertinent given the high instance of part-time work among mothers. More than half (54 per cent) of working mothers are part-time compared to a third (33 per cent) of working women without dependent children (ONS 2014a). These women are likely to experience a significant wage penalty associated with part-time work (Stewart and Bivand 2016). In addition, for those who later return to full-time work, their time spent in part-time employment is likely to have a long-term scarring effect on their future earnings (Olsen and Walby 2004).

Many women are forced to take a step down to find work that fits with childcare responsibilities after having children. A 2012 poll found that almost half (48 per cent) of mothers on low to middle incomes take a lower-skilled part-time job on their return to work after having children (Alakeson 2012). A survey commissioned by BIS and the EHRC found that nearly half of mothers (42 per cent) who were returning to a lower level job did not want that role (IFF 2015).

Quality part-time or flexible working options are more accessible in established roles compared to advertised jobs (Stewart ***et al.*** 2012). Only 6.2 per cent of roles with a full-time equivalent salary of over £20,000 are advertised as having reduced or flexible hours available (Timewise Foundation 2015). The part-time opportunities that are more freely available tend to be characterised by low skill, low pay roles and poor progression. It is largely due to women's higher prevalence in part-time roles that women are over-represented among the lowest paid workers in the UK (Kumar ***et al.*** 2014). Those who are both on low pay and work part-time are more likely to get stuck in low pay than those in full-time roles (D'Arcy and Hurrell 2014).

This lack of progression out of low pay is twinned with poor progression from part-time to full-time work: the UK has comparatively low rates of progression from part-time to full-time work, particularly for women (Thompson and Hatfield 2015). These earlier research findings may help explain our own finding that the motherhood pay penalty is concentrated among mothers who had children earlier in life.

Age at first birth

The motherhood pay penalty identified in our analysis is entirely associated with mothers who had their first child when they were aged under 33. Mothers whose first birth was at 32 or younger earn 15 per cent less than similar childless women at age 42. Conversely, mothers whose first birth was at 33 or older earn 12 per cent more than similar childless women. A similar pattern is present in the 1958 cohort.

Comparing wages between mothers (rather than between mothers and childless women), younger mums experience a 26 per cent pay penalty in comparison to older mothers (33 or over at first birth) with other similar characteristics.

Though the analysis does not explore causality, the difference in outcomes between younger and older mothers is likely to relate to a host of inter-related factors, including: work history; labour market attachment; and the affordability of childcare.

Work history

Amongst working mothers, full-time work at age 42 is most common among mothers who were younger when they had their first child. These work patterns are likely to relate to the child's age rather than the mother's age at first birth: maternal employment, and maternal full-time employment, increases with age of the mother's youngest child (ONS 2014a), particularly when the youngest child reaches secondary school age.

The earnings of those in this analysis who had children earlier in life and who are in full-time work at age 42, may reflect the impact of having time out of work after maternity leave or a period of part-time work when their children were young. Periods of part-time work can have a scarring effect on future earnings, even after the individual has moved into full-time work. Conversely, those who had children at 33 or older and who are working full-time at age 42 will still be caring for young children. They are therefore more likely to include women who returned to full-time work soon after maternity leave. It is possible that mothers who had their children when they were older, and who are working part-time at age 42, may experience a scarring wage effect when and if they move back into full-time work as some of the younger mothers have.

Labour market attachment

It is likely that women who have their first child at an older age will have had more time to gain experience and develop their skills in the workplace. Women who have been able to progress in their careers to a higher level of seniority will be better able to negotiate flexibility and may be perceived as more valuable by their employers, who will work harder to retain them. Research from the EHRC/BIS shows that older mothers tend to receive more benefits and are less likely to experience discrimination when pregnant and during the maternity period. Older mothers are more likely to receive occupational maternity pay from their employer, take longer maternity leave and to return to their pre-birth employer after maternity leave (Chanfreau 2011). Younger mothers are more likely to experience discrimination at work and are six times more likely to be dismissed than older mothers because of their pregnancy or maternity leave (Adams 2016).

Affordability of childcare

The affordability of childcare may also be a contributing factor. Nearly half (43 per cent) of parents of three- and four-year-olds who said they wanted to enter employment, or to work more, cited childcare affordability as a barrier to that (Borg and Stocks 2012). Older mothers are likely to be in more senior roles and to be earning more, therefore they may be better able to afford formal childcare and work longer hours when they have pre-school age children. Lower earners are more likely to cite childcare costs as a barrier to working or increasing their hours (Cory and Alakeson 2014).

The fatherhood bonus

Contrary to the situation for mothers, fathers working full-time at age 42 receive a raw wage 'bonus', earning 22 per cent more on average than non-fathers in full-time work. Controlling for personal characteristics, the bonus remains similar at 21 per cent, reflecting the overall similarity in the composition of fathers and men without children, who are working full-time.[8] Unlike for mothers, the relationship between earnings and age at birth of first child is not statistically significant for fathers.

Findings for the fatherhood bonus from the 1958 cohort (NCDS) suggest the bonus has increased over the period – from 12 per cent to 21 per cent. However, methodological differences between the NCDS and BCS make direct comparison difficult, and therefore trends should not be inferred from these two data points alone.

Assessing the motherhood penalty and fatherhood bonus by selected personal characteristics

Education

Education is a significant predictor of earnings: our analysis echoes this well-known finding. However, we find that the wage premium associated with a degree is larger for mothers than for fathers. Mothers with degrees earn 27 per cent more than mothers without this level of qualification who share otherwise similar characteristics. In comparison, fathers

8 Please see the methodology and discussion of the motherhood penalty for further details about the controls used

with degrees earn 24 per cent more than similar fathers without. Men without children and women without children have equal wage premiums for degree-level education. For those without children, men and women both see a 21 per cent wage premium associated with a degree. Therefore, a disparity in the returns to education between men and women appear to be present only for parents.

Number of children

Wage differentials by number of children do not appear to be significant for mothers. However fathers experience a bonus for having two or more children (9 per cent) above and beyond that of being a father of one child. This analysis does not look for causality; however, the available evidence on family formation suggests that causality is likely to be two-way. For example, for some families household income may be a factor in decisions about having children. The additional fatherhood bonus may reflect this, instead of or as well as a potential causal relationship that links the presence of more children in the family to greater earnings.

Relationship status

We also look at the impact of relationship status on earnings.[9] We find that mothers who were single when they had their first child earn less than similar mothers who were in a couple.[10] The wage bonus associated with being in a relationship is 12 per cent. The equivalent wage impact for fathers is not statistically significant. As the majority of lone parents who live with their dependent children are female (ONS 2014a), we would not expect this association to be significant for fathers.

Others areas of investigation

We also investigated the association between parents' wages and other factors, such as social class, household income, sector of work and region of residence. However, for each of these variables, the results were not statistically significant. For example, though it appears that professional mothers[11] experience a motherhood pay penalty while non-professional mothers do not, and for fathers, professionals experience a larger wage bonus than non-professionals, neither of these findings were statistically significant. Similarly, though it appears that mothers in higher income households face higher penalties than mothers on lower incomes, these findings are not statistically significant. Further research is needed to explore the relationship between occupational social class, income, sector, region and parental earnings effects.

9 Note that we compare different groups of mothers (or fathers), rather than comparing mothers with women without children. For example we compare mothers who were single at their first birth with mothers who were in a couple, rather than comparing mothers with women without children. Again it is important to note whom we are comparing. 19 per cent of parents who are in full-time work at age 42 were single at birth. Though single parents are generally less likely to be in work than couple parents, those who are in work are more likely to be working full-time (at age 42) than couple parents.

10 In our analysis, relationship status does not confer primary caring responsibilities. See methodology for further details.

11 Professional is defined as social classes 1 and 2. Non-professional is defined as classes 3 (i and ii),4 and 5.

3 Conclusion

This analysis has found that, for cohorts born in 1958 and 1970 and surveyed at age 42, mothers earn less than similar women without children, and fathers earn more than similar men without children. Though we do not assess causality in this research, or the degree to which wage changes are voluntary or involuntary, we can point to the wide evidence base on parents' experience of work for likely factors.

Motherhood and wages: underlying causes for lost earnings

An analysis of the available evidence on mothers' experience of the labour market points to three important factors that may cause pay penalties: lost experience and weaker labour market attachment; periods of part-time work; and workplace discrimination. We discuss these factors below and suggest future directions for policy.

In addition, there is a methodological factor at play. Though our analysis isolates those who work full-time, this definition is based on a threshold of 30 hours. Therefore, if a particular group of respondents within the full-time group work more hours than another group (e.g. fathers compared to men without children) any resultant variation in earnings will be indistinguishable from a genuine association between wages and parenthood. It is likely that a degree of the difference in earnings between parents and childless individuals will be related to differences in hours worked.

The impacts of lost experience, part-time work and weaker labour market attachment

Differences in the wages of mothers and childless women at age 42 may reflect the cost of lost experience or periods of part-time work. Women are much more likely than men to move into part-time work or stop working altogether when they have children. Of the 1970 cohort, 92 per cent of fathers are in employment at age 42 compared to 78 per cent of mothers at the same age. The vast majority of working fathers are full-time (97 per cent) compared to less than half (46 per cent) of working mothers. This gender gap in the prevalence of part-time work is considerably smaller for people without children.

It should also be noted that lost experience is most likely to be due to extended time out of the labour market when children are young, rather than due to a long maternity leave period. Older mothers, who do not experience a motherhood wage penalty, tend to take longer leave after the birth of a child than younger mothers and are more likely to return to their pre-birth employer after the leave (Chanfreau 2011; IFF 2015).

As our analysis does not control for labour market history, any differences due to lost experience would appear within the results (in comparison to qualifications, social class and region, which are controlled for within the analysis). Previous research on behalf of the Equal Opportunities Commission found that over a third of the gender pay gap

(distinct from the motherhood pay penalty) was accounted for by working patterns, including time out of the workforce (Olsen and Walby 2004). Similarly, Budig (2014) showed that, among American parents, changes in work behaviours and human capital accounted for some of the motherhood penalty, but left the majority unexplained.

As previously discussed, the differences in the motherhood penalty for older and younger first-time mothers may also be partially due to differences in the labour market attachment. Younger mothers have spent less time in the labour market, gaining skills, experience and specialist knowledge – therefore building up value to their own or other employers. Analysis of the Department of Work and Pensions (DWP) Women Returners Survey suggests that stronger labour market attachment before the birth of a child is associated with a higher rate of returning to work. It finds that older mothers are more likely to return to work following the birth of a child, as are mothers who have spent longer in their job and those with more senior roles (Chanfreau *et al.* 2011).

Discrimination in the labour market

Discrimination in the labour market during and after pregnancy also affects employment rates, pay and progression and can have a lasting impact as a woman with caring responsibilities may struggle to regain employment in the job or at the level at which she was previously employed. A study commissioned by EHRC and the Department for Business, Innovation and Skills (BIS) found that 77 per cent of pregnant women and new mothers in the UK reported having suffered some form of discrimination in the workplace and 11 per cent reported being dismissed, singled out for compulsory redundancy, or felt compelled to leave work due to poor treatment (Adams 2016). It was also found that 70 per cent of employers expected women to make it known during recruitment if they are pregnant, and 25 per cent felt it was reasonable to ask women about their plans to have children, despite it being illegal for employers to discriminate on the basis of this information when making an employment offer.

The incidence of a motherhood pay penalty among mothers who had their first child under 33, with a pay bonus for those who had their first child above this age, may be linked to the incidence of workplace discrimination. Discrimination appears to affect younger mothers more than older ones. The same EHRC/BIS survey found that a higher proportion of mothers aged under 25 than older mothers reported that they were dismissed due to pregnancy (6 per cent of younger mothers, compared to 1 per cent across all mothers) or felt under pressure to hand their notice in (15 per cent of younger mothers compared to 7 per cent on average). Younger mothers are also more likely to experience pregnancy or maternity related harassment and – relatedly – experience a negative impact on their health and stress levels, with one in four reporting this compared to one in seven for older mothers (*ibid.*).Fatherhood and wages: underlying causes for a wage premium

The reasons for the fatherhood bonus are not clear, though it is likely to relate to hours worked, increased effort and positive discrimination.

Hours worked and increased effort

The wage bonus will in part be due to increased hours worked in comparison to men without children[12], as well as remuneration for increased effort. Analysis based on American fathers found that increased work effort accounted for 16 per cent of the fatherhood bonus. However, accounting for changes in work behaviours left the remainder of the fatherhood bonus unexplained (Budig 2014). There is also likely to be a selection effect, whereby the characteristics that make it more likely for men to have children also make it more likely that they will have high earnings.

Positive discrimination

Another factor at play may be positive discrimination. There may be a cultural bias that results in a fatherhood premium in the workplace. For example, research in the US found that CVs that differed only in their mention of parenthood (through membership of a parent-teacher association) resulted in different outcomes for men and women. While CVs from fathers were more highly scored than identical ones from non-fathers, the opposite effect was observed in women's CVs. Mothers were scored less highly than identical female candidates that did not mention parenthood (Correll ***et al.*** 2007). A recent poll in the UK suggests that public opinion reflects this bias. A survey by the Fawcett Society found that three in 10 think men are more committed to their job after having a baby – and nearly half of respondents think women are less committed after having children (Olchawski 2016).

Policy implications

Policy to reconcile work and family life has not stood still – but it has also not kept pace with the sweeping changes that have taken place in Britain over the last 40 years. Improvements in childcare support and parental leave have been a welcome change but policy in both areas could be significantly improved to better help families. Childcare provision is still insufficient in most Local Authorities (Rutter 2016), while shared parental leave will fail to bring about equal parenting in its current form (Women and Equalities Committee 2016). Other changes have been regressive, such as the poor work incentives faced by second earners on low wages (mostly female) in low-income households under the nascent welfare system, Universal Credit (Cory 2013), and the reduced access to justice for those who face discrimination or unfair treatment at work because of pregnancy, maternity or parental leave or their family responsibilities.

12 Please see previous discussion of methodological considerations of hours worked.

Comparative analysis has shown that countries that have progressive work and family reconciliation policies have better labour market outcomes for women (Misra ***et al.*** 2010, Lundberg 2012). Yet the UK is still failing to support many parents to combine paid work and care. We suggest the following package of policy interventions:

- Equal parenting from day one – more equitable, flexible parental leave
- Better childcare support – access to adequately funded, flexible, affordable, high-quality childcare
- Transparency and justice at work – effective gender pay gap reporting and fairer access to tribunals
- Equal access to the labour market – more flexible jobs and a right to request a return to full-time hours.

Equal parenting from day one

Effective parental leave enables parents to care for their families without losing ground in the workplace. The recently introduced shared parental leave (SPL) scheme is a step forward – yet it leaves fathers with no independent right to parental leave or pay after the first fortnight of their child's life. Beyond that time, fathers get no access to paid leave unless the mother agrees to cut short her maternity rights. Statutory pay rates are very low, and women are more likely to benefit from occupational maternity pay from their employer while on maternity leave than fathers who take shared parental leave.

As in all households, financial considerations will be a major factor in decisions about who works and who cares. The low statutory pay available during shared parental leave will mean the highest earners – who are disproportionately male – go back to work by default, further entrenching gender gaps in employment, pay and representation, and leaving parents without the flexibility and financial support they need for a more equitable start to family life.[13]

An independent right to well-paid leave for fathers would even out these inequities over the first year of a child's life, while also helping households in the longer term. Fathers who care for their children as infants spend more time on childcare in the long run (Huerta ***et al.*** 2013). Moreover, the presence of both parents when a child is young supports positive development and better outcomes later on in life (Fatherhood Institute 2014).

Families who have children at a comparatively young age are likely to gain the most from more equitable parental leave and pay. Take-up of paternity leave is lowest for fathers under 29 compared to other age groups – and the largest barrier to take up (across fathers as a whole) is not being able to afford to take it (Chanfreau 2011). Better statutory pay for leave would enable more of these fathers to access a decent period of time off to help care for a baby or infant, and all the benefits that come with it.

13 Statutory pay is just £139.58 a week or 90 per cent of average weekly earnings, whichever is lower.

The UK should move towards a truly equitable parental leave system, including a period of well paid, dedicated 'use it or lose it' leave for fathers. The Select Committee on Women and Equalities have recommended that a dedicated father (or second parent) should get leave of three months (in addition to shared parental leave) at a sufficient replacement wage rate (90 per cent of normal earnings) (Women and Equalities Committee 2016).

Childcare support

The high cost of childcare, and the unavailability of flexible, high-quality provision, locks some parents out of the labour market, or blocks access to full-time work (Cory 2013). This barrier is particularly high for low-wage second earners, who tend to be women caring for children or elderly relatives. Younger mothers are particularly likely to find that poor childcare support is a barrier to work, and younger fathers have lower levels of access to and use of childcare support through their employer (Chanfreau 2011).

Some positive steps have been taken to provide better childcare support to working families. Under the forthcoming 'tax-free childcare' scheme, some working families will receive additional financial support to cover a proportion of their childcare costs. The government will also be increasing the free childcare available for working parents of three- and four-year-olds from 2017. But the funding available for free childcare hours does not cover the cost of nurseries to provide it, and therefore the expansion is likely to lead to poorer quality provision and an unsustainable, limited market. Childcare only works for families when it is affordable, flexible and high-quality, and located close to home or work. The government should ensure that the funding rate for the free childcare hours is adequate, and supports a high-quality, sustainable and flexible childcare market.

Childcare costs are a barrier to work for many parents. However, parents of children under the age of three are more likely than those of three- and four-year-olds to be locked out of work because of unaffordable childcare (Borg and Stocks 2013). As previous IPPR research has shown, improving childcare provision for the under-threes would help close the gender gap in both employment rates and wages (Ben-Galim and Thompson 2014). High-quality childcare and early years education also has a positive impact on child development and acts as an equaliser, narrowing the gaps in school-readiness between children living with high and low levels of disadvantage (Parker 2013).

The government should ensure parents have access to affordable, high-quality childcare particularly for one- and two-year-olds. One route to better support for parents of two-year-olds would be to expand the provision of free hours to all two-years-olds (from the 40 per cent most disadvantaged at present).

Transparency and justice at work

The recent decision by the government to require large companies to report gender pay gaps (enforcing Section 78 of the 2010 Equality Act) is a positive move to open up gender differences in the workplace to greater scrutiny. Given the significant part of the gender pay gap that results from changes in employment and earnings patterns after parenthood, employers should be required to report information that is likely to give an insight into how well they support parents. Such indicators could include the number of women returning from maternity leave; whether they are still in post a year after returning; the proportion of men and women working part time; the average hourly pay of part-time work compared to full-time work and the proportion of eligible male employees taking up shared parental leave.

Where pregnancy or maternity discrimination or similar unfair treatment linked to caring responsibilities persists, individuals should have full access to justice. The introduction in 2013 of employment tribunal fees has resulted in a signification reduction in the number of cases brought forward (Pyper and McGuinness 2015). The number of claims of pregnancy or maternity-related discrimination fell by 50 per cent after the introduction of fees (EHRC 2016). Polling by the Citizens Advice found that four out of five participants who were having problems at work felt fees were a deterrent, confirming that for many the pathway to justice is being blocked by fees. The fee regime has also failed to generate the income expected of it, largely due to the substantial fall in claims (CAB 2015). Tribunal fees need to be reviewed so that they are not a barrier to justice. The Ministry of Justice is currently carrying out an internal review and it has said it will consult on any recommendations in due course. However, the government rejected the recent EHRC recommendation (EHRC 2016) to ensure tribunal fees are not a barrier to justice (BIS 2016).Equal access to the labour market: flexible work opportunities

In order to reduce lost experience and ensure parents do not have to make wage-flexibility trade-offs, it is essential that parents are able to return to their employer after having children, and can find the right jobs to match their skills throughout the time they are caring for dependent children. This is particularly important for mothers, who tend to be the primary carers of dependent children and, as we have seen, are far more likely to move into part-time or flexible work.

High-quality, flexible work is a pre-requisite for gender equality in the labour market, as well as better skills utilisation and higher productivity in the UK. Though the UK has a relatively high female employment rate, the majority of mothers of pre-school and primary school age children work part-time (ONS 2014a), and many have little option but to take roles below their skill level (IFF 2015).

The right to request flexible working has been a boon to many, but there remains a large unmet demand for flexible work in quality jobs, particularly from parents and carers. Nearly half (47 per cent) of people, want to work flexibly, yet only 6.2 per cent of quality vacancies (those with full-time equivalent salaries of £20,000 or more) are advertised as flexible roles (Stewart and Bivand 2016). Encouraging more jobs to be advertised on a flexible or part-time basis would open up more opportunities for those who are seeking flexibility and reduce the skills under-utilisation common among part-time workers. This would also better facilitate a return to full-time work when children are older for those who want it. The UK should move to 'flexible by default' recruitment, whereby jobs are assumed to be available on a flexible basis unless business reasons do not allow.

Clarifying in legislation that the right to request can be used to ask for an increase in working hours, thereby making the right to request a two-way street, would also help encourage greater movement from part-time to full-time roles.

Ensuring mothers are able to work if they want to, and are fairly paid for that work, is one of the main routes to improving living standards for families in the UK. Dual-earning (for couple households) or employment (for single parent households) is the surest route out of poverty for families (Lawton and Thompson 2013), and women's income in particular has become an increasingly important component of income among low-to-middle-income households (Whittaker 2013). Enabling mothers to work or to increase their hours if they want to, has considerable benefits for the Treasury and the UK economy. For example, increasing maternal employment by only five percentage points would be worth £750m annually in increased tax revenue and reduced benefit spending (Ben-Galim and Thompson 2014).

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