

Britain's slow movement to a Gender Egalitarian Equilibrium: Parents and Employment in the UK 2001 – 2013ⁱ

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Abstract

This paper examines the working lives of British couple families across the first decade of the millennium using EU Labour Force Survey data (2001-2013) taking a multiple equilibria approach (Esping-Andersen and Billari, 2015). We identify a growth in dual full-time earners, increased working hours of mothers in part-time employment and a growing proportion of households with 'non-standard' working patterns, suggesting both a convergence and greater diversity in economic provisioning within parent couple households. We find that household employment patterns remain strongly associated with maternal education and family size but are becoming less sensitive to the age of youngest child. The dual full-time earner model is growing in significance for British parents of young children but a new gender egalitarian equilibrium has not yet been reached.

Keywords

Breadwinners, Dual-earners, Education, Employment, Families, Gender

Introduction

As female education and employment has grown in most affluent countries since the mid-1970s, how employed parents accommodate economic activity with the care of children has become a key challenge for citizens and policy makers alike (Sherif Trask, 2010). Traditional gender work roles and expectations have become unsettled, creating the potential for parents to combine economic independence and family care in different ways - a new “gender egalitarian equilibrium” (Esping-Andersen, 2009). Furthermore, over the last decade, a policy consensus has emerged that increased female labour force participation, a more extensive and efficient use of women’s skills, and female earnings, are central to promoting economic growth (United Nations, 2001; World Bank 2006; European Commission 2010).

This paper examines work-family household arrangements adopted by parents, between 2001-2013, in Britain, a country where the male breadwinner family, although in decline, has a strong structural and cultural legacy (Creighton, 1999; Crompton, 1999; Lewis, 2009). It focuses on couple households with dependent children and examines the relationship between parents’ education, care responsibilities (the number and age of children) and the type of work-family household arrangement. For the UK, and indeed most European countries, it is not a *gender* but a *parental* gap in employment that presents a policy challenge. Typically the association of parenthood with participation in employment is broadly similar and positive for men, but more variable and usually negative for women (OECD, 2011). In the European context, meeting the EU employment growth targets requires closing maternal employment gaps, and has led governments to introduce work-family reconciliation policies intended to support maternal (and occasionally paternal) accommodation of employment and care responsibilities (Lewis, 2012).

Conceptual framework

The family unit is undergoing a transition from a traditional unitary model based on a male dominant economic actor towards a different logic with less specialization of roles by gender (Browning *et al*, 2011). Improvements in women’s education, the changing policy landscape and shifting gender role

attitudes are key drivers. Growth in economic independence for women led to similar conclusions being drawn about the future of the family from traditional 'macro' models, the 'new household economics' (Becker 1991) and 'the second demographic transition thesis' (Lesthaeghe, 1995) – that marriage and fertility rates would decline as the returns to marriage fell and the opportunity cost of motherhood rose (Becker) or that more individualistic values would shift priorities away from family (Lesthaeghe). However, in much of Scandinavia, France, US and the UK, the evidence shows a recovery in fertility rates and growing stability in partnerships, especially amongst more highly educated women (Esping-Andersen and Billari, 2015). Awareness of complexity in gender role change has led to the development of a multiple equilibria model (ibid) where the household distribution of parental work time is an important indicator of gender dis/equilibrium: the historic stable equilibrium based on a traditional male breadwinner and female carer; an emerging gender egalitarian equilibrium with dual full-time earners; and an unstable equilibrium associated with transition between the two, where household working patterns are more heterogeneous. Esping-Andersen and Billari (2015) argue that the combined exogenous shock of birth control providing control over fertility and technological change freeing women from the demand of household labour provide the underlying impetus for the shift from the historic stable equilibrium. In this model, whilst women are drivers for change, the speed of transition will reflect how quickly the norms of gender equality are adopted and how costly the adjustment is. Although agnostic on causality, Esping-Andersen and Billari recognise the role that family policy might have in influencing gender practices through parental leave or childcare provision.

The multiple equilibria approach provides a useful framework for exploring household division of parental work over time because the model explores pathways between equilibrium and makes strong predictions about how changes in female education, gender role attitudes or the policy environment might be associated with a trajectory towards a gender egalitarian equilibrium. In the case of the UK, Esping-Andersen et al (2013) argue that the full-time breadwinner plus part-time carer model is evidence of a lagged adjustment to the gender revolution and 'unstable' equilibrium behaviour. Over the last two decades in the UK, women have continued to become better educated and more active in

the labour market, gender role attitudes became more egalitarian and ‘family-friendly’ policies have been implemented (Stewart, 2013). We consider the extent to which these changes left the 1.5 earner model untouched or have contributed to more gender equal patterns of work by testing hypotheses on parents’ work patterns based on the multiple equilibria model using evidence from the EU Labour Force Survey 2001-2013.

Work-family policy context

Since the late 1990s, political aspiration has been to take into account the economic and caring responsibilities of parents. Increases in maternity and paternity leave provision and right to request flexible working formed key elements of the family-friendly policies of the New Labour government (Stewart, 2013) and continued to be supported by subsequent governments. These policies are designed to enable employed parents to have ‘time to care’ (Lewis, 2012), both through taking maternity or paternity leave and allowing for a transition into part-time employment.

Formal childcare provision, on the other hand, is designed to provide parents with ‘time to work’ (Lewis, 2012). The National Childcare Strategy introduced in the UK in 1998 and subsequent policy initiatives (Speight et al, 2009; Stewart, 2013; Stewart and Obolenskaya, 2015), aimed to improve child outcomes through high quality early years education and maternal employment (La Valle and Smith, 2009). These policies are funded through a mix of supply-side (free childcare) and demand-side (tax credit) subsidies and delivered by a mixture of private, voluntary and public providers. As a result, public spending on family benefits in the UK is 4.3% of GDP, above the average of 2.6 % (OECD, 2011), but take-up of formal childcare provision remains strongly associated with family income (Huskinson et al., 2014), suggesting that childcare costs remain a significant barrier to accessing provision for those on lower incomes.

Trends in education, parental employment and care responsibilities

In the latter half of the 20th century, Britain experienced a steady increase in participation in employment for women but a decline for men, reaching 64% and 74% respectively by 2012 (O’Brien

et al, 2015). This pattern is linked with the expansion of higher education in the UK, which resulted in a significant increase of the working population with tertiary education (from 25% in 2000 to 40% in 2012) and an erosion of the gender education gap. Indeed, by 2012 younger British women are increasingly better educated than men (50% of women in the 25-34 age group have tertiary education compared with 46% of men, OECD, 2014). Better-educated women are generally more likely to be employed (England et al., 2012), although evidence from Austria suggests that for families with very young children and highly educated mothers, the male breadwinner model has been growing in prevalence (Berghammer, 2014).

The presence of children in the household is usually a significant factor affecting women's employment rates across most European countries. Whilst British fathers are more likely to work than men without children, the opposite is true for mothers (ONS, 2013). The employment rate of fathers is not typically sensitive to the age or number of children, but that of mothers is highly sensitive to both (65% youngest child aged 1-3, 74% 4-10, 80% 11-18, ONS, 2013; Lewis et al., 2008). When mothers, especially those with young children, work, it is usually part-time (Gregory and Connolly, 2008).

The employment situation of a partner can also affect how much mothers and fathers participate in paid work. Kanji (2013) highlights the importance of considering the family context, finding that fathers whose female partners are the main earner tend to work shorter hours than other fathers.

Changes in parental employment patterns have been accompanied by changes in fathers' contribution to unpaid work in the household, which has been rising in Europe and North America (Hook, 2006). In the UK, the trend is especially pronounced with regard to the time fathers spent on caring for children, which increased between 1975 and 2000 from an average of 3-8 to 32-36 minutes per day (Sullivan, 2010). The increase was much greater for fathers with higher educational attainment, suggesting an increasing social differentiation between fathers.

At the same time, gender-role attitudes in Britain continue to change towards greater gender-role egalitarianism, with only 13% subscribing to the view that “a man’s job is to earn money; a woman’s job is to look after the home and family” in 2012, compared with 49% in 1984 (Scott and Clery, 2013). However, when it comes to the issue of working mothers, a substantial minority (33%) believes that when there is a child under school age, the mother should stay at home (ibid). Furthermore, there is very little normative support for splitting the breadwinner and carer roles equally (with both parents working full-time or both working part-time). Instead, 38% believe that the best way for a family with a child under school age to organise family and work life is for the father to work full-time and mother to work part-time (ibid).

Our typology of household employment and hypotheses

We group household employment according to maternal and paternal employment status and the usual weekly hours worked into ten types (Table 1). Our approach is extensive - we are keen to identify different forms of dual earner and breadwinner models and to establish the extent of diversity of employment patterns within the ‘unstable’ equilibrium (Esping-Andersen and Billari, 2015).

There are four ‘standard’ typologies: dual full-time earner where both parents work full-time, the ‘standard’ 1.5 earner where the father works full-time and mother works part-time, the male sole breadwinner where the father works full-time and mother does not work and the non-earner household where neither parent is in employment. Beyond this, we identify six ‘non-standard’ typologies. These include two household working patterns where the mother works full-time: the ‘non-standard’ 1.5 earner where the mother works full-time and father works part-time and the female sole breadwinner where the mother works full-time and father does not work. The extensive use of part-time employment in the UK means that we identify three ‘non-standard’ typologies where parents are working part-time: dual part-time earner where both parents work part-time and two sole part-time earner models where either the father or the mother works part-time and the other does not

work. Finally, there is a group where working hours of at least one parent vary too much to be classified as either full- or part-time.

TABLE 1 here

Drawing on the multiple equilibria approach (Esping-Andersen and Billari, 2015), we develop and test a number of hypotheses relating to the prevalence of these typologies in the UK over 2001-2013 and to the significance of different predictors of these patterns. The typology, our dependent variable, represents household distribution of parental work time and is an important indicator of gender egalitarian dis/equilibrium. The novelty of our work lies in empirical testing of the multiple equilibria approach in the UK using recent data; examining *all* couple households with dependent children of *all* ages; including non-earner households; considering how household working patterns are influenced by the characteristics of both parents; and taking a timeframe which covers substantial changes in the work-family policies in the UK as well as the pre- and post-recession period.

We hypothesise that:

- 1) The male sole full-time earner model and the standard 1.5 earner model will both decrease in prevalence; at the same time the dual full-time earner model will become more common, in accordance with the UK moving away from the traditional towards the gender-egalitarian equilibrium;
- 2) Maternal education will retain its importance in influencing household employment patterns, with better-educated women being more likely to be in dual full-time earner households;
- 3) The significance of the age of the youngest child and the number of children in the household will become less pronounced, reflecting improvements in childcare provision and other work-family policy developments in the UK.

Methods and data

Parental and household analysis of labour force surveys remains relatively rare as the routine tendency has been to conduct *gender* analysis of employment behaviour. However, household level

analysis allows more finely tuned attention to the impact on economic activity of having a dependent child in the household and the impact of another worker on relative shares of hours of work, contribution to household tasks and risk of household poverty (Harrop and Moss, 1995; Kitterød and Lappegård, 2012; Kitterød and Rønsen, 2012; Kanji, 2013; Berghammer, 2014).

We are interested in how household employment patterns for similar types of individuals with similar family structures have changed over time, we therefore need representative cross sectional data. The data come from the EU Labour Force Survey (EU-LFS, 2001-2013), a harmonized large-scale and nationally representative household survey which allows examination of emergent trends over the periodⁱⁱ. The data is collected by national statistical agencies using standardised questions and coding, the surveys cover the entire population aged ≥ 15 and provides sample weightsⁱⁱⁱ (which are used in this analysis). The dataset provides detailed coverage of employment status, working hours and patterns for all adults within the household. The combination of household data and large sample size allows analysis of household level working patterns in some detail, even for relatively small sub-populations. Moreover, the EU-LFS has an excellent response rate for a household survey; 60.6% in 2013 for the UK (Eurostat, 2014) and data is comparable over time and across countries due to the harmonization and centralised administration by Eurostat (see Sigle-Rushton et al. 2013). Our analysis focuses on parents - adult couples aged 16-64 with co-resident dependent (biological, step or adopted) children within their household. Lone parent households are not included. In constructing the household level data, spouses and cohabiting partners were matched with the reference person^{iv}. In 2001 the UK EU-LFS sample consisted of 11,809 couple households of working age, of which 4,644 had at least one child under the age of 15 living in the household and in 2013 the sample was 11,552 couple households of which 4,900 had at least one child under the age of 15 living in the household.

We follow the OECD by measuring working time based on *total usual hours worked per week in their main job, including overtime and excluding travel time* and use the standard Eurostat and OECD definition of full- and part-time employment (full-time work is defined as 30 or more usual

weekly hours of work in the main job)^v. The decision to analyse usual rather than actual hours reflects the sensitivity of actual hours to uncommon overtime, bank holidays, holidays, parental leave or illness during in the reference week. Usual hours provides a more consistent measure and reflects the typical working pattern of the respondents over time. Reporting of hours worked, actual or usual, in micro data is subject to error or recall bias, particularly when compared with firm based administrative data, however, our analysis of broad household working patterns is less sensitive to this type of error than a detailed study of hours worked.

We use multinomial logit models to explore factors associated with households being in one of the main categories: dual full-time earner, 'standard' 1.5 earner, sole male breadwinner, no worker and a residual category which consists of all other combinations of parental employment. We present results as Average Marginal Effects (AMEs) indicating the average effect of each explanatory variable on the probability of observing each outcome. A key advantage of using estimated AMEs is that they are invariant to omitted explanatory variables, thereby making it possible to make comparisons between outcomes and models (Mood, 2010). Results presented as Odds Ratios are also available (see Technical Appendix).

Our empirical model combines individual and household level data. The dependent variable of working patterns is measured at household level (level 2) and our explanatory variables are a mixture of individual variables (level 1) – age, education, nationality – and household variables – number of children, age of youngest child and region. Households are not randomly composed and we expect higher levels of correlation amongst the individual level variables within households than across the general population, for example, the level of correlation in levels of education within households is 0.54 compared with 0.37 across the whole sample. We therefore estimate models clustered by household, and robust standard errors are calculated by taking account of the non-random clustering of individuals within households^{vi}.

Trends in work family arrangements

There are three dominant types of work arrangements within families – ‘standard’ 1.5 earner, dual full-time earner and male breadwinner – which in 2013 account for more than 4 in 5 families (Figure 1). Given the degree of economic upheaval in the intervening years, three findings are striking. Firstly, the share of ‘non-standard’ work-family arrangements increased over the decade, albeit from a low base, from 8% to 12% (Figure 2), this includes a significant growth (at 1%) in part-time employment amongst fathers (non-standard 1.5, dual PT earner and male sole PT earner) and main breadwinning amongst mothers (non-standard 1.5 and female sole FT or PT earner). Secondly, the proportion of households where neither parent works has remained stable at 6% over most of the decade, falling to just under 5% in 2013, well below the national rate of unemployment of 7.5% in 2013^{vii}. Thirdly, the proportion of male full-time sole breadwinner households has remained stable over the decade at about 22%.

FIGURES 1 and 2 here

The proportion of ‘standard’ 1.5 earner households declined significantly (at 1%) from 37% in 2001 to 31% in 2013 and now equals the proportion of dual full-time earners, which significantly increased (at 1%) from 26% in 2001 to 31% in 2013 (Figure 1). The usual weekly working hours of fathers working full-time in couple households have fallen significantly (at 1%) from 47 hours to 45 hours per week^{viii}, remained stable for mothers in full-time employment (39 hours per week) but risen significantly (at 1%) from 17.6 to 18.5 per week for mothers in part-time employment (see Technical Appendix). Within households our combined findings of a growth in dual full-time earners, increasing hours of work of women in ‘standard’ 1.5 earners and growing share of household hours of work, is suggestive of a behavioural shift towards a gender egalitarian equilibrium.

UK LFS longitudinal data allows us to trace the *same* households over five quarters. Our additional analysis suggests (see Technical Appendix) relatively high rates of stability in our four main patterns – over 75% of households remained in the same state over five quarters. However, unsurprisingly,

there was considerably less stability among families in non-standard working patterns with more frequent transitions into other working patterns.

Our findings offer mixed support for our hypothesis on working patterns; a decline in the standard 1.5 earner model and the dual full-time earner model has become more common. By 2013 there is greater diversity in terms of ‘non-standard’ employment patterns but no decline in the prevalence of the sole male breadwinner.

Who are these various household types?

We explore the characteristics associated with each household employment pattern. Parental education, family size and age of youngest child are of particular interest but our models also control for parental age, nationality^{ix} and region of residence (descriptive statistics are presented in Appendix Table 1). We observe an improvement in parental education over the decade. The change is most noticeable for mothers; in 2001 35% of mothers had low qualifications and by 2013 this has fallen to 16%, and whilst 26% of mothers in 2001 were highly qualified this had risen to 47% by 2013. These improvements are observed across household types but particularly in dual full-time earner households – 31% of fathers, 36% of mothers with high qualifications in 2001, increasing to 47% of fathers, 60% of mothers in 2013 (see Technical Appendix). We also find some changes in family composition with families having fewer children and more families with younger children.

Our first finding, that household employment patterns are strongly associated with education levels, is not surprising (Table 2). Relative to those with intermediate levels of education, we find that fathers with low levels of education are significantly more likely to be sole male breadwinners or in households where neither parent works and less likely to be in two earner households. Where fathers are highly educated, the household is more likely to be a sole male breadwinner and less likely to be a non-earner household. Like England et al (2012) and Joshi (2010), we find a strong relationship between maternal education and employment. Highly educated mothers are more likely to be in dual

full-time earner households and significantly less likely to be in a sole male breadwinner or non-earner households. In contrast, mothers with low qualifications are more likely to be in households with a sole male breadwinner or non-earner households than in a two-earner household. The results offer support for our hypothesis that maternal education has retained its influence on household employment patterns, with better-educated women being more likely to be in dual full-time earner households. Indeed, the impact of mother's education appears to be stronger in 2013 than in 2001 (based on the estimated AMEs, mother with low levels of education are much less likely to be in dual full-time earner households and more likely to be in sole male breadwinner or no earner households in 2013 than in 2001); this, combined with the growth in female education, has contributed to the rise in dual full-time earner households.

Relative to those with two children, families with one child are more likely to be dual full-time earner households than 'standard' 1.5 earner households – an effect which is marginally stronger in 2013. More generally, those families with three or more children are more likely to be in sole male breadwinner, non-working or 'non-standard' working pattern households than in two earner households. We conclude that there is limited change in the impact of family size upon household working patterns and therefore our hypothesis in this regard is not supported.

Our use of usual rather than actual hours of work means that those parents currently taking any form of leave (including parental leave) will be included in one of these classifications and we attribute the increased likelihood of parents with new-born children (aged 0-1) being in dual full-time earner households to the extension of maternity leave (this is verified when examining the descriptive data). In 2001, families with pre-primary aged children (aged 1 to 4) were significantly less likely to be in dual full-time earner than in 'standard' 1.5 earner households and more likely to be in male sole breadwinner but those with secondary school aged children were more likely to be in dual full-time earner households.

Perhaps the most striking changes between 2001 and 2013 relates to the impact of age of youngest child (aged 2 to 5) on the household employment pattern. By 2013 the probability of being in a dual full-time earner household is less sensitive to the age of youngest child, whilst parents of pre-primary school aged children remain less likely to be in dual earner households, there is no longer a significant difference in the odds ratio of a parent with a youngest child aged 2 to 4 being in a dual full-time earner relative to 'standard' 1.5 households (see Technical Appendix) and this has contributed to the growth of dual full-time earner households. That is, over the decade parents with young children, even pre-schoolers, are becoming more likely to form dual earner working arrangements, offering support for our hypothesis that the significance of the age of the youngest child will be less pronounced in 2013 than in 2001, in part, reflecting work-family policy developments in the UK.

Given the strong link between levels of maternal education and age of youngest child with household working patterns, we allow for the possibility of different outcomes for better or less educated mothers of pre-school aged children. We find that at the start of the decade highly educated mothers whose youngest child is 3 were less likely to be in dual full-time earner households but this effect was no longer significant by 2013 (Table 3). The particular sensitivity of this result to the youngest child being aged 3 and the extension of the free early years education to children aged 3 in 2004, is certainly suggestive that the main beneficiaries of the extended early years education policy (in terms of a growth in full-time employment) were better-educated families. This result also reinforces the impact of the growth in female education and the relationship with full-time employment noted above.

We find a role for age of parents; young parents (under 25) and older parents (over 45) are more likely to be non-earners or have 'non-standard' working, with father's age becoming less of a distinguishing factor for working patterns, particularly for standard 1.5 and breadwinner households. We observe some difference based on nationality; parents from outside of the EU are less likely to be

in two earner households and more likely to be in sole male breadwinner households, have non-standard working patterns or to be non-working than parents from the UK or other EU countries.

TABLES 2 and 3 here

Conclusions

Our evidence shows a growth in dual full-time earning, a decline in the prevalence of the ‘standard’ 1.5 earner household and within this working pattern, fathers’ hours of work have declined and mothers’ hours have risen. Similarly, we observe a small growth in ‘non-standard’ work-family arrangements. These findings suggest some convergence in economic provisioning between British parents, that is, movement towards a gender egalitarian equilibrium, as predicted. However, our hypothesis is only partially accepted as British families continue to rely on a male sole full-time breadwinner model – over the period this arrangement continues to account for one fifth of households– so we also find stability in this element of traditional equilibrium. Such heterogeneity is less likely in strong equilibria contexts, whether they be traditional or egalitarian, Esping-Andersen et al (2013, 11).

Our typologies of household working patterns reveal diversity which is strongly linked to parental education: a growing share of dual full-time earners where parents, especially mothers, are highly educated; but also a constant small percentage of workless households with low levels of education; and a steady share of sole male breadwinners consisting of less well-educated mothers but heterogeneous educational backgrounds for fathers. It appears that the continued growth in women’s educational attainment in Britain is a major structural factor behind the changes in parental working patterns that we observe and consistent with the theory of transition between the traditional and gender egalitarian equilibria.

The growth that we observe in dual earning households with pre-school children over the decade is also consistent with other evidence that improvements in public childcare provision have supported

dual earning (Brewer et al 2014). However, free childcare provision in the UK is part-time, Speight et al (2010) report that take-up has been lower amongst disadvantaged groups and Stewart (2014) finds better-educated mothers benefit more than less educated mothers in monetary terms from stable employment. Therefore, not only are better-educated mothers better able to afford additional childcare provision, they also face stronger incentives to work in terms of monetary gain. Both are consistent with our evidence of increasing engagement in full-time employment amongst better-educated mothers of pre-school children.

Furthermore, a substantial minority in the UK (33%) believes that the mother should stay at home when there is a pre-school aged child (Scott and Clery, 2013). Whilst the share of the population taking this view has declined sharply, from 64% in 1989, this has been accompanied by a rise in the proportion who believe that a mother of pre-school children should work part-time (from 26 to 43% over the same period). It seems that culturally embedded gender based norms as well as economic calculations are at work, as these attitudes reveal a strong underlying concern for maternal involvement in the care of pre-school children and a very slow adjustment to the view and practice that parental responsibilities can be equally shared by both parents. Moreover, British work-family policy design and implementation over the last decade, despite egalitarian political rhetoric signaling “sharing”, has been both maternalist and minimalist when contrasted to other European countries (Baird and O’Brien, 2015). By 2013 the UK still has one of the longest maternity leaves in Europe, a further barrier to a gender egalitarian equilibrium.

In summary, the evidence from this study confirms Esping-Andersen et al.’s (2013) depiction of the UK as being in between a traditional and a gender egalitarian equilibria. Despite significant growth in dual earning households, British societal infrastructure still tends to promote and support a full-time breadwinner plus part-time carer model slowing adjustment to the gender revolution. However, we would argue that given the long established 1.5 standard worker accommodation in the UK, Esping-Andersen et al.’s use of the term ‘unstable equilibrium’ in relation to the UK is perhaps misleading, as we may be seeing instead continuity of a rather stable household adaptation.

The approach taken in this paper is to use household employment patterns of couple households in the UK as a key indicator of the gender egalitarian dis/equilibria. Other factors, such as parents' gender attitudes, particularly views on maternal work, division of household labour, and affordability of childcare, will also be influential and our study was limited by the absence of these measures in the EU-LFS data.

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ⁱⁱ EU-LFS covers the EU-28, 2 candidate countries and three EFTA countries. We present data on alternate years – 2001, 2003, 2005, 2007, 2009, 2011 and 2013. Estimates for our empirical models are for 2001 and 2013, allowing us to draw conclusions about main changes over the period. We present results for key variables for all intervening years and for models using pooled data for all years in Tables A.6-A.8 in the Technical Appendix. These support our conclusions on the direction of change over the 12 years.

ⁱⁱⁱ Weights are calculated using census data and take into account the probability of selection and external data relating to the distribution of the population being surveyed by sex, age, and region.

^{iv} This generated 274 cases of missing household data in 2001, and 727 in 2013, because the partner did not respond to the survey.

^v <http://www.oecd.org/els/emp/onlineoecdemploymentdatabase.htm>, accessed. 30/8/2015.

^{vi} The robustness of these results is checked by generating an explanatory variable that captures the level of education at a household level, the results are unchanged (see Technical Appendix). We present the results obtained using individual level data on education because interpretation of the impact of maternal education is clearer within this specification and it allows us to test for interactions between maternal education and age of youngest child.

^{vii} This finding is consistent with Harkness and Evans (2011), who use data from the UK Labour Force Survey 2001-9 to explore the effect of male unemployment upon working behavior of their partners, finding that these women were more likely to remain in employment. The impact of the recession on parental employment is explored in Aldrich et al (2016).

^{viii} Working hours of fathers are explored in more detail in O'Brien et al (2016).

^{ix} EU enlargement in 2004, meant that migration from the EU12 to the UK rose significantly over this period. Dustmann and Frattini (2014) find that migrants from the EU-12 have higher employment rates than the 'native' population, therefore this changing demographic is likely to contribute to shifting patterns in aggregate employment. However, our study looks at couple households with children and the EU-12 migrant group are young and less likely to be parents and less likely to be included in our sample.

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Table 1: Typology of household working patterns

Typology	Weekly working hours	
	Father	Mother
<i>Dual FT earner</i>	≥ 30	≥ 30
<i>Standard 1.5 earner</i>	≥ 30	< 30
<i>Non-standard 1.5 earner</i>	< 30	≥ 30
<i>Male sole FT earner</i>	≥ 30	0
<i>Female sole FT earner</i>	0	≥ 30
<i>Dual part-timers</i>	< 30	< 30
<i>Male sole PT earner</i>	< 30	0
<i>Female sole PT earner</i>	0	< 30
<i>Neither working</i>	0	0
<i>Other</i>	Vary	Vary