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Abstract

We analyse the relationship between early maternal employment and child emotional and behavioural outcomes in early childhood and adolescence. Using rich data from a cohort of children born in the UK in the early 1990s, we find little evidence of a strong statistical relationship between early maternal employment and any of the emotional outcomes. However, there is some evidence that children whose mother is in full-time employment at the 18th month have worse behavioural outcomes at ages 4, 7, and 12. We suggest that these largely insignificant results may in part be explained by mothers who return to full-time work earlier being able to compensate their children: we highlight the role of fathers' time investment and alternative childcare arrangements in this respect.

JEL Codes: D1; I3; J6.

Keywords: child outcomes; maternal employment; well-being; conduct; ALSPAC.

1. Introduction

The majority of the female labour force in the UK, which accounts for almost half of the total workforce, is now comprised of working-mothers (ONS, 2013). This makes the difficult decision of whether a mother should return to work during the first years of her child's life an important social as well as individual issue.

The existing research in this area has primarily focused on early maternal employment and child cognitive development: far less attention has been paid to child emotional and behavioural development in this respect, both of which have been shown to be empirically important predictors of later academic success and adult life satisfaction (Heckman & Rubinstein, 2001; Heckman *et al*., 2006; Layard *et al*., 2014). The scarce empirical evidence here is due in part to the lack of datasets containing information on both mothers' work and children's emotional and behavioural (as well as cognitive) outcomes. Yet, establishing whether mothers who return to work when their children are young put their children's emotional and behavioural development at risk is central for policymakers interested in childcare and household labour supply.

We here provide new evidence on the relationships between early maternal labour supply and children's emotional and behavioural outcomes. To do so, we use very rich data from the Avon Longitudinal Study of Parents and Children (ALSPAC) cohort. This data allows us to track the link between early maternal employment and a battery of outcomes, including children's moods and feelings, behavioural problems and disorders, and depression and anxiety, measured between ages of four and eighteen. We follow closely the empirical strategy in Gregg *et al*. (2005), and estimate regression models that remove as far as possible the influence of confounding factors that are correlated with early maternal labour-supply decisions and independently affect child emotional and behavioural development, which could lead to potentially biased estimates.

Our estimated correlations between maternal full-time employment in the first 18 months of their child's life and subsequent child emotional and behavioural outcomes at different ages are largely statistically insignificantly, holding a rich set of potentially confounding covariates constant. These substantive results do not vary significantly by maternal education, lone-parent status, family-care arrangements or maternal mental health, suggesting that mothers' return to work fairly soon after birth

is not significantly detrimental to their children's emotional and behavioural development.

The remainder of the paper is organised as follows. Section 2 reviews the existing literature. Section 3 then presents the data we use, and Section 4 our empirical strategy. The results appear in Section 5. Last, Section 6 concludes.

2. Previous literature on maternal labour supply on child development

In Becker's model of the household production function (Becker, 1981; see also, Becker and Tomes, 1986), a mother's decision to return to work after birth involves a trade-off between the benefits from market work via family income and the costs of spending time away from her child in terms of the latter's human-capital accumulation. Holding family income constant, maternal labour supply is then hypothesised to slow down children's cognitive development by reducing the time mothers spend in enriching the home environment. In addition, the children of women who return to work early may miss out on significant breastfeeding time (Lindberg, 1996; Roe *et al*., 1999), with breastfeeding having been shown to be associated with better health outcomes for children (Cunningham *et al*., 1991; Fitzsimons and Vera-Hernandez, 2013).

Following Becker's theory, much of the empirical work – mostly on American data – has focused on the relationship between maternal employment and child cognitive development. The results here are mixed, ranging from a negative impact on early child cognitive outcomes (e.g., Desai *et al*., 1989; Baydar & Brooks-Gunn, 1991; Belsky & Eggebeen, 1992; Brooks-Gunn *et al*., 2002; Waldfogel *et al*., 2002; Baker *et al*., 2008; Bernal, 2008; Herbst and Tekin, 2010), to a negligible or zero effect (Blau and Grossberg, 1992; Gregg *et al*., 2005; Harvey, 1999; Baker and Milligan, 2010), or even a positive relationship (Vandell and Ramanan, 1992; Duniflon *et al*., 2013). The relevant estimated coefficients also vary in size, sign and significance within a number of contributions according to the timing of the return to employment, the intensity of employment, and parental characteristics such as household income, family type and parental education.

One example of this diversity comes from the National Longitudinal Survey of Youth (NLSY). Han *et al*. (2001) and Waldfogel *et al*. (2002) adopt a similar empirical approach and find that, although maternal employment in the first year of a child's life has a negative impact on child cognitive outcomes, employment in the

second and third years actually attracts a positive estimated coefficient (although the effect sizes are smaller than those in the first year). Ruhm (2004) includes a far more extensive set of control variables in his analysis of NLSY data. He also finds a negative and statistically significant early maternal employment effect on cognitive ability. However, this modest adverse effect is only observed for children aged 3 or 4, not for those aged 5 or 6. Other work has also suggested that any negative effect is concentrated amongst younger children (Joshi & Verropoulou, 2000; Bernal, 2008; Bernal & Keane, 2010; Liu *et al*., 2010).

Employment intensity also matters. Ruhm (2004) suggests that maternal work of over 20 hours per week is associated with substantially worse child cognitive outcomes than is shorter-duration work. Using National Institute of Child Health and Human Development (NICHD) data, Brooks-Gunn *et al*. (2002) also find that the adverse effects of early maternal employment are found for full-time working mothers.

Regarding parental characteristics, in Ruhm (2008) maternal labour supply only harms children from "advantaged" families, whereas "disadvantaged" children on the contrary benefit from their mothers working a limited number of hours. However, in the British Household Panel Survey (BHPS) data analysed by Ermisch and Francesconi (2013), maternal labour supply when the child was aged 0-5 reduces the probability of the child achieving an A-level qualification or higher, with this adverse effect being much stronger for children of less-educated mothers. In addition, previous work has consistently found that the negative effects of early maternal employment are statistically robust only for the children of two-parent families and not for lone parents (see, for example, Harvey, 1999; Brooks-Gunn *et al*., 2002; Ruhm, 2004). One interpretation is that either the positive effects of single mothers' earnings outweigh the negative effects of non-maternal childcare on child cognitive development, and/or children of single mothers have better access to other sources of childcare compared to those in two-parent families.

Paul Gregg and colleagues (2005) were among the first to use the ALSPAC cohort (which we analyse here) to consider the effects of early maternal employment on child cognitive outcomes in the UK. In the early waves of the ALSPAC data, they find no systematic relationship between early maternal employment and national child test scores up to age 8. They do, however, uncover a small negative effect on (the

principal component of) an ALSPAC-administered literacy test at age 7, particularly for the children of more-educated and married mothers.

While there is then a fair amount of work mother's work and child cognitive outcomes, far less is known about the implications for child emotional and behavioural development. An early exception is the work by Belsky and Eggebeen (1991). Using the NLSY, they find some evidence that children whose mothers were employed full-time during the child's first or second year were significantly less compliant to parents – e.g. did not eat food that was given to them, complained about going to bed, and/or did not turn off the TV when told to by parents – than were those whose mothers were not employed full-time during these early years.

Cooksey *et al*. (2009) appeal to two different datasets – the 1970 British Cohort Study (BCS70) and the NLSY – to reveal evidence of a modest relationship between early maternal employment and internalised behavioural problems (e.g. emotional problems and peer relations). Richardson *et al*. (1993) find a positive link between the lack of adult supervision after school due to employment and the probability of adolescents engaging in risky behaviours (such as substance abuse) and low mood/depression. Similarly, Berger *et al*. (2005) estimate propensity-score matching models using the NLSY and find early maternal employment to be associated with more child externalising behaviour problems. Using the Millennium Cohort Study (MCS), McMunn *et al*. (2011) find no evidence that early maternal employment affects the total strengths and difficulties (SDQ) score reported by parents, which measures child emotional and behavioural issues. Last, Powdthavee and Vernoit (2013) consider the older children sampled in the youth section of the BHPS, and find that maternal employment during adolescence has a temporary positive effect on the self-rated happiness of children aged 11-15. Overall, it is probably fair to say that the current literature is small, and we do not yet fully understand the relationship between early maternal employment and child behavioural and emotional development. We will here contribute to this literature with a systematic analysis of ALSPAC data.

3. Data

3.1. The Avon Cohort study

ALSPAC[1] is a near-census English birth-cohort survey designed to study the effect of environmental, genetic, and socio-economic influences on health and development outcomes of children. ALSPAC recruited pregnant women residing in the Avon area with expected delivery dates between April 1, 1991, and December 31, 1992. A total of 14,541 pregnancies (80–90% of all pregnancies in the catchment area) resulted in a sample of 13,971 children at age 12 months. The data contains high-frequency reported measures of cognitive and socio-emotional skills in infancy, as well as a very rich set of parental investment measures and parental characteristics collected from the prenatal period onward. At the ages of 7, 8, and 9 years, the ALSPAC cohort underwent physical, psychometric and psychological tests administered in a clinical setting. Administrative data from the National Pupil Database has been matched to the ALSPAC children, containing school identifiers and the results of national Key Stage school tests for all children attending public schools in the four Local Educational Authorities[2] that cover the Avon area.

As with any large cohort survey, there is attrition in the later waves: we will discuss the way in which we deal with this in sub-section 3.4.[3] Moreover, the participating mothers and children (who start responding to the SMFQ questionnaire from the age of 11) did not always answer all of the questions at all of the survey waves, so that the sample size varies across the different regression equations. We address this issue using mean imputation (with dummy variables) when there are missing values for our covariates in order to maintain the sample size. Note that the majority of ALSPAC participants in are white. Given the catchment area and the effect of subsequent attrition, the ALSPAC sample is over-representative of higher socio-economic status groups, as compared to the national population (Boyd *et al*., 2013).

3.2. Measures of child emotional and behavioural outcomes.

[1] The ALSPAC website contains details of all the data that is available through a fully searchable data dictionary (http://www.bris.ac.uk/alspac/researchers/data-access/data-dictionary/). Ethical approval for the study was obtained from the ALSPAC Ethics and Law Committee and the Local Research Ethics Committees.

[2] These Local Educational Authorities are Bristol, South Gloucestershire, North Somerset, and Bath and North East Somerset.

[3] See Gregg *et al*. (2005) for a summary of sample attrition in ALSPAC and the labour-market characteristics of the mothers in the sample.

Our main measures of child emotional and behavioural outcomes at various ages come from the Short Mood and Feelings Questionnaire (SMFQ) and the Strength and Difficulties Questionnaire (SDQ).

The SMFQ is designed to assess depressive symptoms (Angold *et al.*, 1995), and was completed by ALSPAC child respondents at research clinics at ages 11 and 13 years and via postal questionnaire at ages 17 and 18. A similar version of SMFQ was also completed by parents/caregivers regarding their children when the child was aged 9, 11, 13 and 16. The internal construct validity of a single continuum of severity of depressive symptoms has been confirmed in a UK community sample in which the items were subjected to unidimensional item-response modelling after simply binary recoding (Sharp *et al*., 2006).

The SDQ consists of five wellbeing subscales covering emotional problems, peer problems, behavioural problems, hyperactivity and pro-social behaviour (see Goodman, 1997). These include, for example, questions about the child's temper tantrums, obedience, whether the child is helpful if someone is hurt/upset/feeling ill, often lies or cheats, fights with other children, and is easily distracted. Goodman *et al*. (2010) show that in low-risk samples such as the ALSPAC these five fine subscales may not measure distinct aspects of child outcomes, and as a result advocate for the use of two broader measures of "internalising behaviour" (here the sum of the emotional and peer subscales) and "externalising behaviour" (the sum of child conduct problems and hyperactivity). Our main regressions include these two broad scales as the dependent variables, with the results from the finer sub-scales appearing in an appendix.

In our analysis, both SMFQ and SDQ scores are (1) inverted so that the higher is the score the better is the emotional or behavioural outcome, and (2) standardized so that their mean is 0 and standard deviation 1.

3.3. Maternal employment

Information on the mother's return to work comes from questions asked of mothers at child ages of 8 weeks, 18 months and 33 months regarding whether they have returned to work yet and, if so, at what month they returned. Mothers also supply information on their usual hours of work at 18 and 33 months.[4]

[4]As such, we do not know the hours of work at the moment when the mother first returned to work, but rather those of mothers who are working when the child is aged 18 months.

We use this information to create dummy variables for whether the mother first returned to work (i) between 0-6 months, (ii) between 7-12 months, and (iii) between 13-18 months. The omitted category here is then mothers who returned to work after the 18th month or never returned at all. We incorporate the information on working hours in a second set of dummies reflecting whether the mother was employed (i) part-time or (ii) full-time at the 18th month. See Appendix Table A1 for the descriptive statistics of the ALSPAC sample, Appendix Table A2 for the description of the employment and control variables used in the analysis, and Appendix Table A3 for the description of the outcome variables, i.e. SMFQ, Internalising, and Externalising Behaviours.

3.4. Accounting for sample attrition

Survey-completion rates – and the probability that researchers can retain participants in a study – likely depend on participants' pre-natal characteristics. One hypothesis in this respect is that mothers from low socio-economic backgrounds are more likely to attrit in the next period. If this were the case we would have non-random attrition of non-employed mothers in subsequent waves if low-SES mothers were also less likely to return to work following birth.

We consider selective attrition by maternal pre-natal characteristics by estimating probit regressions on the probability of dropping out of the ALSPAC sample at different ages. This attrition equation (attrit = 1 *versus* non-attrit = 0) is estimated as a function of a set of pre-natal characteristics, z_{i0}. These are mother's education, age at child's birth, ethnicity, mental health, child gender, whether the mother reported experiencing financial difficulty during pregnancy, whether she was married, and whether she worked at all during her pregnancy.

This method thus relies on 'selection on observables' and treats attrition as ignorable non-response, conditional on z_{i0} (Fitzgerald *et al*., 1998; Wooldridge, 2002). We estimate attrition probits at each ALSPAC wave, using the full sample of mothers whose pre-natal characteristics, z_{i0}, are observed. We use the results of the probit model to calculate the inverse probability weightings (IPW), $^{1}/_{1-\hat{p}_{it}}$, which are then used to weight the observations in the regressions. The IPW re-weighting assigns greater weight to individuals who have similar pre-natal characteristics to those who are subsequently more likely to attrit in the study.

4. Identification issues and empirical strategy

4.1. Main regression equation

Previous attempts to estimate the effect of early maternal employment on child outcomes relied on sibling fixed-effects models to control for time-invariant maternal factors that may be correlated with both mother's labour supply and child outcomes (e.g., Waldfogel *et al*., 2002; Anderson *et al*., 2003; James-Burdumy, 2005; Ermisch and Francesconi, 2013). The identifying assumption here is that the mother's decision to go back to work is independent of any shock to child cognitive and non-cognitive outcomes when 'ability' differences among the children drive this shock (Ermisch and Francesconi, 2013). One potential pitfall of the sibling fixed-effects model is then that it may underestimate the costs of early maternal employment if unobserved differences across children, such as underlying health or behavioural problems, are behind the variation in early maternal labour supply (e.g., Powers, 2003; Ruhm, 2008).

James-Burdumy (2005) and Ermisch and Francesconi (2013) are two notable contributions that combine instrumental variables with the sibling fixed-effects model to account for shocks that may be related to early maternal employment. Both use the regional employment rate as an instrument for early maternal employment, with mixed results. The regional and time variation in UK female unemployment rates in Ermisch and Francesconi (2013) produces instruments that are strong enough to identify the effect of early maternal employment on the child's probability of achieving an A-level; this turns out to be similar in size to that found in the fixed-effects model. However, the instrument in James-Burdumy (2005) (the percentage of the labour force in services) is too weak to identify the effect of early maternal employment on child reading scores in the US. Other related analyses have appealed to policy changes in maternal leave to evaluate the impact of post-birth maternal time at home on child outcomes. In the German Socio-Economic Panel (SOEP), Dustman and Schönberg (2012) find very little evidence of a positive impact. On the contrary, Carneiro *et al*. (2011) consider the impact of extending paid and unpaid maternal leave in Norway, and find a large positive effect on child schooling.

Given the data limitations regarding siblings, as well as little variation in the regional unemployment rate as an instrument,[5] Gregg *et al*. (2005) rely mostly on the richness of the ALSPAC dataset to identify the effect of maternal employment on child cognitive outcomes. They introduce proxy variables for mothers' unobserved ability in the labour market and in home production into their regressions to reduce as far as possible the conditional correlation between maternal labour supply and the unobserved effect.

We adopt a similar empirical strategy, and estimate the following regression equation:

$$C_{it} = \alpha + \beta_{t-j} Return_{it-j} + \gamma X_i + Q_i^L + Q_i^H + \varepsilon_{it}, \quad (1)$$

where C_{it} indicates child *i*'s outcome (i.e., SMFQ or SDQ) measured at a time *t* after the 34th month since birth, $Return_{it-j}$ is a set of dummy variables for maternal return to work in the early $t-j$ period of the child's life, X_i is a vector of characteristics of the child, mother and household, Q_i^L are the proxy variables for the mother's labour-market ability, measured prior to childbirth, and Q_i^H those for the mother's ability in home production (child-rearing). These latter proxy variables allow us to capture the comparative advantage of the mother in both the labour market and parenting, as well as her attitudes in general and towards parenting in particular. As discussed above, we estimate separate equations for two different definitions of $Return_{it-j}$. The first shows when the mother first returned to work (i) between 0-6 months, (ii) between 7-12 months, and (iii) between 13-18 months. The second indicates whether the mother was employed part-time or full-time at the 18th month. In both cases, the omitted category is mothers who returned to work after the 18th month or never returned at all. The coefficient β_{t-j} is our estimate of the impact of early maternal employment on child's emotional and behavioural outcomes.

However, the estimated value of β_{t-j} will be biased if there is a correlation between omitted variables that are not captured by our proxy variables, Q_i^L and Q_i^H, and the unobserved characteristics that simultaneously influence both C_{it} and $Return_{it-j}$. As in Gregg *et al*. (2005), we cannot use sibling fixed effects as we have

[5] The ALSPAC data is confined to the Avon area of the UK only.

very few sibling pairs, and there is not enough geographic variability for us to use the labour market as an instrument for mother's return to work. Nevertheless, the ALSPAC data is rich, and we control for a variety of variables to help us to capture as much residual heterogeneity as possible. In detail, our regressions control for the following groups of proxy variables.

(i) **Basic demographic characteristics**. These consist of mother's age at the start of pregnancy, mother's highest level of education, the number of siblings of different ages (0-15 years, and 16-18 years) at the time of birth, child ethnicity, gender and birth weight, a dummy for whether the child was admitted to a special care unit at birth, father's highest level of education, social class, employment status at 21 months and pre-birth occupation, parents' homeownership status at 8 months, and whether the parents experienced financial difficulties during pregnancy.

(ii) **Proxy variables for maternal labour-market ability**. These are a dummy for whether the mother worked during pregnancy, hours worked at last pre-birth job, maternal pre-birth occupation, maternal social-networks score, maternal social-support score, grandmother's educational attainment, and mother's pre-birth body mass index (BMI).

(iii) **Proxy variables for maternal attitudes**. These include the Crown-Crisp Experiential Index (CCEI) to capture maternal anxiety and depression during the 2nd trimester, maternal Locus of Control – i.e. the extent to which mothers believe that their actions can influence their future outcomes – measured during the 2nd trimester, a maternal interpersonal sensitivity measure, a dummy for whether the mother smoked during pregnancy, mother's own childhood happiness score, parenting score of the mother's mother, the presence of the mother's mother in the household during her childhood, and mother's Life Event score – i.e., a sum of life events at 18th week gestation, including, for

example, partner died since pregnancy, moving home, partner was ill during pregnancy, etc.[6]

4.2. Testing for the heterogeneous effects of early maternal employment

As in Gregg *et al*. (2005), we also explore whether the size and significance of the early maternal employment coefficients vary by maternal education, lone-parent status, and family-care arrangements. We in addition look for an interaction effect between early maternal employment and maternal mental health (measured at the 8th month) to see whether outcomes are better for children when mothers with worse mental health return to work early.

We estimate separately the following four equations:

$$C_{it} = \alpha + \beta_{t-j} Return_{it-j} + \delta MEdu_i + \pi(Return_{it-j} \times MEdu_i) + \gamma X_i + Q_i^L + Q_i^H + \varepsilon_{it}, \quad (2)$$

$$C_{it} = \alpha + \beta_{t-j} Return_{it-j} + \theta Lone_i + \tau(Return_{it-j} \times Lone_i) + \gamma X_i + Q_i^L + Q_i^H + \varepsilon_{it}, \quad (3)$$

$$C_{it} = \alpha + \beta_{it-j} Return_{it-j} + \lambda Care_i + \varrho(Return_{it-j} \times Care_i) + \gamma X_i + Q_i^L + Q_i^H + \varepsilon_{it}, \quad (4)$$

$$C_{it} = \alpha + \beta_{it-j} Return_{it-j} + \rho MHealth_i + \varsigma(Return_{it-j} \times MHealth_i) + \gamma X_i + Q_i^L + Q_i^H + \varepsilon_{it}, \quad (5)$$

Here $MEdu_i$ is a dummy for mother's highest educational attainment being at least at high-school level (i.e. A-level qualifications) and $Lone_i$ a dummy for the mother not living with her partner when the child was 8 months old. The three childcare-arrangement dummies in $Care_i$ are for the household using (i) centre-based childcare for at least 5 hours a week, (ii) unpaid childcare by relatives for 20 hours or more, and (iii) paid childcare for 20 hours or more. Last, maternal mental health $MHealth_i$ is represented by the inverse CCEI measured in the 8th month. For space reasons, the

[6] We here follow the advice in Harvey (1999) that variables that are themselves affected by maternal employment and then in turn affect children should not be controlled for when estimating the impact of maternal employment. As such, we do not include household income as a control in our estimations.

interaction regressions only concern the dummy variables for the mother being employed part-time at the 18th month or full-time at the 18th month.

All of our regression equations are estimated using Ordinary Least Squares (OLS) with robust (unclustered) standard errors.

5. Results

Table 1 shows the estimated correlation between early maternal employment and both child- and carer-reported SMFQ at different ages. Panel A refers to return to work at different times in the first 18 months, while panel B distinguishes part-time from full-time work at month 18. All regressions include the demographic characteristics, and maternal ability and maternal attitude proxies discussed in Section 3 above. Robust standard errors are reported, and the probability weight in the regression is the IPW at each age.

Looking across columns, we can see that most of the estimated associations between early maternal employment and child emotional outcomes at different ages are insignificant. There is however some evidence that mothers' early return to work, between 0-6 months, is associated with lower self-reported SMFQ scores at ages 13 and 18. In panel B, there is no consistent effect of full-time versus part-time early maternal employment on child outcomes.

Table 2 shows the analogous results for carer-reported SDQ. Mothers' return to employment between the 13th and 18th months is positively correlated with carer-reported internalising behaviours at ages 7 and 16. On the other hand, in panel B full-time employment at the 18th month seems to increase carer-reported child behavioural problems at ages 4, 7, and 12. Overall, similar to Table 1, most of the estimated coefficients on mothers' employment are insignificant here.

We also estimate SDQ regressions on each of the five SDQ areas discussed in Section 3.2, including pro-social SDQ, which appears in neither the Internalising nor the Externalising behavioural indices. These results appear in Appendix Table A4. Children whose mother is in full-time employment at the 18th month have worse carer-reported conduct and hyperactivity scores at ages 4, 7, and 12 years: this is consistent with the results in Table 2. There is thus some evidence that mother's early

return to full-time employment in the first few years has an effect on the child's behavioural – but not emotional – problems.[7]

Table 3 shows the results for carer-reported SMFQ at 9, self-reported SMFQ at 18, and carer-reported internalising and externalising behaviours at ages 4, 7, 12 and 16 by gender. Most of the mothers' work coefficients continue to be insignificant, but as in Table 2 mothers' full-time employment at the 18th month is associated with lower externalising behaviours at age 7 for both boys and girls.

Table 4 moves on to the interactions and tests whether the effect of mothers' part-time and full-time employment at the 18th month on child behavioural and emotional problems is moderated by mothers' education. All of the interaction coefficients here turn out to be insignificant. This finding is then not consistent with Ermisch and Francesconi (2013), who suggest that the adverse effect of maternal employment on child cognitive outcomes is larger for children with less-educated mothers.

The analogous results with a dummy for lone-parent status appear in Table 5. We continue to find a negative significant correlation between full-time employment at the 18th month and externalising behaviours at ages 4 and 7, but there is little evidence here that mothers' work is systematically more or less harmful for single-parent children. Out of the 20 estimated interaction coefficients, 15 are insignificant. It is nevertheless perhaps worth noting that the three positive interactions here all refer to part-time employment at the 18th month.

Table 6 considers heterogeneity by type of childcare arrangement. There is a negative main effect of full-time employment at the 18th month on externalising behaviours at ages 4, 7 and 12. There is equally evidence that the use of centre-based childcare for at least 5 hours a week leads to lower externalising behaviours at ages 4, 7, and 16. However, the interaction terms show that the use of centre-based childcare for mothers who work full-time almost completely offsets the negative effect of both mothers' employment and this type of childcare. For example, for externalising behaviours at age 7, the main effect of mothers' full-time employment is -0.293 and the main effect of centre-based childcare is -0.395, but the interaction term between the two attracts a positive estimated coefficient of 0.500. The sum of these three is

[7] We also followed the bulk of previous work in this area by looking at the relationship between maternal employment and child educational attainment in ALSPAC, measured by the Standardised Assessment Test (SAT) at age 4.5, Language (LIT) score at age 7, and Key Stage (1, 2, and 4) scores. The results can be found in Table Appendix A5.

statistically zero. As such, a child with a full-time working mother at 18 months who goes to a childcare centre has the same externalising SDQ score at age 7 as a child whose mother does not work full-time at 18 months and who does not go to a childcare centre.

Last, Table 7 considers interactions with maternal mental health, as measured by the inverted CCEI index when the child is 8 months old. We might imagine here that any negative impacts of full-time maternal employment on child emotional and behavioural outcomes may be smaller for mothers with worse mental health. The main effect of maternal mental health is positive and statistically significant across all columns of Table 7, as might be expected. However, none of the interaction coefficients are significant: maternal mental health does not moderate the effect or maternal employment.

With a few exceptions for some of the early behavioural outcome regressions, we then conclude that there is little evidence that mothers' work matters for child emotional and behavioural outcomes. One reading is that mothers' return to employment itself depends on child initial emotional and behavioural outcomes. Mothers may be less likely to return to full-time employment if there are early indications of child emotional and/or behavioural problems. Reverse causality could then explain why many of our estimated relationships above are insignificant.[8]

Another potential explanation is that the children of mothers who return to full-time work early receive compensating inputs from some other source to ensure their continued development. For example, Table 8 reveals that while full-time employed mothers spend significantly less time playing, caring, and cognitively stimulating their children, there is evidence of a counterbalancing effect from the child's father, who increases his time inputs in the right-hand panel of Table 8. For example, in the last line the coefficient on full-time maternal employment at the 18th month for maternal cognitive stimulation is -0.220 with a standard error of 0.039, the analogous coefficient for the father is 0.173 with a standard error of 0.039. In addition, Table 9 shows that early maternal return to work or mothers' full-time work

[8] For example, Appendix Table A1 provides some evidence that average birth weight is higher for children whose mother returned to work early. Similarly, children whose mother returned to work early are less likely to have been born prematurely (before the 37th gestation week). We have controlled for as many of these as possible in our child outcome regressions.

when the child is 18 months old is associated with the child spending more hours per week in other kinds of childcare.[9]

6. Concluding remarks

We have here considered the relationship between maternal employment and child emotional and behavioural outcomes at different child ages in the UK. Using ALSPAC data, we estimate regressions that control for underlying heterogeneity, including proxy variables for maternal ability in the labour market prior to pregnancy and maternal attitudes towards child rearing, which could potentially affect mothers' return to work when the child is still young.

We find that almost all of the estimated coefficients on early maternal employment are insignificant. However, there is some evidence to suggest that early full-time maternal employment predicts child behavioural problems (proxy by externalising behaviours) at ages 4, 7, and 12. We find no evidence that the relationship between mothers' work and child emotional and behavioural outcomes is moderated by maternal education, lone-parent status, childcare arrangements or mother's mental health at the 8th month.

The overall impression here is that it makes little difference to child emotional and behavioural development whether the mother returns to work early, later, or not at all. Our final analyses in Tables 8 and 9 suggest that these largely insignificant results may reflect compensation in child development from sources other than the mother. In particular, the children of mothers who return to work early receive significantly more childcare from both commercial providers and from the family, and more cognitive stimulation from their fathers. As such, children whose mothers return to work early but are not able to arrange sufficient childcare or do not have a supportive partner may indeed fare worse in terms of their future emotional and behavioural outcomes. It is tempting to read this in terms of voluntary versus involuntary return to work. A systematic analysis would then require a persuasive instrumental variable for early maternal work in our kinds of child-outcome regressions, and we suspect that future research will have to return to this issue.

[9] As a robustness check, Appendix Table A6 examines what happens to the early maternal employment estimates when we condition on father's time inputs (father's time spent playing, caring, and cognitively stimulating their child). As expected, most of the early maternal work coefficients become more negative when father's time inputs are controlled for, confirming the existing of compensating inputs to ensure the continued development of the children of mothers who returned to full-time work early.

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Table 1: Maternal employment and child moods and feelings scores

	Carer-reported SMFQ		Self-reported SMFQ			
Variables	**Age 9 (115M)**	**Age 16 (198M)**	**Age 11 (126M)**	**Age 13 (150M)**	**Age 16 (198M)**	**Age 18 (214M)**
Panel A: Returned within 18 months						
Returned to employment between M0-6	0.065*	-0.026	0.006	-0.085**	-0.042	-0.101**
	[0.034]	[0.041]	[0.037]	[0.037]	[0.042]	[0.047]
Returned to employment between M7-12	0.049	0.008	0.035	-0.053	-0.073	-0.116**
	[0.040]	[0.051]	[0.045]	[0.043]	[0.052]	[0.056]
Returned to employment between M13-18	0.074	-0.027	0.046	0.015	-0.041	-0.115
	[0.050]	[0.067]	[0.055]	[0.055]	[0.068]	[0.081]
Panel B: Returned PT vs. FT at 18th month						
In PT employment at M18	0.071**	0.005	0.039	-0.027	-0.012	-0.081*
	[0.029]	[0.037]	[0.032]	[0.033]	[0.038]	[0.043]
In FT employment at M18	-0.031	0.035	-0.058	-0.067	0.079	-0.035
	[0.046]	[0.055]	[0.053]	[0.051]	[0.057]	[0.063]
Observations	7,220	5,153	6,498	5,944	4,573	3,964
Panel A: Adjusted R-squared	0.0658	0.0689	0.0237	0.0379	0.0859	0.0441
Panel B: Adjusted R-squared	0.0678	0.0666	0.0244	0.0372	0.0864	0.0520

Notes: ***<1*; **<5%; *<10%. Robust standard errors are reported in brackets, and IPW is used as a sample weight.

The Short Mood and Feeling Questionnaire (SMFQ) is a measure of depressive symptoms and mood disorder in children. The scale is inverted so that higher scores represent better emotional well-being. All regressions control for mother's age at the start of pregnancy, mother's highest level of education attainment, the child's ethnicity, the number of siblings of different ages (0-15 years, and 16-18 years) at the time of birth, child's gender, child's birth weight, a dummy for whether the child was admitted to a special care unit at birth, father's highest level of education attainment, father's social class, father's employment status at 21 months, father's pre-birth occupation, parents' homeownership status at 8 months, whether the parents experienced financial difficulties during pregnancy, a dummy for whether the mother worked during pregnancy, hours worked at last pre-birth job, maternal pre-birth occupation, maternal social networks score, maternal social support score, grandmother's educational attainment, and mother's pre-birth body mass index (BMI), the Crown-Crisp Experiential Index (CCEI) used to capture maternal anxiety and depression during the 1st trimester, maternal locus of control – i.e. the extent to which mothers believe that their actions can influence their future outcomes – measured during the 2nd trimester, a dummy for whether the mother smoked during pregnancy, mother's childhood happiness score, and the presence of the mother's mother in the household during childhood.

Table 2: Maternal employment and child's behavioural outcomes

	Carer-reported internalising behaviours				Carer-reported externalising behaviours			
Variables	**Age 4 (47M)**	**Age 7 (81M)**	**Age 12 (140M)**	**Age 16 (198M)**	**Age 4 (47M)**	**Age 7 (81M)**	**Age 12 (140M)**	**Age 16 (198M)**
Panel A: Returned within 18 months								
Returned to employment between M0-6	-0.022	0.012	-0.028	-0.004	-0.017	-0.028	0.009	-0.005
	[0.029]	[0.032]	[0.036]	[0.040]	[0.028]	[0.031]	[0.035]	[0.041]
Returned to employment between M7-12	-0.008	0.039	0.016	0.013	0.002	-0.081**	-0.001	0.003
	[0.036]	[0.038]	[0.042]	[0.048]	[0.035]	[0.039]	[0.043]	[0.050]
Returned to employment between M13-18	0.024	0.096**	0.046	0.124**	-0.035	-0.048	-0.019	0.028
	[0.043]	[0.046]	[0.050]	[0.059]	[0.043]	[0.049]	[0.052]	[0.063]
Panel B: Returned PT vs. FT at 18th month								
In PT employment at M18	-0.010	0.033	0.002	0.010	-0.024	-0.005	-0.014	-0.046
	[0.026]	[0.028]	[0.032]	[0.036]	[0.026]	[0.028]	[0.032]	[0.037]
In FT employment at M18	-0.023	0.036	-0.021	-0.007	-0.102**	-0.167***	-0.085*	-0.031
	[0.043]	[0.043]	[0.045]	[0.052]	[0.040]	[0.045]	[0.049]	[0.057]
Observations	8,857	7,921	6,606	5,144	8,857	7,902	6,600	5,161
Panel A: Adjusted R-squared	0.0892	0.0839	0.0779	0.0785	0.105	0.103	0.105	0.0861
Panel B: Adjusted R-squared	0.0892	0.0836	0.0777	0.0777	0.106	0.104	0.105	0.0865

Notes: ***<1*; **<5%; *<10%. Robust standard errors are reported in parentheses.

Total Strength and Difficulties Questionnaire (SDQ) score is a sum of responses given to questionnaires about the child's (i) emotional symptoms, (ii) conduct problems, (ii) hyperactivity/inattention, and (iv) peer relationship problems. The scales are inverted so that higher scores represent better behavioural outcomes. Control variables are as in Table 1.

Table 3: Maternal Employment and Child Emotional and Behavioural Outcomes By Gender

Variables	SMFQ (C) Age 9 (115M)	SMFQ (S) Age 18 (214M)	INT BEHAV (C) Age 4 (47M)	INT BEHAV (C) Age 7 (81M)	INT BEHAV (C) Age 12 (140M)	INT BEHAV (C) Age 16 (198M)	EXT BEHAV (C) Age 4 (47M)	EXT BEHAV (C) Age 7 (81M)	EXT BEHAV (C) Age 12 (140M)	EXT BEHAV (C) Age 16 (198M)
i) Male cohorts										
Panel A: Returned within 18 months										
Returned to employment between M0-6	0.055	-0.110*	-0.036	-0.040	-0.111**	-0.059	-0.020	-0.050	-0.030	-0.048
	[0.051]	[0.065]	[0.042]	[0.046]	[0.055]	[0.054]	[0.040]	[0.046]	[0.054]	[0.061]
Returned to employment between M7-12	0.098*	-0.111	-0.028	0.027	0.054	0.043	-0.017	-0.019	0.059	0.036
	[0.056]	[0.079]	[0.052]	[0.055]	[0.057]	[0.062]	[0.051]	[0.055]	[0.063]	[0.072]
Returned to employment between M13-18	0.149**	-0.085	0.032	0.103	0.050	0.081	-0.085	-0.071	-0.056	-0.023
	[0.072]	[0.099]	[0.063]	[0.067]	[0.074]	[0.088]	[0.064]	[0.070]	[0.079]	[0.099]
Panel B: Returned PT vs. FT at 18th month										
In PT employment at M18	0.076*	-0.054	-0.005	0.031	0.020	0.053	-0.018	0.030	-0.036	0.061
	[0.046]	[0.065]	[0.039]	[0.040]	[0.048]	[0.059]	[0.040]	[0.040]	[0.048]	[0.057]
In FT employment at M18	0.003	-0.093	0.006	0.017	-0.054	-0.023	0.013	-0.156**	-0.120*	-0.011
	[0.057]	[0.079]	[0.050]	[0.063]	[0.065]	[0.073]	[0.048]	[0.063]	[0.073]	[0.070]
Observations	3,672	1,698	4,588	4,080	3,318	2,510	4,588	4,071	3,315	2,519
Panel A: Adjusted R-squared	0.0692	0.0343	0.0911	0.0871	0.0832	0.0646	0.105	0.0796	0.0877	0.0773
Panel B: Adjusted R-squared	0.0684	0.0339	0.0912	0.0863	0.0803	0.0657	0.105	0.0814	0.0880	0.0775
B) Female cohorts										
Panel C: Returned within 12 months										
Returned to employment between M0-6	0.002	0.010	0.002	0.077*	0.063	-0.004	0.014***	0.001	0.049	0.005
	[0.005]	[0.006]	[0.004]	[0.043]	[0.047]	[0.005]	[0.004]	[0.042]	[0.045]	[0.006]
Returned to employment between M7-12	-0.033	0.041	0.027	0.057	-0.027	0.006	0.030*	-0.134**	-0.064	0.037
	[0.022]	[0.027]	[0.018]	[0.052]	[0.061]	[0.023]	[0.017]	[0.054]	[0.058]	[0.027]

Returned to employment between M13-18	0.023	-0.138	0.029	0.095	0.056	0.139*	0.012	-0.016	0.021	0.083
	[0.068]	[0.125]	[0.059]	[0.064]	[0.065]	[0.078]	[0.058]	[0.068]	[0.066]	[0.079]
Panel D: Returned PT vs. FT at 18th month										
In PT employment at M18	0.106***	-0.068	-0.015	0.036	-0.021	-0.088*	-0.033	-0.037	0.008	-0.077
	[0.040]	[0.059]	[0.035]	[0.038]	[0.043]	[0.053]	[0.036]	[0.038]	[0.040]	[0.050]
In FT employment at M18	-0.019	-0.058	0.026	0.072	0.018	0.076	-0.080	-0.170***	-0.039	0.058
	[0.065]	[0.094]	[0.057]	[0.060]	[0.062]	[0.073]	[0.057]	[0.065]	[0.065]	[0.075]
Observations	3,704	1,714	4,617	3,841	3,288	2,520	4,617	3,831	3,285	2,529
Panel C: Adjusted R-squared	0.0620	0.0364	0.0879	0.0915	0.0869	0.0866	0.0833	0.0855	0.0856	0.103
Panel D: Adjusted R-squared	0.0636	0.0362	0.0882	0.0910	0.0862	0.0875	0.0838	0.0854	0.0846	0.104

Notes: ***<1%; **<5%; *<10%. Robust standard errors are reported in parentheses. Control variables are as in Table 1.

Table 4: Differential effects of early maternal employment by mother's highest completed education level

	SMFQ (C) Age 9 (115M)	SMFQ (S) Age 18 (214M)	INT BEHAV (C) Age 4 (47M)	INT BEHAV (C) Age 7 (81M)	INT BEHAV (C) Age 12 (140M)	INT BEHAV (C) Age 16 (198M)	EXT BEHAV (C) Age 4 (47M)	EXT BEHAV (C) Age 7 (81M)	EXT BEHAV (C) Age 12 (140M)	EXT BEHAV (C) Age 16 (198M)
Mother return to employment										
PT at 18th month	0.085**	-0.122**	-0.015	0.014	-0.031	0.005	-0.009	0.007	0.005	-0.025
	[0.037]	[0.058]	[0.032]	[0.035]	[0.042]	[0.047]	[0.032]	[0.035]	[0.041]	[0.048]
FT at 18th month	-0.030	-0.075	-0.036	0.005	-0.047	-0.034	-0.074	-0.225***	-0.101	-0.058
	[0.069]	[0.101]	[0.069]	[0.066]	[0.069]	[0.083]	[0.061]	[0.072]	[0.077]	[0.091]
Maternal education										
A-Level and above	-0.017	-0.096	-0.040	-0.041	-0.074	0.040	0.072*	0.016	0.057	0.153**
	[0.049]	[0.067]	[0.044]	[0.047]	[0.053]	[0.059]	[0.043]	[0.045]	[0.052]	[0.061]
Interaction effect										
A-Level × 0-18 month PT	-0.035	0.110	0.012	0.051	0.088	0.011	-0.041	-0.028	-0.051	-0.057
	[0.050]	[0.071]	[0.045]	[0.048]	[0.054]	[0.059]	[0.045]	[0.048]	[0.053]	[0.061]
A-Level × FT at 18th month	-0.007	0.093	0.024	0.064	0.061	0.049	-0.056	0.097	0.020	0.037
	[0.085]	[0.116]	[0.081]	[0.081]	[0.084]	[0.097]	[0.075]	[0.085]	[0.092]	[0.106]
N	7,220	3,964	8,857	7,921	6,606	5,144	8,857	7,902	6,600	5,161
Adj. R^2	0.0662	0.0436	0.0890	7,921	6,606	0.0774	0.106	0.104	0.105	0.0874

Notes: *<10%; **<5%; ***<1%. Robust standard errors are reported in brackets. Control variables are as in Table 1.

Table 5: Differential effects of early maternal employment by lone-parent status

	SMFQ (C) Age 9 (115M)	SMFQ (S) Age 18 (214M)	INT BEHAV (C) Age 4 (47M)	INT BEHAV (C) Age 7 (81M)	INT BEHAV (C) Age 12 (140M)	INT BEHAV (C) Age 16 (198M)	EXT BEHAV (C) Age 4 (47M)	EXT BEHAV (C) Age 7 (81M)	EXT BEHAV (C) Age 12 (140M)	EXT BEHAV (C) Age 16 (198M)
Maternal employment										
PT at 18th month	0.071**	-0.079*	-0.019	0.033	0.001	0.005	-0.025	-0.005	-0.021	-0.036
	[0.030]	[0.044]	[0.026]	[0.028]	[0.033]	[0.037]	[0.026]	[0.028]	[0.032]	[0.038]
FT at 18th month	-0.015	-0.004	-0.005	0.047	-0.007	0.015	-0.091**	-0.145***	-0.063	0.027
	[0.045]	[0.064]	[0.043]	[0.044]	[0.046]	[0.055]	[0.042]	[0.045]	[0.050]	[0.057]
Lone parent status										
Lone parent	-0.062	-0.150	0.023	0.029	0.073	-0.109	-0.002	-0.003	-0.001	0.057
	[0.101]	[0.125]	[0.074]	[0.081]	[0.088]	[0.115]	[0.072]	[0.076]	[0.098]	[0.129]
Interaction effect										
Lone parent × PT at 18th month	0.127	0.440**	0.207*	-0.033	-0.198	0.398**	0.126	-0.042	0.259	0.162
	[0.163]	[0.200]	[0.120]	[0.147]	[0.174]	[0.176]	[0.130]	[0.156]	[0.185]	[0.218]
Lone parent × FT at 18th month	-0.368	-0.174	-0.208	-0.252	-0.385	0.064	-0.187	-0.433*	-0.368	-0.635*
	[0.325]	[0.311]	[0.249]	[0.249]	[0.254]	[0.227]	[0.218]	[0.263]	[0.274]	[0.365]
N	6,962	3,812	8,493	7,635	6,368	4,995	8,493	7,616	6,363	5,010
Adj. R^2	0.0643	0.0462	0.0895	0.0816	0.0766	0.0741	0.105	0.103	0.0998	0.0843

Notes: ***<1*; **<5%; *<10%. Robust standard errors are reported in brackets. Control variables are as in Table 1.

Table 6: Differential effects of early maternal employment by childcare arrangements

	SMFQ (C) Age 9 (115M)	SMFQ (S) Age 18 (214M)	INT BEHAV (C) Age 4 (47M)	INT BEHAV (C) Age 7 (81M)	INT BEHAV (C) Age 12 (140M)	INT BEHAV (C) Age 16 (198M)	EXT BEHAV (C) Age 4 (47M)	EXT BEHAV (C) Age 7 (81M)	EXT BEHAV (C) Age 12 (140M)	EXT BEHAV (C) Age 16 (198M)
Maternal employment										
PT at 18th month	0.073*	-0.158**	0.025	0.039	0.004	0.016	0.007	-0.021	-0.019	-0.137**
	[0.042]	[0.061]	[0.037]	[0.043]	[0.054]	[0.050]	[0.037]	[0.044]	[0.051]	[0.054]
FT at 18th month	-0.013	-0.149	-0.034	-0.012	-0.078	0.062	-0.150*	-0.293***	-0.273***	-0.115
	[0.085]	[0.110]	[0.078]	[0.095]	[0.095]	[0.098]	[0.081]	[0.101]	[0.105]	[0.118]
Childcare type										
Centre	-0.121	-0.135	0.037	-0.201**	0.018	-0.039	-0.223***	-0.395***	-0.129	-0.235**
	[0.088]	[0.109]	[0.062]	[0.095]	[0.088]	[0.080]	[0.063]	[0.081]	[0.090]	[0.095]
Family care	0.031	-0.057	-0.029	-0.006	-0.025	-0.033	0.001	-0.010	-0.036	-0.071
	[0.036]	[0.047]	[0.029]	[0.037]	[0.040]	[0.044]	[0.028]	[0.035]	[0.040]	[0.043]
Commercial	-0.095	-0.039	0.008	-0.095	0.052	0.105	0.040	-0.073	-0.048	0.053
	[0.096]	[0.104]	[0.068]	[0.086]	[0.077]	[0.085]	[0.070]	[0.067]	[0.072]	[0.091]
Interaction effect										
Centre × PT at 18th month	0.085	0.143	0.040	0.206*	0.042	0.098	0.067	0.210**	0.038	0.195*
	[0.107]	[0.139]	[0.082]	[0.109]	[0.110]	[0.104]	[0.084]	[0.105]	[0.115]	[0.115]
Family care × PT at 18th month	-0.019	0.091	-0.070	-0.025	-0.005	-0.020	-0.047	0.036	0.030	0.155**
	[0.051]	[0.076]	[0.045]	[0.054]	[0.063]	[0.064]	[0.046]	[0.054]	[0.061]	[0.067]
Commercial × PT at 18th month	0.037	0.203	0.037	0.052	-0.081	-0.025	-0.045	-0.020	-0.011	-0.012
	[0.107]	[0.125]	[0.082]	[0.100]	[0.096]	[0.100]	[0.085]	[0.088]	[0.093]	[0.110]
Centre × FT at 18th month	0.007	0.343**	0.088	0.295**	-0.072	0.051	0.258**	0.500***	0.254*	0.353**
	[0.150]	[0.173]	[0.128]	[0.136]	[0.139]	[0.137]	[0.113]	[0.137]	[0.145]	[0.169]
Family care × FT at 18th month	-0.029	0.018	-0.057	-0.106	-0.021	-0.085	0.051	0.018	0.123	0.093
	[0.083]	[0.111]	[0.074]	[0.089]	[0.088]	[0.095]	[0.077]	[0.092]	[0.098]	[0.109]
Commercial × FT at 18th month	0.077	0.195	0.074	0.244**	0.102	-0.101	-0.058	0.153	0.200*	-0.039

	[0.122]	[0.147]	[0.097]	[0.117]	[0.109]	[0.124]	[0.100]	[0.108]	[0.116]	[0.134]
N	7,220	3,964	8,857	7,921	6,606	5,144	8,857	7,902	6,600	5,161
Adj. R^2	0.0662	0.0442	0.0899	0.0903	0.0804	0.0774	0.107	0.111	0.113	0.0877

Notes: *<10%; **<5%; ***<1%. Robust standard errors are reported in brackets. Control variables are as in Table 1.

Table 7: Differential effects of early maternal employment by maternal mental health (at 8 months)

	SMFQ (C) Age 9 (115M)	SMFQ (S) Age 18 (214M)	INT BEHAV (C) Age 4 (47M)	INT BEHAV (C) Age 7 (81M)	INT BEHAV (C) Age 12 (140M)	INT BEHAV (C) Age 16 (198M)	EXT BEHAV (C) Age 4 (47M)	EXT BEHAV (C) Age 7 (81M)	EXT BEHAV (C) Age 12 (140M)	EXT BEHAV (C) Age 16 (198M)
Maternal employment										
PT at 18th month	-0.024	-0.389	-0.076	-0.076	0.056	-0.389	-0.275	-0.135	-0.205	-0.206
	[0.318]	[0.386]	[0.230]	[0.230]	[0.258]	[0.350]	[0.225]	[0.263]	[0.307]	[0.375]
FT at 18th month	0.165	0.436	0.464	0.464	-0.038	0.306	0.104	-0.256	-0.424	-0.257
	[0.433]	[0.497]	[0.362]	[0.362]	[0.451]	[0.509]	[0.320]	[0.387]	[0.468]	[0.574]
Mother's emotional health (Inversed CCEI at return age)										
Inversed CCEI at 8 months	0.020***	0.002	0.018***	0.018***	0.018***	0.010***	0.017***	0.016***	0.014***	0.014***
	[0.003]	[0.003]	[0.002]	[0.002]	[0.002]	[0.003]	[0.002]	[0.002]	[0.003]	[0.003]
Interaction effect										
ICCEI × 0-18 month PT	0.001	0.004	0.001	0.001	-0.000	0.005	0.003	0.002	0.002	0.002
	[0.004]	[0.005]	[0.003]	[0.003]	[0.003]	[0.004]	[0.003]	[0.003]	[0.004]	[0.005]
ICCEI ×FT at 18th month	-0.002	-0.006	-0.006	-0.006	0.001	-0.004	-0.003	0.001	0.005	0.003
	[0.005]	[0.006]	[0.004]	[0.004]	[0.006]	[0.006]	[0.004]	[0.005]	[0.006]	[0.007]
N	6,979	3,825	8,516	7,649	6,389	5,000	8,516	7,632	6,384	5,016
Adj. R^2	0.0834	0.0452	0.102	0.0955	0.0837	0.0793	0.119	0.115	0.111	0.0925

Notes: *<10%; **<5%; ***<1%. Robust standard errors are reported in brackets. Control variables are as in Table 1. CCEI = Crown Crisp Experiential Index, which is a measure of maternal depression. We reverse the score so that higher values now represent better mental health.

Table 8: Early maternal employment and parental time investment

	Mother's cognitively stimulating activities			Father's stimulating activities		
	0.5 years	**1.5 years**	**3.5 years**	**0.5 years**	**1.5 years**	**3.5 years**
Panel A: Returned within 18 months						
Returned to employment between M0-6	0.004	-0.074***	-0.060**	0.114***	0.126***	0.061**
	[0.025]	[0.025]	[0.026]	[0.025]	[0.025]	[0.028]
Returned to employment between M7-12	0.022	0.013	-0.056*	0.047	0.144***	0.117***
	[0.032]	[0.031]	[0.032]	[0.032]	[0.031]	[0.034]
Returned to employment between M13-18	-0.003	-0.010	0.001	-0.081**	0.023	0.040
	[0.037]	[0.041]	[0.040]	[0.038]	[0.040]	[0.042]
Panel B: Returned PT vs. FT at 18th month						
In PT employment at M18	-0.002	0.000	0.008	0.015	0.078***	0.038
	[0.023]	[0.022]	[0.024]	[0.023]	[0.023]	[0.025]
In FT employment at M18	0.033	-0.220***	-0.130***	0.119***	0.173***	0.041
	[0.037]	[0.039]	[0.039]	[0.039]	[0.039]	[0.042]
Observations	11,162	10,909	9,894	10,724	9,894	9,209
Panel A: Adjusted R-squared	0.0382	0.0403	0.0373	0.0918	0.0373	0.0795
Panel B: Adjusted R-squared	0.0395	0.0423	0.0378	0.0895	0.110	0.0781
	Mother's playing activities			**Father's playing activities**		
	0.5 years	**1.5 years**	**3.5 years**	**0.5 years**	**1.5 years**	**3.5 years**
Panel A: Returned within 18 months						
Returned to employment between M0-6	0.005	-0.063**	-0.019	0.108***	0.089***	0.066**
	[0.024]	[0.025]	[0.027]	[0.024]	[0.025]	[0.028]
Returned to employment between M7-12	-0.003	-0.049	0.049	0.074**	0.083***	0.088***
	[0.031]	[0.031]	[0.033]	[0.031]	[0.031]	[0.034]
Returned to employment between M13-18	-0.060	-0.001	-0.042	0.006	0.028	0.052
	[0.044]	[0.038]	[0.043]	[0.039]	[0.038]	[0.041]
Panel B: Returned PT vs. FT at 18th month						
In PT employment at M18	-0.010	0.014	-0.021	0.041*	0.077***	0.055**
	[0.023]	[0.022]	[0.024]	[0.022]	[0.022]	[0.024]
In FT employment at M18	0.026	-0.165***	-0.071*	0.109***	0.137***	0.070*
	[0.032]	[0.040]	[0.038]	[0.036]	[0.034]	[0.040]

Observations	11,159	10,883	9,877	10,788	10,352	9,209
Panel C: Adjusted R-squared	0.0443	0.0398	0.0473	0.0862	0.111	0.0908
Panel D: Adjusted R-squared	0.0432	0.0423	0.0476	0.0853	0.112	0.0911

Note: *<10%; **<5%; ***<1%. Robust standard errors are reported in brackets. Control variables are as in Table 1. See Table 3A in the Appendix for the description of the outcome variables.

Table 9: Early maternal employment and the extent of childcare services

	Hours of family childcare use per week				Hours of commercial childcare use per week			
	1yr	**2yrs**	**3yrs**	**4yrs**	**1yr**	**2yrs**	**3yrs**	**4yrs**
Panel A: Returned within 18 months								
Returned to employment between M0-6	7.808***	6.044***	3.607***	1.063***	4.097***	3.639***	1.996***	1.831***
	[0.636]	[0.406]	[0.244]	[0.126]	[0.191]	[0.191]	[0.148]	[0.205]
Returned to employment between M7-12	5.453***	4.762***	2.170***	0.423***	3.810***	3.211***	0.974***	0.808***
	[0.774]	[0.536]	[0.310]	[0.163]	[0.291]	[0.284]	[0.218]	[0.263]
Returned to employment between M13-18	2.043**	4.653***	2.336***	0.153	0.044	1.293***	0.021	-0.128
	[0.990]	[0.680]	[0.415]	[0.202]	[0.211]	[0.295]	[0.204]	[0.271]
Panel B: Returned PT vs. FT at 18th month								
In PT employment at M18	4.135***	5.642***	2.967***	0.515***	1.238***	1.587***	0.319**	-0.234
	[0.574]	[0.376]	[0.238]	[0.124]	[0.179]	[0.180]	[0.137]	[0.192]
In FT employment at M18	11.215***	10.130***	4.744***	1.743***	11.367***	11.531***	6.922***	5.576***
	[1.088]	[0.761]	[0.510]	[0.342]	[0.592]	[0.599]	[0.523]	[0.568]
Panel A: Observations	12,303	12,303	12,303	12,303	12,303	12,303	12,303	8,041
Panel B: Observations	15,445	15,445	15,445	15,445	15,445	15,445	15,445	8,132
Panel A: Adjusted R-squared	0.0665	0.0756	0.142	0.0983	0.206	0.179	0.125	0.121
Panel B: Adjusted R-squared	0.142	0.153	0.216	0.113	0.267	0.255	0.177	0.152

Note: *<10%; **<5%; ***<1. Control variables are as in Table 1.

Appendix

Table A1: Descriptive statistics

	PT0-18		FT0-18		19-33		over 33	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Mother's return to work	42.94		12.3		32.52		12.25	
Child age when returned (months)	7.62	4.53	6.45	3.89	30.57	4.45	35.16	1.75
Mother's age at birth	28.88	4.3	29.82	4.68	28.34	4.87	28.77	4.97
% A-level or above (mother)	0.44	0.5	0.6	0.49	0.37	0.48	0.38	0.48
% A-level or above (father)	0.52	0.5	0.58	0.49	0.53	0.5	0.55	0.5
% University degree (mother)	0.27	0.45	0.4	0.49	0.16	0.37	0.16	0.37
% University degree (father)	0.23	0.42	0.29	0.45	0.21	0.41	0.22	0.41
Whether lone parent at birth	0.03	0.18	0.06	0.23	0.09	0.29	0.09	0.29
Experienced major financial problem (before birth)	0.11	0.31	0.11	0.31	0.12	0.32	0.1	0.3
White ethnic background	0.97		0.93		0.96		0.96	
Num. older siblings	1.06	1.06	1.05	1.11	1.17	1.14	1.18	1.15
Birth weight (gram)	3446.1	541.78	3414.07	542.55	3403.22	554.23	3380.92	570.05
Born premature (under 37 weeks)	0.1	0.3	0.11	0.31	0.1	0.31	0.12	0.33
Childcare (centre base)	0.05	0.21	0.09	0.29	0.01	0.1	0.01	0.1
Childcare (family base)	0.48	0.5	0.55	0.5	0.29	0.45	0.3	0.46
Childcare (commercial base)	0.1	0.3	0.37	0.48	0.01	0.09	0	0.06
Mother in employment (age 5)	0.86	0.35	0.90	0.30	0.45	0.50	0.37	0.48
Mother in employment (age 10)	0.90	0.30	0.91	0.29	0.69	0.46	0.68	0.47
Mother in employment (age 12)	0.91	0.28	0.92	0.28	0.77	0.42	0.77	0.42

Table A2: Description of employment and control variables

Grouping	Variable Description
Employment	Age of child when first return to work (asked when child aged 33 months)
	Whether first return as part-time between months 0 and 18. (under 30 hr/week)
	Whether first return as full-time between months 0 and 18. (>30 hr/wk)
	Whether first return to employment between month 19 to 34
	Whether first return to employment after month 34
Basic	Mother's age at start of pregnancy
	Mother's highest level of educational attainment (5 levels)
	Whether child is white ethnicity
	Number of siblings aged between 0-15 years old at birth
	Number of siblings aged between 16-18 years old at birth
Demographic	Child's gender
	Child's birth weight
	Whether was admitted to special care unit at birth
	Father's highest level of educational attainment (5 levels)
	Father's social class
	Father's employment status at 21 months
	Father's pre-birth occupational grouping (6 groups)
	Whether a younger sibling by 42 months
	Whether live on own housing at 8 months old
	Whether live in a council housing at 8 months old
	Whether experienced financial difficulties during pregnancy
Proxy for mother's labour market ability	Mother worked in pregnancy
	Hours worked at last pre-birth job
	Mother's pre-birth occupational grouping (6)
	Social networks score
	Social support score
	Grandmother's education attainment
	Mother's pre-birth BMI
	Gestation stopped working
	Mother in employment at 54 months old
	Duration of residence in Avon
	Pre-pregnancy physical health
	Grandfather's education attainment
Mother's attitudinal variables	CCEI (anxiety subscale) score during 2nd trimester
	CCEI (depression subscale) score during 2nd trimester
	Mother's Locus of control during 2nd trimester
	Mother's Interpersonal score during 2nd trimester

Smoking during pregnancy
Mother's childhood happiness score
Presence of mother's mother in the household during childhood
Alcohol consumption during pregnancy
Maternal grandmother’s maternal care score
Life events in childhood score

Table A3: Description of the outcome variables used the analysis

Psycho-social measures:	
Short Moods and Feelings Questionnaire (SMFQ):	A 13-item scale measure for depressive symptoms. There are two versions: carer-assessed (at child ages 9, 11, 13 and 16) and self-assessed (at ages 11, 13, 17 and 18). The raw SMFQ scores are re-scaled so that the high number reflects positive psychosocial wellbeing. All scores are standardized with mean 0 and standard deviation 1.
Strength and Difficulties Questionnaire (SDQ):	A 25-item scale with 5 sub-scales consisting of (i) Conduct problems, (ii) Hyperactivity/inattention, (iii) Peer problems; (iv) Emotional symptoms; and (v) Pro-social behaviour. Total SDQ is the sum of the first four sub-scales. There are two versions of SDQ: carer-assess (at 4, 7, 8, 10, 12, 13 and 17 years) and teacher-assess (at 8 and 11 years). The raw SDQ scores are re-scaled so that the high number reflects positive psychosocial behaviours. All scores are standardized with mean 0 and standard deviation 1**.**
Parental time investment measures:	
	Six measures of parental activities with the cohort child come from self-reported parental time-use data (at 1.5 and 3.5 years). The data contains information on the number of times in a given period that mothers and their partners individually engage in an activity with their child. Each measure is an un-weighted index with the composition listed below. All time investment measures are standardized with mean 0 and standard deviation 1.
Maternal cognitive stimulation	Sing to CH; read to CH; teach CH; talk to CH while working (only at 3.5 years old)
Maternal play time	Play with toys with CH; any play with CH; engage in physical play with CH
Maternal basic care time	Bath CH; prepare food for CH
Paternal cognitive stimulation	Sing to CH; read to CH
Paternal play time	play with toys with CH; any play with CH; engage in physical play with CH
Paternal basic care time	Bath CH; prepare food for CH
Childcare arrangement measures:	
Childcare hours using families	Number of reported hours per week that childcare relied upon a person from the family members (partner, grandparents), friends or relatives.
Childcare hours using commercial outlets	Number of reported that hours per week childcare rely upon a paid non-family person either inside home (child minder, nanny, sitter) or centre-base (crèche, nursery).
Perceived tiredness and help received	
Rating of own tiredness	Self-assess scoring with 0 = not tired at all and 3 = very much. There are assessments for both mothers and partners in the

	sample (at 1st trimester, 2nd month, 1, 2, 5, 6 and 9 years).
Rating of level of help received from partner	Self-evaluated scoring with 0 = receive no help from partner and 3 = a lot of help (2nd month, 1, 2, 5, 6 and 9 years).

Table A4: Maternal employment and child's sub-scale behavioural outcomes

Variables	Panel A: Returned to employment			Panel B: Returned to employment		N	Panel A: Adjusted -R^2	Panel B: Adjusted -R^2
	0-6 months	7-12 months	13-18 months	0-18 PT	0-18 FT			
A) Sub-scale SDQ (Carer-reported)								
Conduct SDQ-4yrs	0.012	0.011	0.007	0.016	-0.085**	8,857	0.0718	0.0725
	[0.029]	[0.035]	[0.044]	[0.026]	[0.043]			
Conduct SDQ-7yrs	-0.020	-0.079**	-0.038	-0.037	-0.161***	7,934	0.0679	0.0690
	[0.032]	[0.038]	[0.048]	[0.028]	[0.047]			
Conduct SDQ-12yrs	0.020	-0.009	0.014	-0.031	-0.055	6,622	0.0687	0.0639
	[0.037]	[0.043]	[0.052]	[0.033]	[0.051]			
Emotional SDQ-4yrs	-0.018	-0.041	0.030	-0.005	0.020	8,857	0.0640	0.0639
	[0.029]	[0.036]	[0.044]	[0.026]	[0.042]			
Emotional SDQ-7yrs	0.012	-0.007	0.086*	0.012	0.079*	7,929	0.0637	0.0637
	[0.032]	[0.038]	[0.046]	[0.028]	[0.043]			
Emotional SDQ-12yrs	-0.040	-0.025	0.018	-0.037	0.011	6,611	0.0709	0.0710
	[0.035]	[0.042]	[0.053]	[0.033]	[0.044]			
Peer SDQ-4yrs	-0.017	0.030	0.010	-0.009	-0.061	8,857	0.0680	0.0681
	[0.029]	[0.036]	[0.043]	[0.025]	[0.044]			
Peer SDQ-7yrs	0.003	0.076**	0.063	0.038	-0.032	7,929	0.0660	0.0658
	[0.032]	[0.038]	[0.048]	[0.028]	[0.046]			
Peer SDQ-12yrs	-0.003	0.053	0.070	0.048	-0.048	6,629	0.0492	0.0495
	[0.037]	[0.042]	[0.049]	[0.031]	[0.049]			
Hyperactive SDQ-4yrs	-0.033	-0.002	-0.045	-0.039	-0.109***	8,857	0.0715	0.0722
	[0.029]	[0.036]	[0.044]	[0.026]	[0.041]			
Hyperactive SDQ-7yrs	-0.036	-0.060	-0.044	0.019	-0.163***	7,918	0.0524	0.0543
	[0.031]	[0.039]	[0.051]	[0.028]	[0.044]			
Hyperactive SDQ-12yrs	-0.002	0.003	-0.026	-0.000	-0.116**	6,612	0.0568	0.0579
	[0.034]	[0.043]	[0.055]	[0.031]	[0.049]			

Pro-social SDQ-4yrs	0.021	-0.004	0.030	-0.011	0.060	8,857	0.0377	0.0380
	[0.029]	[0.036]	[0.044]	[0.026]	[0.042]			
Pro-social SDQ-7yrs	0.030	-0.076**	0.012	-0.010	0.040	7,931	0.0311	0.0303
	[0.031]	[0.038]	[0.046]	[0.027]	[0.043]			
Pro-social SDQ-12yrs	-0.040	-0.032	0.035	-0.013	-0.020	6,345	0.0317	0.0314
	[0.035]	[0.043]	[0.055]	[0.032]	[0.051]			
B) Sub-scale SDQ (Teacher-reported)								
Conduct SDQ-7yrs	-0.049	0.017	0.018	-0.006	0.003	5,123	0.111	0.111
	[0.041]	[0.046]	[0.055]	[0.035]	[0.051]			
Conduct SDQ-12yrs	-0.052	-0.002	-0.019	-0.033	-0.054	5,823	0.141	0.141
	[0.038]	[0.042]	[0.059]	[0.033]	[0.049]			
Emotional SDQ-7yrs	0.022	0.131***	0.067	0.051	-0.001	5,127	0.0377	0.0368
	[0.038]	[0.045]	[0.061]	[0.034]	[0.057]			
Emotional SDQ-12yrs	-0.021	0.002	0.011	-0.023	-0.036	5,825	0.0461	0.0463
	[0.035]	[0.044]	[0.058]	[0.032]	[0.052]			
Peer SDQ-7yrs	-0.054	0.092**	0.048	0.048	-0.100	5,127	0.0420	0.0414
	[0.039]	[0.047]	[0.059]	[0.035]	[0.063]			
Peer SDQ-12yrs	-0.040	0.067	0.014	0.030	-0.094	5,826	0.0438	0.0438
	[0.037]	[0.046]	[0.057]	[0.033]	[0.059]			
Hyperactive SDQ-7yrs	0.014	0.028	0.052	0.025	-0.092	5,098	0.0721	0.0729
	[0.039]	[0.047]	[0.060]	[0.035]	[0.056]			
Hyperactive SDQ-12yrs	-0.054	-0.023	0.061	-0.006	-0.045	5,826	0.0703	0.0697
	[0.036]	[0.045]	[0.054]	[0.032]	[0.053]			

Note: *<10%; **<5%; ***<1%. Robust standard errors are reported in brackets.

Each row represents a separate regression equation. Control variables are as in Table 1.

Table A5: Maternal employment and cognitive outcomes at different developmental stages

Variables	Panel A: Returned to employment			Panel B: Returned to employment		N	Panel A: Adjusted -R^2	Panel B: Adjusted -R^2
	0-6 months	7-12 months		0-18PT	0-18FT			
SAT Language M54	0.008	0.069*	0.006	0.020	0.052	8,140	0.102	0.104
	[0.029]	[0.037]	[0.043]	[0.026]	[0.043]			
SAT Reading M54	-0.004	0.037	0.048	0.033	0.004	8,143	0.145	0.146
	[0.028]	[0.036]	[0.043]	[0.025]	[0.045]			
SAT Writing M54	0.000	0.069*	0.014	0.017	0.010	8,143	0.126	0.128
	[0.028]	[0.036]	[0.043]	[0.026]	[0.044]			
SAT Maths M54	-0.000	0.064*	0.002	0.021	0.014	8,142	0.154	0.158
	[0.028]	[0.036]	[0.043]	[0.026]	[0.044]			
SAT Total M54	0.002	0.073**	0.020	0.027	0.026	8,145	0.191	0.192
	[0.027]	[0.035]	[0.041]	[0.024]	[0.042]			
Lit. Reading M84	-0.044	-0.023	-0.011	-0.016	-0.076*	7,480	0.131	0.129
	[0.030]	[0.037]	[0.047]	[0.026]	[0.042]			
Lit. Spelling M84	-0.060**	-0.033	-0.034	-0.013	-0.092**	7,369	0.0996	0.101
	[0.030]	[0.038]	[0.048]	[0.027]	[0.044]			
Lit. Total M84	-0.042	-0.018	-0.015	-0.002	-0.069	7,482	0.114	0.114
	[0.030]	[0.037]	[0.047]	[0.027]	[0.043]			
KS1 Reading M88	-0.056	0.026	0.052	0.018	-0.029	9,647	0.196	0.201
	[0.037]	[0.047]	[0.059]	[0.034]	[0.058]			
KS1 Writing M88	-0.059*	0.028	0.014	-0.009	-0.028	9,647	0.210	0.213
	[0.031]	[0.040]	[0.046]	[0.028]	[0.049]			
KS1 Maths M88	-0.021	0.024	0.027	0.019	0.000	9,640	0.140	0.147
	[0.025]	[0.033]	[0.040]	[0.024]	[0.039]			
KS1 Total M88	-0.038	0.023	0.028	0.010	-0.016	9,631	0.211	0.216
	[0.024]	[0.031]	[0.038]	[0.022]	[0.038]			
KS2 English M134	-0.041*	0.050*	0.036	0.028	-0.033	10,297	0.244	0.245
	[0.023]	[0.029]	[0.035]	[0.021]	[0.034]			
KS2 Maths M134	-0.043*	-0.015	0.041	-0.000	-0.045	10,301	0.188	0.192
	[0.024]	[0.030]	[0.037]	[0.022]	[0.035]			
KS2 Science M134	-0.020	0.009	0.014	0.001	-0.034	10,401	0.205	0.207
	[0.023]	[0.029]	[0.036]	[0.021]	[0.033]			
KS4 Total Average M192	-0.040*	0.019	0.031	0.005	-0.040	10,164	0.331	0.319
	[0.021]	[0.027]	[0.034]	[0.020]	[0.032]			

Note: *<10%; **<5%; ***<1. Control variables are as in Table 1.

Table A6: Robustness checks – the effects of including father's time input as additional control variables on the early maternal employment estimates

Variables	SMFQ (C) Age 9 (115M)	SMFQ (S) Age 18 (214M)	INT BEHAV (C) Age 4 (47M)	INT BEHAV (C) Age 7 (81M)	INT BEHAV (C) Age 12 (140M)	INT BEHAV (C) Age 16 (198M)	EXT BEHAV (C) Age 4 (47M)	EXT BEHAV (C) Age 7 (81M)	EXT BEHAV (C) Age 12 (140M)	EXT BEHAV (C) Age 16 (198M)
Panel A: Returned within 18 months (excluding father's time inputs)										
Returned to employment between M0-6	0.050	-0.109**	-0.006	0.006	-0.046	-0.017	-0.003	-0.010	0.011	-0.003
	[0.035]	[0.050]	[0.030]	[0.034]	[0.040]	[0.044]	[0.031]	[0.033]	[0.038]	[0.044]
Returned to employment between M7-12	0.036	-0.113*	-0.024	0.039	-0.026	0.007	0.000	-0.057	0.005	0.007
	[0.042]	[0.059]	[0.039]	[0.040]	[0.045]	[0.051]	[0.038]	[0.041]	[0.045]	[0.052]
Returned to employment between M13-18	0.095*	-0.082	0.034	0.134***	0.063	0.129**	-0.036	-0.014	0.008	0.074
	[0.050]	[0.084]	[0.046]	[0.050]	[0.055]	[0.065]	[0.047]	[0.051]	[0.054]	[0.065]
Panel A: Returned within 18 months (including father's time inputs as controls)										
Returned to employment between M0-6	0.059*	-0.121**	-0.005	0.005	-0.044	-0.022	-0.013	-0.022	-0.001	-0.013
	[0.035]	[0.051]	[0.031]	[0.034]	[0.040]	[0.044]	[0.031]	[0.033]	[0.038]	[0.044]
Returned to employment between M7-12	0.035	-0.124**	-0.024	0.034	-0.031	-0.002	-0.008	-0.071*	-0.010	-0.008
	[0.042]	[0.059]	[0.039]	[0.040]	[0.045]	[0.051]	[0.038]	[0.041]	[0.045]	[0.052]
Returned to employment between M13-18	0.094*	-0.085	0.035	0.131***	0.058	0.121*	-0.032	-0.014	0.001	0.064
	[0.050]	[0.085]	[0.046]	[0.050]	[0.055]	[0.064]	[0.047]	[0.051]	[0.053]	[0.065]
Observations	6,140	3,401	7,434	6,743	5,654	4,521	7,434	6,728	5,652	4,536
Panel C: Returned PT vs. FT at 18th month (excluding father's time inputs)										
PT at 18th month	0.063**	-0.082*	0.008	0.042	0.006	0.004	-0.022	0.009	-0.022	-0.037
	[0.030]	[0.047]	[0.027]	[0.030]	[0.035]	[0.039]	[0.028]	[0.029]	[0.033]	[0.039]

FT at 18th month	-0.007	0.001	0.034	0.053	-0.001	0.065	-0.063	-0.129***	-0.078	0.030
	[0.045]	[0.067]	[0.042]	[0.046]	[0.048]	[0.054]	[0.043]	[0.047]	[0.052]	[0.058]
Panel D: Returned PT vs. FT at 18th month (including father's time inputs as controls)										
PT at 18th month	0.063**	-0.088*	0.006	0.037	0.002	-0.002	-0.028	-0.000	-0.035	-0.047
	[0.030]	[0.047]	[0.027]	[0.030]	[0.035]	[0.039]	[0.028]	[0.029]	[0.033]	[0.039]
FT at 18th month	-0.009	-0.008	0.031	0.045	0.000	0.056	-0.082*	-0.155***	-0.102**	0.014
	[0.045]	[0.067]	[0.042]	[0.047]	[0.047]	[0.054]	[0.043]	[0.047]	[0.052]	[0.058]
Observations	6,140	3,401	7,434	6,743	5,654	4,521	7,434	6,728	5,652	4,536

Note: *<10%; **<5%; ***<1. Control variables are as in Table 1.