# Can daddies learn how to change nappies? Evidence from a short paternity leave policy <br> Ariane Pailhé, Anne Solaz, Maxime Tô 

## To cite this version:

Ariane Pailhé, Anne Solaz, Maxime Tô. Can daddies learn how to change nappies? Evidence from a short paternity leave policy. 2018. hal-01892935

## HAL Id: hal-01892935

## https://hal.science/hal-01892935

Preprint submitted on 10 Oct 2018

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire HAL, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

# DOCUMENTS240 

## Can Daddies Learn How to Change Nappies?

Evidence from a Short Paternity Leave Policy

Ariane Pailhé, Anne Solaz, Maxime Tô

Ariane Pailhé, Anne Solaz, Maxime Tô, 2018, Can Daddies Learn How to Change Nappies? Evidence from a Short Paternity Leave Policy, Paris, INED, Document de travail, 240

# Can Daddies Learn How to Change Nappies? Evidence from a Short Paternity Leave Policy 

Ariane Pailhé* ${ }^{*} \quad$ Anne Solaz ${ }^{\dagger} \quad$ Maxime Tô ${ }^{\ddagger}$

June 24, 2018


#### Abstract

When paternity leave was introduced in France in 2002, the objectives were to involve fathers more closely with their children from an early age and thus reduce gender inequalities in the domestic sphere. This article assesses the impact of paternity leave on the distribution of domestic and parental tasks within couples in the first months after birth, doing so by using data from the national cohort of children born in 2011 (ELFE). In order to identify the effect of paternity leave, we take advantage of the survey's timing and the fact that some fathers have already taken leave when others are about to do so. A comparison of these two groups shows that paternity leave leads to a more equal division of parental tasks and some domestic activities after the birth of a first child. Depending on their level of education, fathers who have taken paternity leave perform some domestic and parental tasks rather than others. Even short-term paternity leave can thus lead to changes in behavior in the private sphere, which seems to continue up to when the child is 2 years old. From a theoretical point of view, these changes can be seen as changes in the technology of the household's production function: paternity leave gives fathers the opportunity to learn to perform child-related tasks.


[^0]Keywords: paternity leave, division of labor, gender, housework, childcare, policy evaluation

## Résumé

Les objectifs du congé paternité mis en place en France en 2002 sont d'impliquer davantage les pères auprès de leurs enfants dès leur plus jeune âge et de réduire ainsi les inégalités de genre dans la sphère domestique. Cet article évalue l'impact du congé parental sur la répartition des tâches domestiques et parentales au sein des couples dans les premiers mois suivant la naissance, en utilisant les données de la cohorte nationale d'enfants nés en 2011 (ELFE). Afin d'identifier l'effet du congé parental, nous tirons bénéfice du calendrier de l'enquête, et du fait que certains pères ont déjà pris le congé de paternité quand d'autres sont sur le point de le faire. La comparaison de ces deux groupes montre que le congé de paternité entraîne une meilleure répartition des tâches parentales, et de quelques activités domestiques lors d'une première naissance. Selon leur niveau d'instruction, les pères qui ont pris un congé de paternité assument certaines tâches domestiques et parentales plutôt que d'autres. Un congé de paternité de courte durée peut ainsi entraîner des changements de comportement dans la sphère privée, qui semble se maintenir lorsque l'enfant a 2 ans. D'un point de vue théorique, ces changements peuvent être considérés comme un changement dans la technologie de la fonction de production du ménage : le congé de paternité donne aux pères la possibilité d'apprendre à accomplir des tâches liées à l'enfant.

Mots-clés: congé paternité, division du travail, genre, travail domestique, soins aux enfants, évaluation de politique publique

## 1 Introduction

Men and women tend to make different adjustments when they become parents. Women typically reduce their labor supply (Angrist \& Evans, 1998) and devote more time to housework in addition to taking care of children, while men increase or maintain their working hours (Apps \& Rees, 2005; Anxo et al., 2011), leading in many cases to stronger marital specialization. In spite of being gender-neutral, parental leave is to a large extent taken mostly by women, which deepens the gender gap in housework and thus accentuates divergent career paths between spouses (Han et al. 2009; Bruning \& Plantenga, 1999).

Paid father-specific leave has been viewed by policymakers as a way to involve fathers more in parental duties from the earliest age of the child, change household time allocation and foster gender equality. Some countries have implemented fathers' quotas in parental leave, i.e., non-transferable long periods of paid parental leave used exclusively by fathers. Others countries have opted for the statutory paternity leave, i.e., a short leave only for fathers after a birth. This paper analyses the extent to which a short-term paternity leave leads to a more equal division of housework and childcare, giving fathers the opportunity to participate in child-rearing activities from the earliest age of the child. It studies the case of French paternity leave, a 11-day statutory paid leave that was implemented in 2002.

In spite of the fact that the formula for short-term paternity leave is the least costly and most frequently implemented form of leave for fathers, few studies have evaluated its impact on gender equality as most research is devoted to the effect of fathers' quotas. Moreover, most studies evaluating the impact of paternity leave policies on paternal and maternal care at home focus on indirect indicators of parental investment, such as labor market earnings or working hours. To the best of our knowledge, few studies evaluate the effect of paternity leave on intra-marital specialization. In these studies, little attention has been paid to the fact that the take-up of paternity leave is likely to be partly endogenous: fathers who take the paternity leave may be more willing to participate to domestic and parental tasks. Using the recent large national cohort of children born in France in 2011 (ELFE cohort) and a question on the will to take-up, we assess the effect of short duration paternity leave on the division of 13 housework- and newborn-related tasks between parents at around two months
after the child birth. Our identification strategy is based on comparing two groups of fathers, those who have already taken paternity leave and those who are about to take it, excluding fathers who are unwilling or unable to take the leave. To do so, we take advantage of both the flexibility in taking French paternity leave and the discrepancies in the timing of the birth cohort survey that we use.

Based on this large sample of parents, we find that, in spite of its short duration, a twoweek paternity leave has a positive impact on the household's allocation of other parental and housework tasks. New fathers who took the paternity leave are more involved in most child-rearing activities than fathers who will take it. Such positive effect is not observed for births of rank 2 and higher. Paternity leave also leads to a more egalitarian division of some housework tasks. According to their level of education, fathers who have taken paternity leave take on certain domestic and parental tasks rather than others. These results show that a short-term paternity leave may lead to behavioral changes in the household in the short-run. These changes in behavior seem to continue when the child reaches the age of 2 . From a theoretical perspective, these changes may be viewed as a change in the technology of the household production function: paternity leave gives fathers the opportunity to learn how to fulfill child-related tasks. This interpretation is enforced, one, by the fact that effects are observed only in the case of a first child.

The paper is organized as follows. The next section discusses how this short leave should have an impact on spouse specialization, outlines the main results found in the literature and presents the French paternity leave. Section 3 describes the data. Section 4 presents the analytical strategy, while Section 5 reports the results and robustness checks.

## 2 Literature review

### 2.1 Why should short paternity leave have an impact on spouse specialization?

In a collective approach of the family, where domestic goods and children can be seen as public goods produced by the household, and assuming a production function with constant
returns to scale, the ratio between the time spent by each of the spouses in the production of public goods depends only on the production function and relative wages of the spouses (see Browning et al., 2014, Chapter 4). Parental preferences influence the total quantity of the goods produced by the household, but they play no role in the relative time spent by each partner on producing these public goods. In this framework, we can identify two potential mechanisms for changing spouse division of tasks specialization after specific leave for fathers: It may i) change the relative wages, or ii) increase the father's productivity in domestic and childcare activities.

The first mechanism has little relevance in cases of short-term paternity leave. A 2-week paternity leave hardly induces any change in spouses' relative wages: the leave is too short to induce important changes in the human capital that would impact the balance between spouses' labor market earnings. Moreover, the fathers' earnings losses are covered by the State or the employer in most cases.

The second mechanism is most likely to operate. The paternity leave - even a short-term one - is likely to influence the household production function. In Becker's allocation-of-time framework (Becker, 1965), where the father's and mother's time with children are perfect substitutes for home production, we expect a change in the specialization as soon as there is a change in the partner's comparative advantage in domestic production. Paternity leave is likely to increase the men's comparative advantage: during their leave, fathers may be involved in housework and child-rearing activities and they may learn how to practice them. This learning-by-doing process would increase fathers' productivity in parental activities. Thus, the production function may be affected by this change in fathers' domestic productivity, which in turn may modify the relative time spent by parents on domestic and childcare work.

Short parental leave may also affect preferences over household produced goods: It may increase father-child bonding and thus increase the share that fathers give to the children. This change in preferences would increase the total quantity of childcare but not affect the parents' relative share in housework.

### 2.2 Empirical Evidence on Paternity Leave

All studies analyzing the division of housework between men and women reach the same conclusion: Despite the dramatic increase in female participation in the labor market across all developed countries, huge gender inequalities in housework have persisted over time (Lachance-Grzela \& Bouchard, 2010; Bianchi et al., 2012). Time spent by women on housework has decreased over time, but this decline was not compensated for by men's higher involvement in unpaid work, which instead has remained stable or evolved very slowly. This gender division of labor persists in all industrialized countries at different orders of magnitude, depending on the national context (Anxo et al., 2011; Fuwa, 2004; Hook, 2010). On the other hand, both women and men have shifted to doing more childcare over the last few decades in many countries. However, even if the gender gap in childcare has been substantially reduced (Gauthier et al., 2004; Sayer et al., 2004), the women's share in childcare remains higher than men's.

Implementing leaves dedicated strictly to fathers is one way to make fathers become more involved in childcare and to thus foster gender equality. Leave programs dedicated to fathers vary a great deal by their nature, coverage and duration; they also have different outcomes. First of all, fathers' take-up varies according to the type of leave and the father's individual characteristics. The fathers' take up rate is very low when paternity leaves are not mandatory (employers can refuse a demand), such as in the US, Australia and the UK (Huerta et al., 2013; Nepomnyaschy \& Waldfogel, 2007, Tanaka \& Waldfogel, 2007, Han et al., 2009, Hosking et al., 2010). It is higher when leave is mandatory for fathers, if the leave is short, and it is paid at or near income replacement level (Moss, 2015). The implementation of fathers' quotas on parental leave has increased fathers' take-up, as shown by studies that evaluate their effect by comparing the fathers of children born before and after the paternity leave reform (Sundström \& Duvander, 2002; Haas \& Hwang, 2008, Kotsadam \& Finseraas, 2011; Cools et al., 2015, Rege \& Solli, 2013; Ekberg et al., 2013; Kotsadam \& Finseraas, 2013 in the forerunner countries, i.e., Sweden and Norway; Kluve \& Tamm, 2013 in Germany; Patnaik, 2015 in Quebec). These studies also show convergent characteristics of leave takers across countries. Fathers who take leaves are generally more advantaged fathers,
better educated, in higher prestige occupations and with greater income.
Whether it be paternity leave or a father's quota parental leave policy, the impact of a father's leave on the father's involvement with his children has been shown by empirical evidence to have mixed results as a result of the diverse methodology used and the countryspecific context. Various outcomes are also studied: the frequency of performing specific child related tasks, the amount of time fathers spend with their infants (either self-declared or based on a time-use diary) and the sharing of specific tasks with the mother. Some other studies use an indirect measure of their involvement, e.g., the father's income or labor force participation, based on the assumption that fathers who participate more at home will have a lower income as a consequence of their lower involvement in employment. This assumption is open to criticism, since the men housework time does not necessarily affect his wages negatively, as shown by Pollmann-Schult, 2010 using German data. Furthermore, outcomes from different studies are measured at different children's ages, making those studies even more difficult to compare.

A first group of studies find a significant impact from paternity leave. Using the Longitudinal Study of Australian Children, which includes weekday and week-end time-diaries as well as measures of the father's presence, involvement and direct involvement in care, Hosking et al., 2010 show that taking leave is not related to fathers' increased involvement in the care of children aged 3-19 months. The amount of time fathers spent with their infants did not appear to be different among those who had taken 4 or more weeks of leave after the birth when compared with those who had taken less than 4 weeks of leave or no leave. Taking some leave appears to be positively related only to childcare on weekends. In this context of non-mandatory paternity leave, the duration of leave does not appear to be related to more time with children. Comparing parents giving birth before the reform with parents giving birth after, Kluve \& Tamm, 2013 also show that having implemented the German "two daddy months" leave policy does not currently reflect any significant changes in fathers' share of time devoted to childcare during the child's first year. Indeed, both fathers and mothers have increased their time with the child after the reform. Patnaik, 2015 employ time-use data and a triple-difference model for Quebec that exploits variations in exposure to fathers' quotas across provinces, time and age-group of the child, and she also
shows that women spent more time on childcare after the reform while men who have been exposed to it do not. Using an indirect indicator for father's involvement in housework in 2007-08 (i.e., fathers' earnings and work hours), Cools et al., 2011 also find no significant impact from introducing the paternal quota in Norway in 1993. Moreover, fathers who were part of the cohort with the "daddy month" were no more likely to take paid days to care for sick children than fathers who were part of the pre-reform cohort. Finally, Ekberg et al., 2013 use Swedish register data and conduct an eight-year follow-up on two large cohorts of families with newborns before and after the implementation of one non-transferable month of parental leave for fathers, and nor do they find any impact on the fathers' labor supply, wages or take-up of paid days to care for sick children.

Conversely, many studies find a significant positive effect of paternity leave on fathers' involvement in childcare. Relying on indirect measures of fathers' involvement, such as labor market outcomes, Rege \& Solli, 2013 use registry data and apply difference and difference methods to fathers' earnings to detect whether paternal leave had an impact on labor supply and earnings in Norway. They show that four weeks of paternity leave during the child's first year leads to a 1-3\% decrease in fathers' future earnings. This effect lasts five years, and they conclude that the reform must have reduced the labor supply of fathers and increased the time they spend with their children. With data from the Norwegian Time Use Survey, they confirm that fathers who take leave spend less time working and more time together with their children. A positive correlation between the duration of fathers' exclusive parental leave and paternal childcare time is also found in eight countries (Boll et al., 2014). Haas \& Hwang, 2008 have conducted their own survey among 356 fathers working in large private companies in Sweden, and they observe that fathers who take more leave than average are more involved in childcare-related tasks and household work on workdays than fathers taking shorter periods of leave. Using child cohort studies and indicators of the frequency of performing childcare tasks, Huerta et al., 2013 compare four OECD countries (Australia, Denmark, United Kingdom and United States). They also show that paternity leave is associated to higher fathers' involvement in child related activities before age 1 and between 2-3 years old. However, they imperfectly take into account that fathers who take leave may be a selected group: these fathers who are more child-oriented or equality minded. Using the
same data and method, Nepomnyaschy \& Waldfogel, 2007 and Tanaka \& Waldfogel, 2007 show that paternity leave taken after childbirth has significant positive effects on fathers' involvement in the childcare of their 9-month old baby. Bunning, 2015 estimated fixed effects regressions using panel data that allow to tackle selection issues. She shows that German fathers who took parental leave subsequently reallocated their time from work to home and increased their involvement in childcare. The effect of a long leave (of more than 2 months) is stronger than that of a short leave of 1 to 2 months. The effect is also stronger when fathers took the leave alone rather than at the same time as their partners.

The effect of fathers' leave on the division of household chores within the couple has received much less attention, but these few studies show a positive effect. Using retrospective data and a self-declared indicator of housework division, Kotsadam \& Finseraas, 2011 show that parents having had a child after the introduction of the father quota in Norway are more likely to equally divide the task 15 years later than parents who had their last child just before the reform. Patnaik, 2015 find that fathers exposed to a 5 -week fathers' quota in Quebec spend more time on housework, especially on shopping, maintenance and repairs. For their part, exposed women spend less time on housework, in particular on housekeeping and cooking. It thus seems that the gender division of housework decreases after the reform. However, the data used was not collected at the couple level, which prevents analysis of specialization within households. Bunning, 2015 found that only German fathers who took more than 2 months of leave or solo-leave subsequently increased their participation in housework.

To our knowledge, there has never been an evaluation of the impact of short-term paternity leave with such broad coverage as that observed in France. Furthermore, the outcomes describing the domestic and parental involvement used in most previous studies are generally limited to some specific indicators (except studies using national birth cohorts) or to indirect indicators that are not precise enough for evaluating the sharing of domestic and parental tasks between partners. We aim here to look more precisely at this sharing among spouses not only by distinguishing between domestic and parental tasks, but also by identifying which domestic and parental tasks are more likely to be equally shared as a result of the policy.

### 2.3 Paternity leave in France

France is known as a child-oriented country (Mazuy et al., 2014) due to the positive values that the population associates with having children and the country's decades-long generous family policies. Among the wide range of family policy measures that have been implemented, a statutory paternity leave is open to any father on-demand ${ }^{2}$ on the occasion of a child being born since January 1st 2002. ${ }_{3}^{3}$ It covers all employees, whatever the firm size or sector (private and public), and it is also available for the self-employed and unemployed.

This paternity leave offers a maximum of 11 consecutive days (Saturdays, Sundays and bank holidays included) for the birth of a child - 18 consecutive days in the case of multiple births - in addition to the three days of absence authorized by the French Labor Code following any child birth. This short duration is comparable to those of European countries, with the most common period of paternity leave being two weeks. ${ }_{4}^{4}$ The duration can be shorter but cannot be split. Most fathers who take leave make use of the full 11 days' leave (Bauer \& Penet, 2005). This leave is flexible in the sense that fathers can use this right at any time during the first four months after the birth, on the condition that the father inform his employer at least one month before the starting date. The employer cannot refuse this leave, whatever the nature of employment contract (short-term, long term, part-time, temporary or seasonal job, etc.), and the beneficiary has a guaranteed right by law to return to work for the same employer and in the same position. During paternity leave, the job contract (or unemployment period) is only interrupted, and paternity beneficiaries are paid by the public health insurance.

The paternity leave allowance amounts to $80 \%$ of previous gross wages $5^{5}$, with a monthly

[^1]limit of $3,129 €($ that is to say $81.27 € /$ day $)$. On many occasions, especially in large companies, fathers may benefit from specific agreements and the employers might maintain their current wages. Employers can deduct these additional expenses from their taxes thanks to a credit tax called "Credit Impot famille". The payment of parental leave benefits is conditional on one's past employment trajectory: to be eligible for payment, the father must be registered for social protection for at least ten months and worked either at least two hundred hours in the past three months or accumulated wages over six months that are superior to 1015 euros, the standard minimum hourly wage. These conditions of eligibility are not restrictive, and along with the short duration of the leave and the high replacement rate they explain the large take-up rate among fathers. Hence, from the beginning, fathers massively adopted this policy: more than $61 \%$ of fathers took paternity leave in 2003, and this figure increased gradually to $68 \%$ in 2013. This take-up is much higher than that of the parental leave legislation that can last 3 years: only $3 \%$ of these leaves are taken by fathers. ${ }^{6}$

## 3 Data

### 3.1 The ELFE Cohort and sample

We use recent data from the recent Etude Longitudinale Française depuis l'Enfance (ELFE) ${ }^{77}$. It is the first nationally representative large scale birth cohort in France, and it follows over 18,000 children born in 2011 (Charles et al., 2011). Single or twin births from mothers aged over 18 with more than 33 weeks of pregnancy were selected in 349 hospitals wards (randomly drawn out of a total of 544 hospitals), with four periods of inclusion over the year ${ }^{8}$

The study includes repeated in-depth interviews with the parents, biological samples taken at birth and linkage to maternity notes that contain information on feeding the baby, weight at birth and gestational age. Currently, four waves are available to researchers, and

[^2]we use mainly the first and second waves, but also the fourth to a certain extent. The first wave of data collection was carried out in the maternity wards shortly after birth and includes information collected face-to-face from the mother by trained midwives. The second wave of data collection is a telephone interview with each parent separately, and it was carried out about 2 months after birth, with the median age of the child being 70 days. The timing of the interview with the mother ranged from 55 to 222 days after birth; the interview with the father generally took place at a later date. This second wave gathered data on socio-economic status, family living arrangements, nutrition, the environment where the children grow up, the sharing of domestic and parental tasks between parents, and the take-up of paternity leave. The fourth interview was face-to-face with each parent and was implemented around the child's second birthday. It again describes the sharing of some domestic and parental tasks among the parents. It will be used to implement a robustness check of our empirical strategy ${ }^{9}$

Our sample is composed of households with two co-resident parents at the time of interview. Twin births are excluded because paternity leave is longer for them. We kept households whose mother was interviewed between 55 and 120 days after birth ${ }^{10}$ and who had non-missing data on the outcomes and the variable of interest. Some missing control variables that are assumed to be time-constant were imputed using information from later waves (if parents' level of education was missing at two months but not at one or two years, for instance). For the remaining missing variables, dummies for the missing data were created to avoid sample selection bias. This was the case for the father's wages, diploma and type of job. This sample is composed of 11,622 households ${ }^{11}$

### 3.2 The variable of interest

Mothers were asked during the second wave survey whether the father was eligible for paternity leave ( $9 \%$ thought they were not eligible) and, more importantly, whether he had

[^3]Table 1: Distribution of paternity leave take up

|  | N | Weighted Proportion |
| :--- | :---: | :---: |
| Already taken | 7,244 | 59.9 |
| Will take | 1,883 | 15.8 |
| Will not take | 1,648 | 15.6 |
| Not eligible | 847 | 8.8 |
| Total | 11,622 | 100.0 |

already taken it, he was about to take it or he did not intend to take it. Table 1 provides the distribution of situations regarding paternity leave. Most of the fathers took the leave just after the birth: At the moment of the mother's interview $60 \%$ of fathers had already taken the paternity leave. Almost all recipients took the full-leave, i.e., 11 days. However, there is still a large share of fathers who intended to but did not take the leave at that moment $(16 \%){ }^{12} 16 \%$ declared they would not take the leave.

Taking paternity leave depends on the characteristics of the household. Tables 2, 3 and 4 present a systematic unconditional comparison of paternity leave take-up in terms of the father's, mother's and family's characteristics ${ }^{13}$ Families where fathers will not take the paternity leave show large differences compared to families where fathers have already taken the paternity leave.

In particular, parents differ in terms of socio-economic background: fathers and mothers in households where the father does not want to take leave have a lower level of education, are more often immigrants, are older and have lower wages. In terms of working conditions, nontaker fathers are less likely to work in the public sector or to have permanent employment. They are more often self-employed or farmers. Certain working conditions play favorably on the likelihood of taking paternity leave, probably when there are fewer anticipated negative consequences associated with a work interruption. The non-taker father's spouses also have special working conditions: most often, these mothers do not work, work part-time or have

[^4]a temporary contract. This is related to assortative mating, i.e., a woman in a precarious economic situation is more likely to find a partner in the same situation. Hence, these female characteristics are not significant when both male and female employment characteristics are taken into account. The take-up is also more likely in couples where the woman's share in household income is higher. These patterns are similar to those found in other countries (see Bauer \& Penet, 2005). With respect to child and family characteristics, not taking paternity leave is more likely for a third child than for a first. Non-takers were also much less present at delivery, suggesting that these fathers are less involved.

When we compare the families where the father has already taken paternity leave and those where he will take it, the differences are much less important. Most differences in education, labor market participation, wage, household income and family type disappear. Fathers who postpone taking leave are a bit more likely to have a higher level of education than fathers who have already taken it. They are also more often immigrants, but the difference is much lower than that between takers and non-takers. This means that fathers who intend to delay their leave are not very different from fathers who have already taken the leave in terms of wages and working conditions. It is also remarkable that there is no difference between the two groups according to birth order and in terms of the father's presence during delivery. Their involvement at birth seems quite similar. However, certain factors influence the timing of the leave. The later the interview, the less likely it is that the leave will be postponed. Postponement of leave is more frequent in the case of a low gestational age. This could be linked to the unexpected date of childbirth, which could prevent the father from taking paternity leave from the start because the legal rules oblige them to inform their employer one month before taking the leave. Although gestational age did not affect non-takers, it does play an important role in timing. The birth season also affects the likelihood of taking leave sooner or later. In particular, when births take place in October, fathers postpone taking leave (presumably to wait for the Christmas holidays); whereas if births take place in December, fathers have taken leave before the child is two months old. Future and current takers also differ in terms of the baby's feeding practices (breastfeeding versus bottle-feeding). Men whose partners are breastfeeding are more likely to wait before taking their leave, perhaps to wait until they are able to help more by participating in feeding
their baby.

### 3.3 Outcomes

Parents were asked about the spouses' sharing of housework tasks (washing dishes, shopping, cooking, doing the laundry, cleaning and making repairs) and activities dedicated to the newborn child (changing nappies, feeding, putting to bed, bathing, taking for a walk, getting up at night if the baby cries and taking it to the doctor). The same questions were asked at the 2 -month and 2-year interviews (only 4 childcare tasks at 2 years). For each task, we observe the distribution between spouses as declared by the mother during her interview ${ }^{14}$ The question was asked in terms of whether each task was done always by themselves, usually by themselves, both equally, usually by their partner, always by their partner, or by someone else. We recoded these last cases as both equally. Since very few fathers always perform parental tasks, we also grouped together always/usually by their partner. We also use three subjective questions related to well-being. One question measures the frequency of disputes about everyday life, friends, children, and professional life since the child was born (never/rarely/sometimes/often). Two more questions measure satisfaction regarding the division of housework and childcare (very satisfied/quite satisfied/quite dissatisfied/very dissatisfied).

Tables 6 and 5 give the distribution of these tasks when the child is two months old. As found in studies based on time use data, women perform mostly the traditional everyday "female type" of core routine tasks, such as preparing meals, cleaning up and doing laundry, while men do more episodic household tasks such as home repairs (Champagne et al., 2014). The gender division of work is particularly pronounced for laundry: more than $80 \%$ of the mothers declare that they always or more often do tasks related to clothes. Conversely, more

[^5]Table 2: Father characteristics

|  | Mean |  | Diff wrt Taken |  | Cannot take |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | All | Taken | Will take | Will not take |  |
| Age at child birth | $33.019^{* * *}$ | $32.696^{* * *}$ | 0.750 *** | $0.741^{* * *}$ | $1.020^{* * *}$ |
|  | (0.08) | (0.09) | (0.20) | (0.25) | (0.39) |
| Degree: Primary education | $0.109^{* * *}$ | $0.089^{* * *}$ | -0.002 | $0.059^{* * *}$ | $0.123^{* * *}$ |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.02) |
| Degree: Short vocational | $0.236^{* * *}$ | $0.223^{* * *}$ | 0.006 | $0.060^{* * *}$ | 0.028 |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.02) |
| Degree: Secondary Education | $0.203^{* * *}$ | $0.216^{* * *}$ | $-0.027^{* *}$ | -0.020 | -0.055*** |
|  | (0.00) | (0.01) | (0.01) | (0.01) | (0.02) |
| Degree: Some College | $0.173^{* * *}$ | $0.189^{* * *}$ | -0.019 | -0.056*** | $-0.048^{* * *}$ |
|  | (0.00) | (0.01) | (0.01) | (0.01) | (0.02) |
| Degree: Higher education | 0.279*** | $0.283^{* * *}$ | $0.042^{* * *}$ | $-0.043^{* * *}$ | $-0.049^{* * *}$ |
|  | $(0.00)$ | (0.01) | (0.01) | (0.01) | (0.02) |
| Immigrant | $0.116^{* * *}$ | $0.085^{* * *}$ | 0.019* | $0.076^{* * *}$ | $0.184^{* * *}$ |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.02) |
| Wage | $1.837^{* * *}$ | $1.935^{* * *}$ | 0.019 | $-0.229^{* * *}$ | $-0.744^{* * *}$ |
|  | (0.02) | (0.02) | (0.06) | (0.07) | (0.07) |
| Soc: Farmer | 0.016 ${ }^{* * *}$ | $0.005^{* * *}$ | $0.015^{* * *}$ | $0.045^{* * *}$ | $0.019^{* * *}$ |
|  | $(0.00)$ | (0.00) | (0.00) | (0.01) | (0.01) |
| Soc: Independant | 0.067*** | $0.029^{* * *}$ | 0.018*** | $0.136^{* * *}$ | $0.162^{* * *}$ |
|  | $(0.00)$ | $(0.00)$ | (0.01) | (0.01) | (0.02) |
| Soc: Executive | $0.220^{* * *}$ | $0.235^{* * *}$ | 0.005 | $-0.055^{* * *}$ | $-0.077^{* * *}$ |
|  | (0.00) | (0.01) | (0.01) | (0.01) | (0.02) |
| Soc: Intermediate occupations | $0.238^{* * *}$ | $0.268^{* * *}$ | -0.006 | $-0.103^{* * *}$ | $-0.146^{* * *}$ |
|  | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) |
| Soc: White Collar | $0.153^{* * *}$ | $0.163^{* * *}$ | -0.018* | $-0.036^{* * *}$ | -0.009 |
|  | (0.00) | (0.01) | (0.01) | (0.01) | (0.02) |
| Soc: Blue collar | 0.295*** | $0.299^{* * *}$ | -0.014 | -0.011 | 0.005 |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.02) |
| Soc: Other | 0.010*** | $0.002^{* *}$ | 0.001 | $0.024^{* * *}$ | $0.046^{* * *}$ |
|  | (0.00) | (0.00) | (0.00) | (0.01) | (0.01) |
| Not Working | $0.086^{* * *}$ | $0.028^{* * *}$ | 0.010 | $0.156^{* * *}$ | $0.379^{* * *}$ |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.02) |
| Working private sector | $0.702^{* * *}$ | $0.729^{* * *}$ | -0.007 | $-0.047^{* * *}$ | $-0.204^{* * *}$ |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.02) |
| Working public sector | 0.188*** | $0.221^{* * *}$ | -0.004 | $-0.115^{* * *}$ | $-0.174^{* * *}$ |
|  | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) |
| Working permanent job | $0.797^{* * *}$ | $0.879^{* * *}$ | -0.021* | $-0.254^{* * *}$ | $-0.446^{* * *}$ |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.02) |
| Working short-term job | $0.093^{* * *}$ | $0.071^{* * *}$ | 0.011 | $0.092^{* * *}$ | $0.067^{* * *}$ |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.02) |

Table 3: Mother characteristics

|  | Mean |  | Diff wrt Taken |  | Cannot take |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | All | Taken | Will take | Will not take |  |
| Age at child birth | $30.726^{* * *}$ | $30.703^{* * *}$ | 0.347** | 0.082 | -0.506* |
|  | (0.06) | (0.07) | (0.16) | (0.20) | (0.26) |
| Immigrant | $0.120^{* * *}$ | $0.091^{* * *}$ | $0.028^{* *}$ | $0.080^{* * *}$ | $0.135^{* * *}$ |
|  | (0.00) | (0.01) | (0.01) | (0.01) | (0.02) |
| Degree: Primary education | 0.093*** | $0.076^{* * *}$ | -0.010 | $0.045^{* * *}$ | $0.135^{* * *}$ |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.02) |
| Degree: Short vocational | $0.067^{* * *}$ | $0.057^{* * *}$ | -0.004 | $0.047^{* * *}$ | $0.047^{* * *}$ |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.02) |
| Degree: Secondary Education | $0.292^{* * *}$ | $0.293^{* * *}$ | -0.007 | 0.015 | -0.019 |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.02) |
| Degree: Some College | $0.213^{* * *}$ | $0.228^{* * *}$ | -0.013 | $-0.050^{* * *}$ | $-0.060^{* * *}$ |
|  | $(0.00)$ | (0.01) | (0.01) | (0.01) | (0.02) |
| Degree: Higher education | $0.335^{* * *}$ | $0.347^{* * *}$ | 0.033** | $-0.057^{* * *}$ | $-0.103^{* * *}$ |
|  | (0.01) | (0.01) | (0.01) | (0.01) | (0.02) |
| Wage | $1.314^{* * *}$ | $1.374^{* * *}$ | 0.032 | $-0.213^{* * *}$ | $-0.365^{* * *}$ |
|  | $(0.02)$ | (0.02) | (0.05) | (0.05) | (0.06) |
| Soc: Farmer | $0.002^{* * *}$ | 0.001** | 0.004** | 0.003 | -0.001 |
|  | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| Soc: Independant | 0.018*** | 0.015*** | 0.008 | 0.013** | -0.001 |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.00) |
| Soc: Executive | $0.151^{* * *}$ | $0.155^{* * *}$ | 0.010 | $-0.020^{* *}$ | $-0.028^{* *}$ |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.01) |
| Soc: Intermediate occupations | 0.299*** | $0.321^{* * *}$ | -0.000 | $-0.083^{* * *}$ | $-0.106^{* * *}$ |
|  | (0.00) | (0.01) | (0.01) | (0.01) | (0.02) |
| Soc: White Collar | $0.386^{* * *}$ | $0.388^{* * *}$ | -0.008 | 0.010 | -0.023 |
|  | $(0.01)$ | $(0.01)$ | (0.02) | (0.02) | (0.02) |
| Soc: Blue collar | $0.077^{* * *}$ | $0.069^{* * *}$ | -0.001 | 0.029*** | 0.036** |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.01) |
| Soc: Other | $0.067^{* * *}$ | $0.050^{* * *}$ | -0.013 | 0.049*** | $0.123^{* * *}$ |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.02) |
| Not Working | $0.314^{* * *}$ | $0.272^{* * *}$ | 0.005 | $0.131^{* * *}$ | $0.234^{* * *}$ |
|  | (0.01) | (0.01) | (0.02) | (0.02) | (0.02) |
| Mother Works | $0.067^{* * *}$ | $0.074^{* * *}$ | $-0.028^{* * *}$ | -0.009 | $-0.019^{* *}$ |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.01) |
| Working part time | $0.142^{* * *}$ | $0.145^{* * *}$ | -0.003 | -0.004 | -0.013 |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.01) |
| Working full time | $0.544^{* * *}$ | $0.583^{* * *}$ | -0.001 | $-0.127^{* * *}$ | $-0.221^{* * *}$ |
|  | (0.01) | (0.01) | (0.02) | (0.02) | (0.02) |
| Working private sector | $0.442^{* * *}$ | $0.464^{* * *}$ | -0.001 | $-0.075^{* * *}$ | $-0.115^{* * *}$ |
|  | (0.01) | (0.01) | (0.02) | (0.02) | (0.02) |
| Working public sector | $0.244^{* * *}$ | $0.264^{* * *}$ | -0.004 | $-0.056^{* * *}$ | $-0.119^{* * *}$ |
|  | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) |
| Working permanent job | $0.636^{* * *}$ | $0.676^{* * *}$ | -0.003 | $-0.134^{* * *}$ | $-0.212^{* * *}$ |
|  | (0.01) | (0.01) | (0.02) | (0.02) | (0.02) |
| Working short-term job | 0.050*** | $0.052^{* * *}$ | -0.002 | 0.003 | $-0.022^{* * *}$ |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.01) |

Table 4: Child and family characteristics

|  | Mean |  | Diff wrt Taken |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | All | Taken | Will take | Will not take | Cannot take |
| April | 0.232*** | $0.222^{* * *}$ | 0.025* | 0.020 | 0.030 |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.02) |
| July | $0.261^{* * *}$ | 0.263*** | -0.012 | -0.008 | 0.008 |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.02) |
| October | $0.256^{* * *}$ | 0.255*** | $0.037^{* * *}$ | -0.013 | -0.029 |
|  | (0.00) | (0.01) | (0.01) | (0.01) | (0.02) |
| December | 0.251*** | 0.260*** | $-0.050 * * *$ | 0.001 | -0.009 |
|  | (0.00) | (0.01) | (0.01) | (0.01) | (0.02) |
| Girl | 0.488*** | 0.489*** | -0.010 | -0.005 | 0.019 |
|  | (0.01) | (0.01) | (0.02) | (0.02) | (0.02) |
| Birth Weight | $3.341^{* * *}$ | $3.355^{* * *}$ | -0.024 | -0.019 | -0.084*** |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.02) |
| Age at interview | $70.618^{* * *}$ | $70.632 * * *$ | $-2.177^{* * *}$ | 0.877** | $2.196^{* * *}$ |
|  | (0.13) | (0.16) | (0.32) | (0.39) | (0.65) |
| Gest. Age | 277.470*** | 277.709*** | $-0.817^{* * *}$ | -0.402 | -0.551 |
|  | (0.11) | (0.13) | (0.30) | (0.35) | (0.43) |
| Married | $0.451^{* * *}$ | $0.453^{* * *}$ | -0.007 | 0.003 | -0.013 |
|  | (0.01) | (0.01) | (0.02) | (0.02) | (0.02) |
| PACS | $0.157^{* * *}$ | $0.180^{* * *}$ | $-0.030^{* * *}$ | $-0.071 * * *$ | $-0.081^{* * *}$ |
|  | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) |
| Cohabiting couple | 0.382*** | 0.362*** | 0.035** | 0.048*** | 0.077*** |
|  | (0.01) | (0.01) | (0.02) | (0.02) | (0.02) |
| Step family | 0.092*** | 0.079*** | 0.017* | 0.037*** | 0.048*** |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.02) |
| First Child | $0.436^{* * *}$ | $0.446^{* * *}$ | -0.003 | $-0.068^{* * *}$ | 0.012 |
|  | $(0.01)$ | (0.01) | (0.02) | (0.02) | (0.02) |
| Second Child | 0.356*** | $0.364^{* * *}$ | -0.016 | -0.012 | $-0.048^{* *}$ |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.02) |
| Third Child + | 0.209*** | 0.190*** | 0.019 | 0.080*** | 0.037* |
|  | (0.00) | (0.01) | (0.01) | (0.02) | (0.02) |
| Equivalized income | $1.561^{* * *}$ | 1.612*** | 0.007 | $-0.111^{* *}$ | -0.392*** |
|  | (0.01) | (0.01) | (0.02) | (0.04) | (0.04) |
| Share of Women Wage in Total Income | $0.384^{* * *}$ | 0.372*** | 0.007 | 0.022** | 0.089*** |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.02) |
| Mother's education < Father's education | $0.213^{* * *}$ | 0.208*** | -0.000 | 0.009 | 0.041* |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.02) |
| Mother's education $=$ Father's education | $0.380^{* * *}$ | $0.383^{* * *}$ | 0.007 | -0.016 | -0.017 |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.02) |
| Mother's education > Father's education | 0.407*** | 0.409*** | -0.007 | 0.007 | -0.024 |
|  | (0.01) | (0.01) | (0.02) | (0.02) | (0.02) |
| Presence of the fath. during delivery | $0.843^{* * *}$ | $0.867^{* * *}$ | -0.002 | $-0.089^{* * *}$ | $-0.108^{* * *}$ |
|  | (0.00) | (0.01) | (0.01) | (0.02) | (0.02) |
| Absence of the fath. during delivery cesarean | $0.093 * * *$ | 0.089*** | -0.004 | 0.022* | 0.010 |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.01) |
| Absence of the fath. during delivery no cesarean | 0.064*** | $0.044^{* * *}$ | 0.006 | 0.067*** | 0.098*** |
|  | (0.00) | (0.00) | (0.01) | (0.01) | (0.02) |
| Some Breast feeding since birth | $0.682^{* * *}$ | 0.669*** | $0.054^{* * *}$ | 0.002 | 0.046** |
|  | (0.01) | (0.01) | (0.01) | (0.02) | (0.02) |

Table 5: Distribution of Housework, 2 months (Mother declaration)

|  | Always Mother | Often Mother | Both Equal | Often Father | Always Father |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Washing-up | 0.195 | 0.230 | 0.462 | 0.087 | 0.026 |
| Shopping | 0.189 | 0.191 | 0.423 | 0.135 | 0.062 |
| Cooking | 0.295 | 0.293 | 0.285 | 0.095 | 0.032 |
| Doing the laundry | 0.584 | 0.240 | 0.142 | 0.023 | 0.012 |
| Cleaning | 0.305 | 0.265 | 0.380 | 0.042 | 0.009 |
| Doing the repairs | 0.019 | 0.028 | 0.162 | 0.269 | 0.523 |

than $80 \%$ of the mothers declare that repairs are mainly performed by the fathers. Shopping and dishwashing are more equally balanced. This gender division of housework is widening over time. Thus, when the child is two years old, there is a decrease in the proportion of couples who share equally in domestic tasks and an increase in the proportion of women who perform the tasks more often (Table 7).

Two months after the birth, the gender division of work is even more unbalanced for child-related activities, partly because the mother is still on maternity leave. The share of couples where the father is doing more than the mother is extremely low, less than $5 \%$. In most cases, the mother is the main care-giver, especially for bathing and getting up at night when the baby cries. Putting children to bed and outdoor activities are more often equally shared between parents: in 4 couples out of ten. Unlike domestic work, the proportion of parents who share parenting tasks equally increases as the child grows (and when the mother is no longer on maternity leave). However, in half of the couples, it is the mother who always or most often performs the parental tasks when the child is two years old (Table 8).

Mothers are quite satisfied with this division of housework and childcare, when the child is both 2 months old and 2 years old (Tables 9 and 10). Yet, the proportion of mothers dissatisfied with the division of household chores increases slightly over time.

The division of housework and childcare depends on the paternity leave status (Figure 1). The division of domestic and parental tasks is more unequal in households where the father declares that he will not take paternity leave. This sharing is less unequal in households where the father has already taken the leave.

Table 6: Distribution of Childcare, 2 months (Mother declaration)

|  | Always Mother | Often Mother | Both Equal | Often/Always Father |
| :--- | :---: | :---: | :---: | :---: |
| Changing | 0.215 | 0.550 | 0.230 | 0.005 |
| Feeding | 0.328 | 0.433 | 0.234 | 0.004 |
| Putting to bed | 0.203 | 0.350 | 0.407 | 0.040 |
| Washing | 0.386 | 0.287 | 0.264 | 0.062 |
| Taking for a walk | 0.154 | 0.379 | 0.456 | 0.011 |
| Night caring | 0.462 | 0.269 | 0.237 | 0.032 |
| Taking to the doctor | 0.407 | 0.218 | 0.369 | 0.006 |

Table 7: Distribution of Housework, 2 years (Mother declaration)

|  | Always Mother | Often Mother | Both Equal | Often Father | Always Father |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Washing-up | 0.168 | 0.251 | 0.451 | 0.100 | 0.029 |
| Shopping | 0.277 | 0.271 | 0.316 | 0.097 | 0.038 |
| Cooking | 0.302 | 0.345 | 0.229 | 0.095 | 0.029 |
| Doing the laundry | 0.564 | 0.264 | 0.138 | 0.023 | 0.011 |
| Cleaning | 0.296 | 0.331 | 0.333 | 0.033 | 0.007 |
| Doing the repairs | 0.024 | 0.041 | 0.168 | 0.340 | 0.427 |

Table 8: Distribution of Childcare, 2 years (Mother declaration)

|  | Always Mother | Often Mother | Both Equal | Often/Always Father |
| :--- | :---: | :---: | :---: | :---: |
| Feeding | 0.086 | 0.430 | 0.449 | 0.036 |
| Putting to bed | 0.138 | 0.312 | 0.459 | 0.091 |
| Washing | 0.172 | 0.374 | 0.339 | 0.115 |
| Night Caring | 0.252 | 0.295 | 0.330 | 0.124 |

Table 9: Well-being (Mother declaration), 2 months

|  | Often/Very dissatisfied | Sometimes/Quite dissatisfied | Rarely/Quite satisfied | Never/Very satisfied |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Disputes | 0.050 | 0.327 | 0.388 | 0.234 |
| Satis repart domestic tasks | 0.028 | 0.104 | 0.485 | 0.383 |
| Satis repart parental tasks | 0.009 | 0.061 | 0.470 | 0.460 |

Table 10: Well-being, 2 years (Mother declaration)

|  | Never/Very satisfied | Rarely/Quite satisfied | Sometimes/Quite dissatisfied | Often/Very dissatisfied |
| :--- | :---: | :---: | :---: | :---: |
| Disputes | 0.117 | 0.443 | 0.296 | 0.143 |
| Satis repart domestic tasks | 0.035 | 0.146 | 0.510 | 0.310 |
| Satis repart parental tasks | 0.008 | 0.067 | 0.479 | 0.446 |

Figure 1: The Sharing of Housework and Parental Activities According to Paternity Leave Status


## 4 Empirical strategy

### 4.1 Identification

The important advantage of the question about paternity leave asked in the ELFE survey is that it makes it possible to dissociate willingness to take leave from actually using it. Usually, when information on paternity leave is available, it is limited to whether or not the leave is
taken. Takers are then compared to non-takers, with the huge disadvantage that the former are selected because they are all convinced of the importance of paternity leave, whereas the latter are not. We saw previously that these two groups differ significantly, especially in terms of fathers' involvement at birth. Here, we can distinguish takers from future takers and from non-takers. We argue below that the comparison of takers (those who have already taken the leave) with future takers (those who will take the leave but have not yet taken it) is relevant in assessing the impact of paternity leave. The timing of the interview provides us with a unique opportunity to compare these two categories of families and assess the impact of a policy. Both wish to take the leave, but only part of them have already taken it at the time of the interview. As seen previously, these two groups of fathers are much more similar to each other than they are to non-takers. The variability in the timing of paternity leave is largely due to the timing of the survey, which can be considered exogenous because it is related to the survey's organization and the interviewer's workload (the interview period is very long, ranging from 50 to over 220 days after birth). The parents interviewed first are more likely to not have taken the leave yet, while those interviewed later may have already taken it.

We are aware that takers and future takers could also differ in terms of unobserved characteristics. Some fathers could take leave as early as possible to participate in child care as early as possible. This is why we control for all possible covariates that could affect timing, such as birth season, type of employment, whether the mother is already back at work, if the father was involved at birth, etc.

### 4.2 Specification

In order to assess the impact of paternity leave on the sharing of domestic and parental tasks, we compare fathers who already took paternity leave to those who will take it through an ordered probit model. It seems to us that this type of model is the most relevant way to take advantage of the limited dependent variable we have at our disposal. In this type of model, the dependent variable $Y_{i}$ represents the level of sharing of each specific task described above
for household $i$, and it is modeled as follows:

$$
Y_{i}=\sum_{j=1}^{5} j \mathbb{1}\left(\alpha P_{i}+X_{i}^{\prime} \beta+\varepsilon_{i} \in\left[\delta_{j}, \delta_{j+1}\right]\right)
$$

where $\mathbb{1}()$ is a function that equals one if the argument is true and zero otherwise. $P_{i}$ is equal to one if the father of household $i$ already took the paternity leave, $X_{i}$ is a set of control variables and $\varepsilon_{i}$ is unobserved heterogeneity.

The treatment effect is measured from parameter $\alpha$. This parameter has no unit, but it can be interpreted as a change in the relative participation in housework and child-related activities. We set the model such that the higher the latent variable, the more the father participates. In order for it to be interpreted as a causal effect, we need to ensure that $\varepsilon_{i}$ is independent from the set of explanatory variables $\left(P_{i}, X_{i}\right)$. For this purpose, we restrict the sample to individuals who already took the paternity leave and those who are going to take it: the underlying idea being that these two categories of fathers are not different in terms of unobserved heterogeneity once all the observed characteristics are taken into account. They are both keen to take the paternity leave.

In order to give a better interpretation of the policy's impact, we present the marginal effects of paternity leave on the outcomes. Aside from helping us understand the extent to which the policy changes the distribution of tasks, it also allows us to assess whether the paternity leave creates an over-investment of fathers (or an under-investment of mothers), whether some new behaviors occur at the tails of distribution (fathers investing completely in one activity) and whether domestic tasks are more equally shared between partners. Marginal effects are defined as the marginal change in the probability of having a given distribution implied by the policy. Thus, there exist as many marginal effects as there are possible distributions of tasks. Using the same notations as above, we denote the marginal effect of paternal leave on the probability that outcome $Y$ takes modality $k$ by $\Delta_{Y}(k,$.$) :$

$$
\Delta_{Y}(k, X)=P(Y=k \mid X, P=1)-P(Y=k \mid X, P=0)
$$

Thus, the marginal effects must be interpreted by considering all possible outcomes of variable $Y$. Moreover, it must be noted that, given the non-linearity of the model, these
marginal effects depend on the covariates $X$. The average effect can be obtained by integrating it over the distribution of covariates $X$. We thus have:

$$
\Delta_{Y}(k)=\int \Delta_{Y}(k, X) d F(X)
$$

The same set of control covariates is used to analyze the division of housework, of childcare and to assess well-being, with the covariates being added step by step in order to analyze how the specific effect of paternity leave may be related to these covariates. Model 1 includes child characteristics (sex, age, month of birth, birth weight). Model 2 adds couple and family characteristics (marital status, type of family, birth order, age and level of education of each parent, and household equivalized income). Model 3 also includes each parent's employment characteristics (wage, socio-economic status, activity status, public or private employment, permanent and short-term employment). For mothers, these characteristics relate to employment before birth (we also control for full-time or part-time employment), and a dummy controls for their return to employment at the time of the survey. Model 4 replaces indicators for each parent with the relative positions of the father and mother in terms of wage and education level. Finally, Model 5 controls for the father's involvement at birth (presence during delivery) and type of feeding. For the sake of comprehension and brevity, we report for each of these models the coefficient of $P_{i}(\alpha)$, which gives the difference of work division for the different tasks between fathers who took paternity leave compared to fathers who will take it 15

In order to test whether the effect of paternity leave differs across birth order and level of education, we introduce alternative specifications with interactions between paternal leave and: i) birth order (first child versus subsequent children); and ii) the three categories of education (primary, i.e., non-high school graduate; secondary, i.e., high school graduate; and tertiary, i.e., college education). Looking at the details of the marginal effects for the education categories of the father, differences are reflected in the compositions of these populations as well as in the direct effects.

[^6]
## 5 Results

### 5.1 Effect of Paternity Leave on the Distribution of Childcare

A father's having taken paternity leave significantly affects the division of childcare (Table 11). Hence, in couples where fathers have already taken the leave, the division of tasks is more equal for the seven childcare activities when only the child characteristics are controlled for (Model 1). Once the demographic characteristics of parents are controlled for, the sharing of tasks between partners is more balanced for five out of the seven parental tasks when the father has taken leave (Model 2): changing the child, putting her to bed, bathing her, taking care of the baby during the night, and taking her to the doctor. For these 5 tasks, the impact of paternity leave on fathers' participation is quite stable regardless of the set of control variables we use, confirming that our results are robust to the small differences observed between our control and treatment groups. The addition of parents' socio-economic characteristics does not strongly affect the estimates (Model 3), neither the inclusion of controls that account for relative income and relative education of spouses (Model 4), ruling out the fact that both the timing of paternity leave and the sharing of activities are correlated to some spouse's bargaining power. Including the type of feeding the baby and the presence of father during delivery -which is an indicator of the father's commitment- (Model 5), somewhat diminishes the parameter for putting the baby to bed, waking up during the night and changing diapers. Hence these activities are related to breastfeeding: mothers are more likely to care for their baby in the evening and during the night while feeding them. The involvement of fathers in these tasks is then reduced.

Though significant, the effects are limited in magnitude. Such short-term leave has very little effect on changes in the division of labor. In terms of marginal effects (See Appendix B), we observe around $2 \%$ to $3 \%$ fewer households in which the mother is not always changing, bathing, taking the child to the doctor, and caring during the night; whereas, in around $2 \%$ of households, the division is shared more equally between the mother and the father. In other words, for these tasks, paternity leave encourages some fathers to start participating in childcare and others to share childcare equally with the mother. It very rarely inverts the gender roles. However, $1 \%$ more fathers become the main provider of bathing activities after
paternity leave.

### 5.2 Effects on Childcare by Birth Order and Education Level

The effect of paternity leave varies according to the child's parity (Tables 12 and 13). Paternity leave is really more effective on the division of childcare for one-child parents than for parents with more children. Six out of seven tasks are shared more equally when the father of a first child has already taken leave: changing, feeding, putting to bed, bathing, nighttime care and taking the baby to the doctor. First-time parents are more likely to learn new parental tasks, and the paternity leave period may help to get them involved. Paternity leave decreases the likelihood that mothers always or often perform the task, and it increases the likelihood that these tasks are more equitably shared. Among new fathers, equal sharing increases by 4 percent for changing the baby and doctor visits, and it increases by 3 percent for putting the child to bed.

For the second or further births, we do not observe any significant effect for paternity leave takers relative to future takers. This suggests that paternity leave helps new fathers learn new tasks with the baby, but it does not change the division of parental tasks dedicated to a second new-born child. This might be related to the fact that the listed tasks concern the child targeted by the cohort ELFE (the youngest one by definition in the two-month wave). When there are several children, it is possible that the parents divide tasks among them: the father takes care of the older children and the mother looks after the youngest. The participation of fathers with older children may be more pronounced in the case of paternity leave, but it is not visible here because our indicators focus on the youngest child. Another interpretation would be that paternity leave has already equalized roles for the first child and no longer plays for subsequent births. The couples have already reached their maximum sharing for the first child (although the division is far from equal), and this short leave has no additional effects for further child.

Since the division of parental tasks strongly depends on educational level, the effects of paternity leave differ according to the father's level of education (Tables 14,15 and 16). In particular, the type of tasks for which the sharing is affected by the leave depends on the level of education. In families where the father has a primary level of education, paternity

Table 11: Effect of Paternity Leave on Childcare Divison

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Changing | $0.093 * * *$ | 0.082*** | 0.078*** | $0.078 * * *$ | 0.072** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Feeding | 0.056* | 0.033 | 0.032 | 0.033 | 0.005 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Putting to bed | $0.080^{* * *}$ | $0.071^{* *}$ | 0.069** | 0.069** | 0.059** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Bathing | $0.095^{* * *}$ | 0.091*** | $0.083^{* * *}$ | $0.081^{* * *}$ | $0.083^{* * *}$ |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Taking for a walk | 0.056* | 0.045 | 0.034 | 0.035 | 0.034 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Night Caring | $0.083^{* * *}$ | 0.079*** | 0.074** | 0.074** | 0.059** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Taking to the doctor | 0.072** | 0.070** | 0.065** | 0.066** | 0.062** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

Table 12: Effect of Paternity Leave on Childcare Division, Parity One

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Changing | $\begin{gathered} 0.161^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.142^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.143^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.141^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.137^{* * *} \\ (0.04) \end{gathered}$ |
| Feeding | $\begin{gathered} 0.133^{* * *} \\ (0.05) \end{gathered}$ | $\begin{gathered} 0.103^{* *} \\ (0.05) \end{gathered}$ | $\begin{gathered} 0.105^{* *} \\ (0.05) \end{gathered}$ | $\begin{gathered} 0.106^{* *} \\ (0.05) \end{gathered}$ | $\begin{gathered} 0.084^{*} \\ (0.05) \end{gathered}$ |
| Putting to bed | $\begin{gathered} 0.126^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.117^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.119^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.118^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.111^{* * *} \\ (0.04) \end{gathered}$ |
| Bathing | $\begin{gathered} 0.127^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.126^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.124^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.121^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.128^{* * *} \\ (0.04) \end{gathered}$ |
| Taking for a walk | $\begin{gathered} 0.072^{*} \\ (0.04) \end{gathered}$ | $\begin{aligned} & 0.064 \\ & (0.04) \end{aligned}$ | $\begin{aligned} & 0.057 \\ & (0.04) \end{aligned}$ | $\begin{aligned} & 0.056 \\ & (0.04) \end{aligned}$ | $\begin{aligned} & 0.055 \\ & (0.04) \end{aligned}$ |
| Night Caring | $\begin{gathered} 0.092^{* *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.089^{* *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.089^{* *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.086^{* *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.074^{*} \\ (0.04) \end{gathered}$ |
| Taking to the doctor | $\begin{gathered} 0.126^{* * *} \\ (0.04) \\ \hline \end{gathered}$ | $\begin{gathered} 0.123^{* * *} \\ (0.04) \\ \hline \end{gathered}$ | $\begin{gathered} 0.127^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.134^{* * *} \\ (0.04) \end{gathered}$ | $\begin{gathered} 0.132^{* * *} \\ (0.04) \end{gathered}$ |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

Table 13: Effect of Paternity Leave on Childcare Division, Parity Two +

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Changing | 0.034 | 0.025 | 0.015 | 0.016 | 0.008 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Feeding | -0.015 | -0.034 | -0.039 | -0.037 | -0.068 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Putting to bed | 0.037 | 0.025 | 0.018 | 0.018 | 0.008 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Bathing | 0.063 | 0.054 | 0.039 | 0.038 | 0.036 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Taking for a walk | 0.036 | 0.027 | 0.014 | 0.015 | 0.013 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Night Caring | 0.074* | 0.070* | 0.064 | 0.064 | 0.047 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Taking to the doctor | 0.018 | 0.018 | -0.000 | -0.001 | -0.005 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

leave tends to make sharing more equal for outdoor activities (taking the baby for a walk). Marginal effects (Appendix B) also show that paternity leave modifies the distribution of changing and bathing the baby in this group: the division of these activities is less "always done by the mothers" ( $3 \%$ less for bathing and changing and $2 \%$ for taking the baby for a walk) and more often done equally (respectively $3 \%$ and $4 \%$ higher). These activities are strongly symbolic from a gender point of view. Changing and bathing the baby are care activities that are traditionally done mainly by mothers; thus, taking over these tasks represents a deviation from the standard assignment of gender roles Akerlof \& Kranton, 2000). It clearly appears that paternity leave has a positive effect on father-child bonding for low-educated fathers who tend to be less involved with their child, and it is marginally changing parenthood norms. Indeed, it represents a higher status cost for fathers with lower rather than higher educations, due to their less egalitarian family and social environments.

When the father has a secondary degree, paternity leave leads to a more even division of bathing the baby. When the man has a tertiary level of education, paternity leave acts in the distribution of other activities within the household: putting the child to bed and taking her to the doctor ( $+3 \%$ increase in egalitarian couples for these two activities). This difference in activities performed across levels of education may be related to work schedules: highly educated fathers are likely to have long working hours and therefore participate in late evening tasks (putting the baby to sleep) and planned activities such as visits to the doctor.

Table 14: Effect of Paternity Leave on Childcare Division, Primary level

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Changing | 0.079 | 0.076 | 0.094 | 0.092 | 0.085 |
|  | $(0.06)$ | $(0.06)$ | $(0.06)$ | (0.06) | $(0.06)$ |
| Feeding | 0.023 | 0.027 | 0.027 | 0.027 | 0.011 |
|  | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) |
| Putting to bed | -0.013 | -0.012 | -0.002 | -0.004 | -0.015 |
|  | $(0.06)$ | $(0.06)$ | $(0.06)$ | $(0.06)$ | $(0.06)$ |
| Bathing | 0.078 | 0.077 | 0.076 | 0.073 | 0.073 |
|  | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) |
| Taking for a walk | 0.103* | 0.108* | 0.101* | 0.100* | 0.097* |
|  | $(0.06)$ | $(0.06)$ | $(0.06)$ | $(0.06)$ | $(0.06)$ |
| Night Caring | 0.067 | 0.077 | 0.075 | 0.073 | 0.057 |
|  | $(0.06)$ | $(0.06)$ | $(0.06)$ | $(0.06)$ | $(0.06)$ |
| Taking to the doctor | 0.059 | 0.073 | 0.067 | 0.069 | 0.069 |
|  | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

Table 15: Effect of Paternity Leave on Childcare Division, Secondary level

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Changing | 0.152** | 0.102 | 0.077 | 0.076 | 0.062 |
|  | (0.07) | (0.07) | $(0.07)$ | (0.07) | (0.07) |
| Feeding | 0.030 | -0.013 | -0.027 | -0.027 | -0.079 |
|  | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) |
| Putting to bed | 0.076 | 0.044 | 0.013 | 0.009 | -0.005 |
|  | $(0.06)$ | (0.06) | (0.07) | (0.07) | (0.07) |
| Bathing | $0.206^{* * *}$ | $0.151^{* *}$ | $0.136 * *$ | 0.133** | $0.132^{* *}$ |
|  | $(0.06)$ | (0.06) | (0.07) | (0.07) | (0.07) |
| Taking for a walk | 0.080 | 0.045 | 0.029 | 0.024 | 0.019 |
|  | (0.07) | (0.07) | $(0.07)$ | (0.07) | (0.07) |
| Night Caring | 0.127* | 0.104 | 0.086 | 0.084 | 0.058 |
|  | $(0.06)$ | (0.07) | (0.07) | (0.07) | (0.07) |
| Taking to the doctor | 0.110* | 0.064 | 0.022 | 0.021 | 0.010 |
|  | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

### 5.3 Effect of Paternity Leave on the Distribution of Housework

The effect of paternity leave is less marked on the sharing of household chores between parents (Table 17). On the whole population, paternity leave does not have any significant impact on the division of domestic activities such as shopping, cooking, laundry or repairs. Only the divisions of dishwashing and cleaning activities are more egalitarian with people who take paternity leave. For cleaning and washing-up activities, the paternity leave effect appears to be significant at all stages of the distribution (Appendix B2). However, the main impact of the reform is the decrease in non-participation: the probability that men never perform these two tasks is significantly lower (around $2 \%$ ) among those who have taken paternity leave. The probability that parents share these two tasks equally also increased by $2 \%$ when fathers took paternity leave.

This lower effect on housework from paternity leave was expected, since it is primarily intended to involve the father with his children rather than in other domestic activities. Moreover, domestic activities are generally less enjoyable and less valued socially than parental activities; thus, in a time-constrained framework, fathers would prefer to devote the extratime provided by paternity leave to childcare rather than other domestic tasks. However, paternity leave not only affects childcare activities but also some activities that are possibly associated with it,. Indeed, the arrival of one child increases the domestic workload.

The effect of paternity leave on the sharing of household chores varies little with parity, except that fathers of several children are more likely to share meal preparation tasks after paternity leave. Nor are there many differences by level of education. For the dishes the sharing is more equal for the three levels of education of the father. The stratification by education level shows significant results that did not exist for the population as a whole for two other activities. The division of cooking activities between spouses is more equal after paternity leave for couples where the man holds a higher education diploma, while there is a more equal distribution for laundry when the fathers hold a high school diploma. More educated people are more likely to have a more egalitarian division of some domestic tasks due to paternity leave, even though they are already the most egalitarian.

Table 16: Effect of Paternity Leave on Childcare Division, Tertiary level

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Changing | 0.074* | 0.061 | 0.061 | 0.061 | 0.057 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Feeding | 0.078* | 0.050 | 0.060 | 0.064 | 0.032 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Putting to bed | $0.130^{* * *}$ | $0.115^{* * *}$ | $0.115^{* * *}$ | $0.114^{* * *}$ | $0.106^{* * *}$ |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Bathing | 0.066* | 0.065* | 0.056 | 0.053 | 0.054 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Taking for a walk | 0.021 | 0.005 | -0.004 | -0.003 | -0.005 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Night Caring | 0.069* | 0.070* | 0.070* | 0.070* | 0.056 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Taking to the doctor | 0.059 | 0.063 | 0.071* | 0.074* | 0.069* |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

Table 17: Effect of Paternity Leave on Housework Divison

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Washing-up | 0.099*** | $0.105^{* * *}$ | 0.098*** | 0.097*** | 0.097*** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Shopping | 0.019 | 0.043 | 0.025 | 0.024 | 0.030 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Cooking | 0.034 | 0.030 | 0.023 | 0.022 | 0.024 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Doing the laundry | 0.020 | 0.038 | 0.032 | 0.031 | 0.031 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Cleaning | 0.061** | 0.071** | $0.057 * *$ | 0.056** | 0.060** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Doing the repairs | 0.030 | 0.015 | 0.008 | 0.009 | 0.007 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

### 5.4 Effect of paternity leave on satisfaction and disputes

To analyze the effect of paternity leave in terms of well-being, we use three subjective indicators: the frequency of disputes about everyday day life, and the mother's satisfaction regarding the sharing of domestic tasks and of parental tasks (Table 18). The frequency of disputes is an indicator of the quality of the couple's relationship. For the population as a whole, there is no less conflict among couples in which fathers took leave. But the mother's satisfaction with the division of domestic and parental tasks increases significantly when the father has already taken paternity leave. The probability that women are very satisfied with the sharing of domestic and parental tasks increases by $4 \%$ and $3 \%$ respectively.

This improvement in satisfaction about for parental task sharing is especially true for mothers of a first child (more than $5 \%$ are very satisfied) for whom changes in the actual division of parental tasks have effectively been most substantial. Mothers with highly educated partners are more satisfied with the division of parenting responsibilities after paternity leave. Satisfaction about the sharing of domestics tasks is also higher after paternity leave for new mothers. It is also significant for higher parities, but to a lesser extent. Regardless of their partner's level of education, mothers whose partners have already taken paternity leave are more satisfied with the division of household chores.

### 5.5 Robustness checks

Our identification is based on the assumption that fathers who took leave do not differ from fathers who intend to take it but still have not at the moment of interview - once we have controlled for the whole set of observed child and family characteristics. Thus, the differences are imputable to the policy. Even though, in order to capture preferences, we have introduced a rich set of controls that describe the working conditions, socio-economic situation and indicators of the father's involvement at birth, these fathers might still differ in unobserved characteristics that could possibly be related to their later parental involvement. The aim of our first robustness check is to verify whether these fathers behave differently when their child is two years old. At this moment, the two groups previously observed at two months have both taken their leave: definitely for those who have already taken it and

Table 18: Effect of Paternity Leave on Well-being

|  | Taken vs Will Take |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Disputes | -0.013 | 0.002 | 0.007 | 0.008 | 0.009 |
|  | $(0.03)$ | $(0.03)$ | $(0.03)$ | $(0.03)$ | $(0.03)$ |
| Satis repart domestic tasks | $0.112^{* * *}$ | $0.116^{* * *}$ | $0.109^{* * *}$ | $0.110^{* * *}$ | $0.107^{* * *}$ |
|  | $(0.03)$ | $(0.03)$ | $(0.03)$ | $(0.03)$ | $(0.03)$ |
| Satis repart parental tasks | $0.095^{* * *}$ | $0.092^{* * *}$ | $0.088^{* * *}$ | $0.089^{* * *}$ | $0.085^{* * *}$ |
|  | $(0.03)$ | $(0.03)$ | $(0.03)$ | $(0.03)$ | $(0.03)$ |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |
|  |  |  |  |  |  |

probably for those who declared that they are going to at two months. Thus, they should not differ so much two years later in terms of parental behavior, once all controls are included.

Among the two groups of takers, we do not observe any significant differences between them in the division of the four parental tasks at the two-year interview (Table 19). The division of parental tasks in couples with delayed leave taking is similar to the division of tasks in couples with early leave taking for all four tasks considered: changing the child, bathing him, nighttime care, and putting him to bed (Model 5). In the first specification, which has only the child characteristics, the division is a bit more unequal for delayed takers when compared to early takers in regard to the activities of bathing and putting the child to bed; but the effect disappears as soon as we control for socio-economic background and working conditions that explain the delay in take-up. This means that our identification strategy is able to capture most of the differences between early and delayed takers, and it gives us the confidence to interpret previous results as a causal effect of the paternity leave policy. Of course, one can claim that there is not more of an effect between early and delayed takers because there is no persistent effect of paternity leave at this age. That is why we also compare the division of tasks between takers and non-takers at this age. The differences are huge for all four of the tasks considered. Non-takers clearly have a much more unequal division of parental tasks.

Another issue might arise from panel attrition of the panel: fathers who are more invested in childcare might be more willing to volunteer to an interview about their child. We therefore also check whether our main results on the division of tasks at two months remain if we were to use the samples of parents still interviewed at two years. The results for this reduced sample (Table 20) are very consistent with the previous results obtained from the whole sample at two months. The division of tasks is more equal in five out of six tasks for which they were already significant. The only exception is doctor's visits, which do not differ between fathers who took leave and those who intended to. However, while this was the case for the whole sample, the coefficient remains positive. Thus, the selective attrition of the panel does not seem to invalidate our previous results.

A final criticism that could be formulated is that fathers who intend to take leave will not necessarily take it. They would be "hidden non-takers". If the reason for non-taking while having announced they would is due to external reasons (job constraints for instance), this does not invalidate our identification strategy; but if the delay is related to the father's weaker desire to take leave, this could mean that our control group is fuzzy. To tackle this issue, we performed two types of robustness checks.

First, we assume that as long as we are approaching the end of the paternity leave period window, the risk of being a "hidden non-taker" is higher. Thus, we test our models on fathers who are more likely to take their leave on time and are interviewed earlier. Though we already made a selection on child's age at interview, we place even more constraints by dropping the fathers who are interviewed when the child is older than three months ( 92 days). Table 21 shows very consistent results: Fathers who take leave adopt a more egalitarian division of parental tasks than those yet to take leave, regardless of whether or not we include the fathers who are at the highest risk of non-taking.

Second, our data do not let us check whether or not fathers who postponed paternity leave actually took it, because no questions about this had been asked in subsequent waves (at the one-year and two-year interviews); nevertheless, we use the timing between the twomonth interviews of the mothers and those of the fathers. Some fathers who intended to take leave - as declared by the mothers - were effectively on leave when they were interviewed some time later. This is the case for 383 fathers out of the 1651 who intended to take leave. This is quite huge proportion (around one quarter), given the fact that the delay between the mother's and father's interviews is quite short on average.

These fathers actually take paternity leave, and thus constitute a good control group. Their division of parental and domestic tasks at the moment of the mother's interview is observed just before their leave. We thus perform a robustness check by keeping only the fathers that the mothers said would take leave and who we know actually took it since they are on leave at the time of the father's interview. We compare them to the treated fathers who already took leave at the moment of the mother's interview (Table 22) ${ }^{[16}$ Results show

[^7]Table 19: Baby tasks sharing at 2 Years (ref=already takers)

|  | Will Take - Not taken vs Taken |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Changing Will take | -0.022 | -0.014 | -0.007 | -0.011 | -0.009 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Not taken | $-0.271^{* * *}$ | -0.239*** | -0.145*** | $-0.156^{* * *}$ | $-0.153 * * *$ |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Putting to bed Will take | -0.057* | -0.053* | -0.049 | -0.053* | -0.049 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Not taken | $-0.282^{* * *}$ | $-0.244^{* * *}$ | -0.209*** | $-0.216^{* * *}$ | $-0.210^{* * *}$ |
|  | (0.03) | (0.04) | (0.04) | (0.04) | (0.04) |
| Bathing Will take | -0.057* | -0.048 | -0.037 | -0.039 | -0.038 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Not taken | $-0.385^{* * *}$ | $-0.332^{* * *}$ | $-0.228^{* * *}$ | $-0.236^{* * *}$ | $-0.233^{* * *}$ |
|  | (0.03) | (0.04) | (0.04) | (0.04) | (0.04) |
| Night Caring Will take | -0.037 | -0.041 | -0.033 | -0.035 | -0.032 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Not taken | $-0.150^{* * *}$ | $-0.113^{* * *}$ | -0.067* | -0.075** | -0.069* |
|  | (0.03) | (0.04) | (0.04) | (0.04) | (0.04) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ Pres. during delivery/Alim | No | No | No | Yes | Yes |
|  | No | No | No | No | Yes |

Table 20: Baby tasks at two months on sample interviewed at 2 years

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Changing | 0.098*** | 0.090*** | $0.083^{* * *}$ | $0.083^{* * *}$ | 0.077** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Feeding | 0.058* | 0.037 | 0.037 | 0.036 | 0.006 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Putting to bed | 0.080*** | 0.073** | 0.071** | 0.070** | 0.060** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Bathing | 0.090*** | 0.092*** | $0.083^{* * *}$ | 0.082*** | 0.084*** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Taking for a walk | 0.052* | 0.043 | 0.034 | 0.034 | 0.032 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Night Caring | 0.089*** | 0.086 ${ }^{* * *}$ | 0.080** | 0.079** | 0.064** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Taking to the doctor | 0.047 | 0.044 | 0.039 | 0.040 | 0.037 |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

that the positive effect of paternity leave on the division of parental tasks remains for five out of six tasks, which confirms our previous results on paternity leave's positive impact on the division of childcare.

## 6 Conclusion

In this paper, we estimate the impact of French short-term paternity leave on the spousal division of various household chores and childcare activities. We also measure heterogeneous effects by birth order and fathers' level of education. To do so, we exploit an original data set that makes it possible to, first, distinguish the precise type of parental task performed and, second, compare fathers who have already taken paternity leave when the child is around 2 months old with fathers who are going to take it.

Comparing these two groups shows that paternity leave leads to better sharing of most parenting activities when the baby is two months old while it only slightly modifies the distribution of housework tasks. In particular, it reduces the probability that mothers always do these tasks and it increases the probability of equal sharing between parents. Fathers who have taken paternity leave spend more time on childcare. Their partner may also spend more time with the child following paternity leave, as studies in other countries have shown (Kluve \& Tamm, 2013, Patnaik, 2015). Paternity leave gives incentives for father to invest in childcare activities without affecting the division of other housework activities. Fathers do not drop domestic tasks (or mother do not invest more in domestic tasks) because they invest more in childcare. Paternity leave also has a positive effect on mothers' satisfaction with the distribution of housework and childcare.

These effects of paternity leave strongly depend on the child birth order and on the father's level of education. The change toward more equal sharing of child care after paternity leave is observed only for the first birth, suggesting that paternity leave allows new fathers to learn parenting activities. This result demonstrates that the policy achieves its goal of balancing parental roles between parents from an early age. The lack of effect for fathers of several children raises questions about the effectiveness of this short-term leave over the long term.
not available for takers.

Table 21: Baby tasks sharing, sample restricted to interview occuring before 92 days

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Changing | $0.087^{* * *}$ | 0.077** | $0.072^{* *}$ | $0.073^{* *}$ | $0.067^{* *}$ |
|  | $(0.03)$ | (0.03) | (0.03) | (0.03) | $(0.03)$ |
| Feeding | 0.058* | 0.034 | 0.035 | 0.036 | 0.010 |
|  | (0.03) | (0.03) | $(0.03)$ | (0.03) | (0.03) |
| Putting to bed | $0.080^{* * *}$ | $0.073^{* *}$ | $0.071^{* *}$ | $0.071^{* *}$ | $0.062^{* *}$ |
|  | (0.03) | (0.03) | (0.03) | (0.03) | $(0.03)$ |
| Bathing | 0.092*** | 0.090*** | $0.082^{* * *}$ | $0.081^{* * *}$ | 0.082*** |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Taking for a walk | 0.060** | 0.048 | 0.037 | 0.039 | 0.038 |
|  | (0.03) | (0.03) | $(0.03)$ | $(0.03)$ | (0.03) |
| Night Caring | $0.078 * * *$ | $0.073^{* *}$ | $0.068^{* *}$ | 0.069** | 0.054* |
|  | $(0.03)$ | $(0.03)$ | $(0.03)$ | $(0.03)$ | $(0.03)$ |
| Taking to the doctor | 0.071** | 0.066** | $0.061^{* *}$ | 0.063** | 0.060* |
|  | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

Table 22: Baby tasks sharing, intented takers restricted to true takers

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Changing | 0.143** | $0.153^{* *}$ | $0.158^{* * *}$ | 0.160*** | $0.151^{* *}$ |
|  | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) |
| Feeding | 0.084 | 0.061 | 0.059 | 0.063 | 0.011 |
|  | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) |
| Putting to bed | 0.091 | 0.107* | 0.112* | 0.111* | 0.096* |
|  | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) |
| Bathing | 0.064 | 0.095 | 0.097* | 0.095 | 0.097* |
|  | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) |
| Taking for a walk | 0.052 | 0.034 | 0.037 | 0.039 | 0.037 |
|  | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) |
| Night Caring | 0.093 | 0.099* | 0.096 | 0.096 | 0.073 |
|  | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) |
| Taking to the doctor | 0.110* | 0.103* | 0.117* | 0.119** | 0.112* |
|  | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

Our data do not allow us to assess whether these fathers use paternity leave to invest more time with their older children, or whether the parental roles after taking paternity leave for previous children have already experienced an equalizing effect that can no longer be improved, since the specialization of tasks has already been established.

Distinguishing between the types of parental tasks performed by the fathers highlights an educational gradient in the division of tasks that are affected by paternity leave. While low-educated fathers who have taken leave are more likely to share equally in changing diapers and doing outdoor activities, those with a high school diploma are more involved in bathing the baby while fathers with a tertiary education opt for sharing more equally bedtime activities. These differences in tasks according to education level reflect social differences, but also work schedule constraints and differences in the time of returning home.

The two objectives of paternity leave are thus achieved. First, it facilitates father-child bonding, which has been recognized to be associated with children's well-being, cognitive development and socio-emotional outcomes (Shannon et al., 2002, Yogman et al., 1995). Second, it fosters gender equality by favoring a more equal gender division of tasks through the father's increased involvement in childcare at the earliest age without any adverse effects on the sharing of domestic tasks or on couples' well-being. It appears that paternity leave clearly has a positive effect on father-child bonding for fathers who tend to be less involved with their children, such as low-educated fathers. In particular, it helps non-participants adopt more egalitarian sharing. Short leave is highly symbolic but it gives fathers the opportunity to learn how to perform childcare tasks at the earliest ages and legitimizes their participation in tasks traditionally performed by women. These effects are observed at two months after childbirth and therefore focus on the very short-term impact of paternity leave. However, there is a still difference between leave-takers and non-takers when the child is two years old, which suggests that the leave may have longer-term effects. These results show that a public policy may influence behaviors in the private sphere and may change gender norms in the long-term.

However, the 11 days of paternity leave is a short leave that affects the division of household work only to a limited extent. Although the observed effects are always positive and significant, they are indeed of little magnitude in comparison to the magnitude of the gender
gap in parental tasks. Gender equality is far from being achieved. Studies analyzing the effect of longer leaves show stronger effects (Bunning, 2015). Extending the duration of paternity leave might be a solution that will accentuate the positive effects that have been observed for new fathers. However, the longer the leave, the lower the coverage because some fathers may be reluctant to take a longer leave. The coverage of short-term leave analyzed here is quite significant since it concerns $70 \%$ of fathers. This means that even a small change in magnitude has important effects.

Our identification strategy takes into account the selection of fathers who wish to take leave and those who do not, which is by far the one most likely to create disparities in behavior. However, it does not allow us to fully take into account the selection in choosing the time of leave. We cannot completely rule out that fathers who took leave and those who the mother has declared will take it may differ in unobserved characteristics that are potentially related to the sharing of tasks within couples. However, several robustness checks give consistent results and allow us to be confident about the positive impact of paternity leave.

Finally, while paternity leave has a positive effect, the proportion of fathers who do not take it remains high - even though it lasts only 11 days. Those who do not take leave are in less stable and low-paid jobs. They probably cannot take leave because they perceive it as risky to their employment prospects. Efforts must therefore be made in the future to increase take-up and mitigate the potential negative effects that such leave may have on a father's career .

## 7 Acknowledgments

The Elfe survey is a joint project between the French Institute for Demographic Studies (INED) and the National Institute of Health and Medical Research (INSERM), in partnership with the French blood transfusion service (Etablissement français du sang, EFS), Santé publique France, the National Institute for Statistics and Economic Studies (INSEE), the Direction générale de la santé (DGS, part of the Ministry of Health and Social Affairs), the Direction générale de la prévention des risques (DGPR, Ministry for the Environment), the

Direction de la recherche, des études, de l'évaluation et des statistiques (DREES, Ministry of Health and Social Affairs), the Département des études, de la prospective et des statistiques (DEPS, Ministry of Culture), and the Caisse nationale des allocations familiales (CNAF), with the support of the Ministry of Higher Education and Research and the Comité de concertation pour les données en sciences humaines et sociales (CCDSHS). Via the RECONAI platform, it receives a government grant managed by the National Research Agency under the "Investissements d'avenir" programme (ANR-11-EQPX-0038). This work was partly funded by the Agence Nationale de la Recherche (Veniromond, ANR-10-BLAN-1821).

## References

Akerlof, G. A. \& Kranton, R. E. (2000), 'Economics and identity', The Quarterly Journal of Economics 115(3), 715-753.

Angrist, J. D. \& Evans, W. N. (1998), 'Children and their parents' labor supply: Evidence from exogenous variation in family size', The American Economic Review 88(3), 450-477.

URL: http://www.jstor.org/stable/116844

Anxo, D., Mencarini, L., Pailhe, A., Solaz, A., Tanturri, M. L. \& Flood, L. (2011), 'Gender differences in time use over the life course in france, italy, sweden, and the us.', Feminist Economics 17(3), 159 - 195.

Apps, P. \& Rees, R. (2005), 'Gender, time use, and public policy over the life cycle', Oxford Review of Economic Policy 21(3), 439-461.

URL: http://oxrep.oxfordjournals.org/content/21/3/439.abstract
Bauer, D. \& Penet, S. (2005), 'Le congé de paternité', Etudes et Résultats 442, 1-11.
Becker, G. S. (1965), 'A theory of the allocation of time', The Economic Journal 75(299), 493-517.

URL: http://www.jstor.org/stable/2228949
Bianchi, S. M., Sayer, L. C., Milkie, M. A. \& Robinson, J. P. (2012), 'Housework: Who did, does or will do it, and how much does it matter?', Social Forces 91(1), 55-63.

Boll, C., Leppin, J. \& Reich, N. (2014), 'Paternal childcare and parental leave policies: evidence from industrialized countries', Review of Economics of the Household 12(1), 129158.

URL: http://dx.doi.org/10.1007/s11150-013-9211-z
Browning, M., Chiappori, P.-A. \& Weiss, Y. (2014), Economics of the Family, number 9780521791595 in ‘Cambridge Books', Cambridge University Press.

Bruning, G. \& Plantenga, J. (1999), 'Parental leave and equal opportunities: Experiences in eight european countries', Journal of European Social Policy 9(3), 195-209.

URL: http://esp.sagepub.com/content/9/3/195.abstract
Bunning, M. (2015), 'What happens after the 'daddy months'? fathers' involvement in paid work, childcare, and housework after taking parental leave in germany', European Sociological Review 31(6), 738-748.
URL: http://dx.doi.org/10.1093/esr/jcv072

Champagne, C., Pailhé, A. \& Solaz, A. (2014), 25 ans de participation des hommes et des femmes au travail domestique : quels facteurs d'évolutions ?, Working Papers 203, Institut National d'Études Démographiques (INED).

URL: http://ideas.repec.org/p/idg/wpaper/203.html
Charles, M.-A., Leridon, H., Dargent, P. \& Geay, B. (2011), 'Tracking the lives of 20,000 children launch of the elfe child cohort study', Population $\mathcal{E}$ Societies (475), 1.

Cools, S., Fiva, J. H. \& Kirkebøen, L. J. (2011), Causal effects of paternity leave on children and parents, Discussion Papers 657, Research Department of Statistics Norway.

URL: http://ideas.repec.org/p/ssb/dispap/657.html
Cools, S., Fiva, J. H. \& Kirkebøen, L. J. (2015), ‘Causal effects of paternity leave on children and parents', The Scandinavian Journal of Economics 117(3), 801-828.

URL: http://dx.doi.org/10.1111/sjoe. 12113

Ekberg, J., Eriksson, R. \& Friebel, G. (2013), 'Parental leave - a policy evaluation of the swedish "daddy-month" reform', Journal of Public Economics 97(C), 131-143.

Fuwa, M. (2004), 'Macro-level gender inequality and the division of household labor in 22 countries', American Sociological Review 69(6), pp. 751-767.

URL: http://www.jstor.org/stable/3593041

Gauthier, A. H., Smeeding, T. M. \& Furstenberg Jr., F. F. (2004), 'Are parents investing less time in children? trends in selected industrialized countries.', Population and Development Review 30(4), 647 - 671.

Haas, L. \& Hwang, C. P. (2008), 'The impact of taking parental leave on fathers' participation in childcare and relationships with children: Lessons from sweden.', Community, Work and Family 11(1), 85-104.

Han, W.-J., Ruhm, C. \& Waldfogel, J. (2009), 'Parental leave policies and parents' employment and leave-taking', Journal of Policy Analysis and Management 28(1), 29-54.

URL: http://ideas.repec.org/a/wly/jpamgt/v28y2009i1p29-54.html

Hook, J. L. (2010), 'Gender inequality in the welfare state: Sex segregation in housework, 1965-2003.', American Journal of Sociology 115(5), 1480 - 1523.

Hosking, A., Whitehouse, G. \& Baxter, J. (2010), 'Duration of leave and resident fathers' involvement in infant care in australia.', Journal of Marriage and Family 72(5), 1301 1316.

Huerta, M., Adema, W., Baxter, J., Han, W.-J., Lausten, M., Lee, R. \& Waldfoge, J. (2013), Fathers' leave, fathers' involvement and child development: Are they related? evidence from four oecd countries, Oecd social, employment and migration working papers, OECD Publishing.

Kluve, J. \& Tamm, M. (2013), 'Parental leave regulations, mothers' labor force attachment and fathers' childcare involvement: evidence from a natural experiment', Journal of Population Economics 26(3), 983-1005.

Kotsadam, A. \& Finseraas, H. (2011), 'The state intervenes in the battle of the sexes: Causal effects of paternity leave', Social Science Research 40(6), 1611-1622.

Kotsadam, A. \& Finseraas, H. (2013), 'Causal effects of parental leave on adolescents' household work', Social Forces 92(1), 329-351.

URL: http://sf.oxfordjournals.org/content/92/1/329.abstract

Lachance-Grzela, M. \& Bouchard, G. (2010), 'Why do women do the lion's share of housework? a decade of research.', Sex Roles $\mathbf{6 3}(11 / 12), 767-780$.

Mazuy, M., Barbieri, M. \& d'Albis, H. (2014), 'Recent demographic trends in france : The number of marriages continues to decrease', Population-E 69(3), 313-363.

URL: www.cairn.info/revue-population-2014-3-page-313.htm

Moss, P. (2015), 11th international review of leave policies and related research, International network on leave policies and research.

Nepomnyaschy, L. \& Waldfogel, J. (2007), 'Paternity leave and fathers' involvement with their young children', Community, Work and Family 10(4), 427-453.

Patnaik, A. (2015), Reserving time for daddy: The short and long-run consequences of fathers' quotas, Working paper.

URL: http://ssrn.com/abstract=2475970

Pollmann-Schult, M. (2010), 'Marriage and earnings: Why do married men earn more than single men?', European Sociological Review 27(2), 147-163.

Rege, M. \& Solli, I. (2013), 'The impact of paternity leave on fathers' future earnings', Demography 50(6).

Sayer, L. C., Bianchi, S. M. \& Robinson, J. P. (2004), 'Are parents investing less in children? trends in mothers' and fathers' time with children[1].', American Journal of Sociology 110(1), 1 - 43.

Shannon, J. D., Tamis-LeMonda, C. S., London, K. \& Cabrera, N. (2002), 'Beyond rough and tumble: Low-income fathers'; interactions and children's cognitive development at 24 months', Parenting 2(2), 77-104.

Sundström, M. \& Duvander, A. Z. E. (2002), 'Gender division of childcare and the sharing of parental leave among new parents in sweden', European Sociological Review 18(4), 433447.

URL: http://esr.oxfordjournals.org/content/18/4/433.abstract

Tanaka, S. \& Waldfogel, J. (2007), 'Effects of parental leave and work hours on fathers' involvement with their babies', Community, Work an Family 10(4), 409-426.

Yogman, M., Kindlon, D. \& Earls, F. (1995), 'Father involvement and cognitive/behavioural outcomes of preterm infants', Journal of the American Academy of Child and Adolescent Psychiatry 34, 58-66.

A Appendix A: Probability to take the leave

Table 23: Logit estimates, Taken (1) VS Will take (0) (1/4)

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Gest. Age | 0.011*** | 0.011*** | 0.011*** | 0.011*** | $0.012^{* * *}$ |
|  | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| Girl | -0.016 | -0.017 | -0.021 | -0.021 | -0.023 |
|  | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) |
| July | 0.133 | 0.125 | 0.105 | 0.106 | 0.097 |
|  | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) |
| October | -0.004 | -0.004 | -0.019 | -0.020 | -0.026 |
|  | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) |
| December | $0.294^{* * *}$ | 0.301*** | 0.290*** | 0.289*** | 0.285*** |
|  | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) |
| Birth Weight | 0.048 | 0.066 | 0.059 | 0.057 | 0.055 |
|  | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) |
| Age at interview | $0.024^{* * *}$ | 0.025*** | 0.025*** | 0.025*** | 0.025*** |
|  | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| N | 9088 | 9088 | 9088 | 9088 | 9088 |

Table 24: Logit estimates, Taken (1) VS Will take (0) (2/4)

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PACS |  | 0.165** | 0.158** | $0.155^{* *}$ | 0.158** |
|  |  | (0.08) | (0.08) | (0.08) | (0.08) |
| Cohabiting couple |  | $-0.185^{* * *}$ | $-0.180 * * *$ | $-0.175^{* * *}$ | $-0.180 * * *$ |
|  |  | $(0.06)$ | (0.06) | (0.06) | (0.06) |
| Step family |  | -0.081 | -0.103 | -0.091 | -0.101 |
|  |  | (0.10) | (0.11) | (0.11) | (0.11) |
| First Child |  | -0.042 | -0.021 | -0.024 | -0.026 |
|  |  | (0.06) | (0.07) | (0.07) | (0.07) |
| Third Child + |  | $-0.137^{*}$ | -0.137* | -0.129 | -0.130 |
|  |  | (0.08) | (0.08) | (0.08) | (0.08) |
| Mother Age at child birth |  | 0.009 | 0.010 | 0.009 | 0.009 |
|  |  | (0.01) | (0.01) | (0.01) | (0.01) |
| Mother Immigrant |  | $-0.422^{* * *}$ | $-0.461^{* * *}$ | -0.469*** | $-0.425^{* * *}$ |
|  |  | (0.11) | (0.11) | (0.11) | (0.11) |
| Mother Short vocational |  | -0.128 | -0.125 |  |  |
|  |  | (0.19) | (0.19) |  |  |
| Mother Secondary Education |  | -0.190 | -0.187 |  |  |
|  |  | (0.14) | (0.14) |  |  |
| Mother Some College |  | -0.171 | -0.157 |  |  |
|  |  | (0.15) | (0.15) |  |  |
| Mother Higher education |  | -0.278* | -0.272* |  |  |
|  |  | (0.15) | (0.15) |  |  |
| Father's age, 2 months |  | $-0.018^{* * *}$ | $-0.017^{* * *}$ | $-0.017^{* *}$ | -0.017** |
|  |  | (0.01) | (0.01) | (0.01) | (0.01) |
| Father Immigrant |  | -0.082 | -0.070 | -0.066 | -0.022 |
|  |  | (0.11) | (0.11) | (0.11) | (0.11) |
| Father Short vocational |  | -0.099 | -0.110 | -0.124 | -0.125 |
|  |  | (0.12) | (0.12) | (0.12) | (0.12) |
| Father Secondary Education |  | -0.052 | -0.043 | -0.075 | -0.074 |
|  |  | (0.12) | (0.12) | (0.12) | (0.13) |
| Father Some College |  | 0.107 | 0.123 | 0.076 | 0.084 |
|  |  | (0.12) | (0.13) | (0.14) | (0.14) |
| Father Higher education |  | $-0.217^{*}$ | -0.255* | $-0.337^{* *}$ | $-0.317^{* *}$ |
|  |  | (0.12) | (0.13) | (0.16) | (0.16) |
| Equivalized income |  | 0.028 | -0.046 | -0.038 | -0.045 |
|  |  | (0.05) | (0.08) | (0.08) | (0.08) |
| Equivalized income sq |  | 0.000 | 0.004 | 0.003 | 0.004 |
|  |  | (0.00) | (0.01) | (0.01) | (0.01) |
| N | 9088 | 9088 | 9088 | 9088 | 9088 |

Table 25: Logit estimates, Taken (1) VS Will take (0) (3/4)

|  | Model 1 | Model 2 | Model 3 | Model 4 |
| :--- | :---: | :---: | :---: | :---: | Model 59.

Table 26: Logit estimates, Taken (1) VS Will take (0) (4/4)

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Share of Women Wage in Total Income 2 m |  |  |  | -0.170 | -0.184 |
|  |  |  |  | (0.19) | (0.19) |
| Mother's education < Father's education |  |  |  | 0.029 | 0.025 |
|  |  |  |  | (0.08) | (0.08) |
| Mother's education > Father's education |  |  |  | -0.031 | -0.027 |
|  |  |  |  | (0.08) | (0.08) |
| Absence of the fath. during delivery cesarean |  |  |  |  | 0.297** |
|  |  |  |  |  | (0.13) |
| Absence of the fath. during delivery no cesarean |  |  |  |  | 0.369** |
|  |  |  |  |  | (0.16) |
| Some Breast feeding since birth |  |  |  |  | $-0.216^{* * *}$ |
|  |  |  |  |  | (0.06) |
| N | 9088 | 9088 | 9088 | 9088 | 9088 |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

Table 27: Logit estimates, Will not take (1) VS Taken (0) (1/4)

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Gest. Age | -0.004 | -0.001 | -0.000 | -0.000 | 0.000 |
| Girl | $(0.00)$ | $(0.00)$ | $(0.00)$ | $(0.00)$ | $(0.00)$ |
| July | 0.006 | 0.003 | 0.016 | 0.016 | 0.012 |
|  | $(0.06)$ | $(0.06)$ | $(0.06)$ | $(0.06)$ | $(0.06)$ |
|  | -0.103 | -0.081 | -0.064 | -0.066 | -0.064 |
|  | $(0.09)$ | $(0.09)$ | $(0.10)$ | $(0.10)$ | $(0.10)$ |
| December | -0.109 | -0.110 | -0.082 | -0.099 | -0.102 |
|  | $(0.09)$ | $(0.09)$ | $(0.10)$ | $(0.10)$ | $(0.10)$ |
| Birth Weight | -0.089 | -0.067 | -0.042 | -0.051 | -0.051 |
|  | $(0.09)$ | $(0.09)$ | $(0.09)$ | $(0.09)$ | $(0.10)$ |
| Age at interview | 0.018 | -0.019 | -0.021 | -0.006 | -0.003 |
|  | $(0.07)$ | $(0.07)$ | $(0.07)$ | $(0.08)$ | $(0.08)$ |
| N | $0.07 * * *$ | 0.003 | -0.001 | 0.000 | 0.000 |

Table 28: Logit estimates, Will not take (1) VS Taken (0) (2/4)

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PACS |  | -0.240*** | -0.144 | -0.160* | -0.148 |
|  |  | (0.09) | (0.09) | (0.09) | (0.09) |
| Cohabiting couple |  | 0.130** | 0.091 | 0.094 | 0.097 |
|  |  | (0.07) | (0.07) | (0.07) | (0.07) |
| Step family |  | 0.130 | 0.090 | 0.088 | 0.086 |
|  |  | (0.10) | (0.11) | (0.11) | (0.11) |
| First Child |  | -0.191 ${ }^{* * *}$ | -0.259*** | -0.275*** | $-0.272^{* * *}$ |
|  |  | (0.07) | (0.07) | (0.07) | (0.07) |
| Third Child + |  | 0.151* | 0.147* | 0.183** | 0.166* |
|  |  | (0.08) | (0.09) | (0.09) | (0.09) |
| Mother Age at child birth |  | -0.011 | -0.010 | $-0.016^{*}$ | $-0.017^{*}$ |
|  |  | (0.01) | (0.01) | (0.01) | (0.01) |
| Mother Immigrant |  | 0.286*** | 0.300** | $0.387^{* * *}$ | 0.356*** |
|  |  | (0.11) | (0.12) | (0.12) | (0.12) |
| Mother Short vocational |  | 0.279* | 0.248 |  |  |
|  |  | (0.16) | (0.17) |  |  |
| Mother Secondary Education |  | -0.055 | 0.036 |  |  |
|  |  | (0.12) | (0.14) |  |  |
| Mother Some College |  | -0.201 | -0.127 |  |  |
|  |  | (0.13) | (0.15) |  |  |
| Mother Higher education |  | -0.174 | -0.137 |  |  |
|  |  | (0.13) | (0.15) |  |  |
| Father's age, 2 months |  | 0.020*** | 0.026*** | $0.027^{* * *}$ | $0.027^{* * *}$ |
|  |  | (0.01) | (0.01) | (0.01) | (0.01) |
| Father Immigrant |  | 0.455*** | 0.345*** | $0.353^{* * *}$ | 0.308*** |
|  |  | (0.10) | (0.11) | (0.11) | (0.11) |
| Father Short vocational |  | $-0.267^{* *}$ | $-0.217^{*}$ | $-0.235^{* *}$ | $-0.226^{*}$ |
|  |  | (0.11) | (0.11) | (0.11) | (0.12) |
| Father Secondary Education |  | $-0.447^{* * *}$ | $-0.430 * * *$ | -0.513*** | $-0.478 * * *$ |
|  |  | (0.11) | (0.12) | (0.12) | (0.13) |
| Father Some College |  | $-0.577^{* * *}$ | $-0.607^{* * *}$ | -0.739*** | -0.689*** |
|  |  | (0.12) | (0.13) | (0.14) | (0.14) |
| Father Higher education |  | $-0.367^{* * *}$ | -0.329** | $-0.536^{* * *}$ | -0.481*** |
|  |  | (0.11) | (0.13) | (0.16) | (0.16) |
| Equivalized income |  | -0.006 | 0.098 | -0.037 | -0.030 |
|  |  | (0.05) | (0.06) | (0.06) | (0.06) |
| Equivalized income sq |  | 0.002 | -0.002 | 0.002 | 0.002 |
|  |  | (0.00) | (0.00) | (0.00) | (0.00) |
| N | 8852 | 8852 | 8852 | 8852 | 8852 |

Table 29: Logit estimates, Will not take (1) VS Taken (0) (3/4)

|  | Model 1 | Model 2 | Model 3 | Model 4 |
| :--- | :---: | :---: | :---: | :---: | Model 59.

Table 30: Logit estimates, Will not take (1) VS Taken (0) (4/4)

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Share of Women Wage in Total Income 2m |  |  |  | $\begin{gathered} 1.935^{* * *} \\ (0.18) \end{gathered}$ | $\begin{gathered} 1.936^{* * *} \\ (0.18) \end{gathered}$ |
| Mother's education < Father's education |  |  |  | $\begin{aligned} & 0.094 \\ & (0.09) \end{aligned}$ | $\begin{aligned} & 0.093 \\ & (0.09) \end{aligned}$ |
| Mother's education > Father's education |  |  |  | $\begin{gathered} -0.119 \\ (0.09) \end{gathered}$ | $\begin{aligned} & -0.097 \\ & (0.09) \end{aligned}$ |
| Absence of the fath. during delivery cesarean |  |  |  |  | $\begin{gathered} -0.656^{* * *} \\ (0.13) \end{gathered}$ |
| Absence of the fath. during delivery no cesarean |  |  |  |  | $\begin{gathered} -0.506^{* * *} \\ (0.16) \end{gathered}$ |
| Some Breast feeding since birth |  |  |  |  | $\begin{gathered} -0.028 \\ (0.07) \end{gathered}$ |
| N | 8852 | 8852 | 8852 | 8852 | 8852 |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

Table 31: Logit estimates, Cannot take (1) VS Taken (0) (1/4)

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Gest. Age | 0.001 | 0.003 | 0.008 | $0.009^{*}$ | $0.009^{*}$ |
|  | $(0.00)$ | $(0.00)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ |
|  | -0.066 | -0.062 | -0.042 | -0.051 | -0.052 |
|  | $(0.07)$ | $(0.08)$ | $(0.08)$ | $(0.09)$ | $(0.09)$ |
|  | $-0.209^{*}$ | -0.161 | -0.173 | -0.201 | -0.190 |
| December | $(0.12)$ | $(0.12)$ | $(0.13)$ | $(0.13)$ | $(0.13)$ |
|  | $-0.311^{* * *}$ | $-0.287^{* *}$ | $-0.242^{*}$ | $-0.280^{* *}$ | $-0.279^{* *}$ |
| Birth Weight | $(0.12)$ | $(0.12)$ | $(0.13)$ | $(0.13)$ | $(0.13)$ |
|  | $-0.251^{* *}$ | $-0.207^{*}$ | -0.206 | $-0.231^{*}$ | $-0.226^{*}$ |
| Age at interview | $(0.11)$ | $(0.12)$ | $(0.13)$ | $(0.13)$ | $(0.13)$ |
|  | $-0.265^{* * *}$ | $-0.218^{* *}$ | $-0.253^{* *}$ | $-0.267^{* *}$ | $-0.254^{* *}$ |
| N | $(0.09)$ | $(0.10)$ | $(0.10)$ | $(0.11)$ | $(0.11)$ |

Table 32: Logit estimates, Cannot take (1) VS Taken (0) (2/4)

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PACS |  | -0.193 | -0.050 | -0.062 | -0.049 |
|  |  | (0.12) | (0.13) | (0.13) | (0.13) |
| Cohabiting couple |  | 0.278*** | 0.216** | 0.222** | 0.237** |
|  |  | (0.09) | (0.10) | (0.10) | (0.10) |
| Step family |  | 0.074 | 0.141 | 0.078 | 0.096 |
|  |  | (0.14) | (0.15) | (0.16) | (0.16) |
| First Child |  | 0.198** | 0.076 | 0.058 | 0.059 |
|  |  | (0.09) | (0.10) | (0.10) | (0.10) |
| Third Child + |  | -0.036 | 0.041 | 0.055 | 0.050 |
|  |  | (0.12) | (0.13) | (0.13) | (0.13) |
| Mother Age at child birth |  | -0.011 | -0.009 | $-0.022^{*}$ | $-0.024^{*}$ |
|  |  | (0.01) | (0.01) | (0.01) | (0.01) |
| Mother Immigrant |  | 0.161 | 0.222 | $0.424^{* * *}$ | 0.355** |
|  |  | (0.14) | (0.15) | (0.16) | (0.16) |
| Mother Short vocational |  | -0.138 | -0.089 |  |  |
|  |  | (0.19) | (0.21) |  |  |
| Mother Secondary Education |  | $-0.446^{* * *}$ | -0.293* |  |  |
|  |  | (0.15) | (0.16) |  |  |
| Mother Some College |  | $-0.488^{* * *}$ | -0.425** |  |  |
|  |  | (0.16) | (0.18) |  |  |
| Mother Higher education |  | $-0.272 *$ | -0.288 |  |  |
|  |  | (0.16) | (0.19) |  |  |
| Father's age, 2 months |  | 0.032*** | 0.036*** | 0.038*** | 0.037*** |
|  |  | (0.01) | (0.01) | (0.01) | (0.01) |
| Father Immigrant |  | 0.861*** | 0.659*** | 0.727*** | $0.654^{* * *}$ |
|  |  | (0.12) | (0.13) | (0.14) |  |
| Father Short vocational |  | $-0.359^{* * *}$ | -0.242 | -0.340** | $-0.340^{* *}$ |
|  |  | (0.13) | (0.15) | (0.15) | (0.16) |
| Father Secondary Education |  | $-0.505^{* * *}$ | -0.321** | $-0.508^{* * *}$ | ${ }^{-0.486 * * *}$ |
|  |  | (0.14) | (0.16) | (0.17) | (0.17) |
| Father Some College |  | $-0.525^{* * *}$ | -0.396** | -0.634*** | -0.598*** |
|  |  | (0.15) | (0.17) | (0.19) | (0.19) |
| Father Higher education |  | $-0.242^{*}$ | -0.004 | -0.338 | -0.311 |
|  |  | (0.14) | (0.17) | (0.21) | (0.22) |
| Equivalized income |  | $-0.539^{* * *}$ | -0.047 | -0.412*** | -0.394*** |
|  |  | (0.08) | (0.10) | (0.10) | (0.10) |
| Equivalized income sq |  | 0.015*** | 0.002 | 0.011*** | 0.011*** |
|  |  | (0.00) | (0.00) | (0.00) | (0.00) |
| N | 8052 | 8052 | 8052 | 8052 | 8052 |

Table 33: Logit estimates, Cannot take (1) VS Taken (0) (3/4)

|  | Model 1 | Model 2 | Model 3 | Model 4 |
| :--- | :---: | :---: | :---: | :---: | Model 59.

Table 34: Logit estimates, Cannot take (1) VS Taken (0) (4/4)

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Share of Women Wage in Total Income 2m |  |  |  | $\begin{gathered} 3.643^{* * *} \\ (0.25) \end{gathered}$ | $\begin{gathered} 3.646^{* * *} \\ (0.25) \end{gathered}$ |
| Mother's education < Father's education |  |  |  | $\begin{aligned} & 0.078 \\ & (0.12) \end{aligned}$ | $\begin{aligned} & 0.089 \\ & (0.13) \end{aligned}$ |
| Mother's education > Father's education |  |  |  | $\begin{gathered} -0.156 \\ (0.12) \end{gathered}$ | $\begin{aligned} & -0.137 \\ & (0.12) \end{aligned}$ |
| Absence of the fath. during delivery cesarean |  |  |  |  | $\begin{gathered} -0.661^{* * *} \\ (0.17) \end{gathered}$ |
| Absence of the fath. during delivery no cesarean |  |  |  |  | $\begin{gathered} -0.440^{* *} \\ (0.21) \end{gathered}$ |
| Some Breast feeding since birth |  |  |  |  | 0.208** <br> (0.10) |
| N | 8052 | 8052 | 8052 | 8052 | 8052 |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

Table 35: Marginal Effect Changing

|  | $\mathrm{P}($ Always Mother $)$ | $\mathrm{P}($ Often Mother) | P (Both equal) | $\mathrm{P}($ (Often Father $)$ |
| :--- | :---: | :---: | :---: | :---: |
| Whole Population | $-0.017^{* *}$ | $-0.003^{* * *}$ | $0.020^{* *}$ | $0.001^{* *}$ |
| By Rank of Birth | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| First Birth |  |  |  |  |
|  | $-0.028^{* * *}$ | $-0.016^{* * *}$ | $0.041^{* * *}$ | $0.002^{* * *}$ |
| Other Birth | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
|  | -0.004 | 0.000 | 0.004 | 0.000 |
| By Education of the Father | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| Primary |  |  |  |  |
|  | $-0.028^{*}$ | 0.002 | $0.025^{*}$ | $0.001^{*}$ |
| Secondary | $(0.02)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
|  | -0.020 | -0.004 | 0.023 | 0.001 |
| Tertiary | $(0.02)$ | $(0.00)$ | $(0.02)$ | $(0.00)$ |
|  | -0.013 | -0.004 | 0.016 | 0.001 |
|  | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |

## B Appendix B: Marginal effects

## B. 1 Childcare

Table 36: Marginal Effect Feeding

|  | $\mathrm{P}($ Always Mother) | P (Often Mother) | P (Both equal) | P (Often Father) |
| :--- | :---: | :---: | :---: | :---: |
| Whole Population | -0.002 | 0.000 | 0.001 | 0.000 |
| By Rank of Birth | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| First Birth |  |  |  |  |
|  | $-0.024^{*}$ | 0.000 | $0.022^{*}$ | $0.001^{*}$ |
| Other Birth | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
|  | 0.021 | -0.006 | -0.015 | -0.001 |
| By Education of the Father | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| Primary |  |  |  |  |
|  | -0.003 | 0.001 | 0.002 | 0.000 |
| Secondary | $(0.02)$ | $(0.00)$ | $(0.02)$ | $(0.00)$ |
|  | 0.024 | 0.001 | -0.023 | -0.001 |
| Tertiary | $(0.02)$ | $(0.00)$ | $(0.02)$ | $(0.00)$ |
|  | -0.014 | 0.002 | 0.012 | 0.001 |
|  | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |

Table 37: Marginal Effect Putting to bed

|  | P (Always Mother) | P (Often Mother) | P (Both equal) | P (Often Father) |
| :--- | :---: | :---: | :---: | :---: |
| Whole Population | $-0.014^{* *}$ | $-0.008^{* *}$ | $0.017^{* *}$ | $0.005^{* *}$ |
| By rank of Birth | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| First Birth |  |  |  |  |
|  | $-0.021^{* * *}$ | $-0.022^{* * *}$ | $0.030^{* * *}$ | $0.013^{* * *}$ |
| Other Birth | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |
|  | -0.004 | -0.001 | 0.004 | 0.001 |
| By Education of the Father | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| Primary |  |  |  |  |
|  | 0.004 | 0.002 | -0.005 | -0.001 |
| Secondary | $(0.02)$ | $(0.01)$ | $(0.02)$ | $(0.00)$ |
| Tertiary | -0.004 | -0.002 | 0.005 | 0.001 |
|  | $(0.02)$ | $(0.01)$ | $(0.02)$ | $(0.01)$ |
|  | $-0.025^{* * *}$ | $-0.019^{* * *}$ | $0.032^{* * *}$ | $0.012^{* * *}$ |
|  | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |

Table 38: Marginal Effect Bathing baby

|  | P (Always Mother) | P (Often Mother) | P (Both equal) | P (Often Father) |
| :--- | :---: | :---: | :---: | :---: |
| Whole Population | $-0.027^{* * *}$ | $-0.001^{* * *}$ | $0.017^{* * *}$ | $0.011^{* * *}$ |
| By rank of Birth | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| First Birth |  |  |  |  |
|  | $-0.031^{* * *}$ | $-0.011^{* * *}$ | $0.021^{* * *}$ | $0.021^{* * *}$ |
| Other Birth | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ |
|  | -0.021 | 0.004 | 0.013 | 0.004 |
| By Education of the Father | $(0.02)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| Primary |  |  |  |  |
|  | $-0.035^{*}$ | 0.006 | $0.021^{*}$ | $0.008^{*}$ |
| Secondary | $(0.02)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| Tertiary | $-0.049^{* *}$ | 0.001 | $0.032^{* *}$ | $0.016^{* *}$ |
|  | $(0.02)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ |
|  | -0.019 | -0.002 | 0.012 | 0.009 |
|  | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ |

Table 39: Marginal Effect Taking for a walk

|  | P (Always Mother) | P (Often Mother) | P (Both equal) | P (Often Father) |
| :--- | :---: | :---: | :---: | :---: |
| Whole Population | -0.007 | -0.006 | 0.012 | 0.001 |
| By Rank of Birth | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |
| First Birth |  |  |  |  |
|  | -0.010 | -0.013 | 0.021 | 0.002 |
| Other Birth | $(0.01)$ | $(0.01)$ | $(0.02)$ | $(0.00)$ |
|  | -0.003 | -0.002 | 0.005 | 0.000 |
| By Education of the Father | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |
| Primary |  |  |  |  |
|  | $-0.021^{*}$ | $-0.021^{*}$ | $0.040^{*}$ | $0.002^{*}$ |
| Secondary | $(0.01)$ | $(0.01)$ | $(0.02)$ | $(0.00)$ |
| Tertiary | -0.002 | -0.002 | 0.004 | 0.000 |
|  | $(0.01)$ | $(0.01)$ | $(0.02)$ | $(0.00)$ |
|  | -0.002 | -0.002 | 0.004 | 0.000 |
|  | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |

Table 40: Marginal Effect Night caring

|  | $\mathrm{P}($ Always Mother $)$ | $\mathrm{P}($ Often Mother) | P (Both equal) | P (Often Father) |
| :--- | :---: | :---: | :---: | :---: |
| Whole Population | $-0.023^{* *}$ | $0.004^{*}$ | $0.015^{* *}$ | $0.004^{* *}$ |
| By Rank of Birth | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| First Birth |  |  |  |  |
|  | -0.023 | 0.002 | 0.016 | 0.005 |
| Other Birth | $(0.02)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
|  | -0.022 | 0.005 | 0.014 | 0.003 |
| By Education of the Father | $(0.02)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| Primary |  |  |  |  |
|  | -0.021 | 0.006 | 0.013 | 0.003 |
| Secondary | $(0.02)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |
|  | -0.030 | 0.005 | 0.020 | 0.006 |
| Tertiary | $(0.02)$ | $(0.00)$ | $(0.02)$ | $(0.00)$ |
|  | -0.020 | 0.003 | 0.013 | 0.004 |
|  | $(0.02)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |

Table 41: Marginal Effect Going to the doctor

|  | $\mathrm{P}($ Always Mother $)$ | $\mathrm{P}($ Often Mother) | P (Both equal) | $\mathrm{P}($ Often Father) |
| :--- | :---: | :---: | :---: | :---: |
| Whole Population | $-0.023^{* *}$ | 0.001 | $0.021^{* *}$ | $0.001^{* *}$ |
| By Rank of Birth | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| First Birth |  |  |  |  |
|  | $-0.043^{* * *}$ | $-0.005^{* * *}$ | $0.045^{* * *}$ | $0.002^{* * *}$ |
| Other Birth | $(0.02)$ | $(0.00)$ | $(0.02)$ | $(0.00)$ |
|  | -0.004 | 0.001 | 0.003 | 0.000 |
| By Education of the Father | $(0.02)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |
| Primary |  |  |  |  |
|  | -0.031 | 0.001 | 0.029 | 0.001 |
| Secondary | $(0.02)$ | $(0.00)$ | $(0.02)$ | $(0.00)$ |
|  | 0.002 | 0.000 | -0.002 | -0.000 |
| Tertiary | $(0.02)$ | $(0.00)$ | $(0.02)$ | $(0.00)$ |
|  | $-0.030^{* *}$ | 0.002 | $0.027^{* *}$ | $0.001^{* *}$ |
|  | $(0.02)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |

Table 42: Marginal Effect Washing-up

|  | $\mathrm{P}($ Always M) | $\mathrm{P}($ Often M) | $\mathrm{P}($ Both equal $)$ | $\mathrm{P}($ Often F) | $\mathrm{P}($ Always F) |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Whole Population | $-0.022^{* * *}$ | $-0.014^{* * *}$ | $0.017^{* * *}$ | $0.013^{* * *}$ | $0.005^{* * *}$ |
|  | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ | $(0.00)$ |
| By Rank of Birth |  |  |  |  |  |
| First Birth | $-0.023^{* *}$ | $-0.014^{* *}$ | $0.018^{* *}$ | $0.014^{* *}$ | $0.005^{* *}$ |
|  | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |
| Other Birth | $-0.022^{* *}$ | $-0.014^{* * *}$ | $0.017^{* *}$ | $0.014^{* *}$ | $0.005^{* * *}$ |
|  | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |
| By Education of the Father |  |  |  |  |  |
| Primary | $-0.027^{*}$ | $-0.011^{*}$ | $0.023^{*}$ | $0.011^{*}$ | $0.004^{*}$ |
|  | $(0.02)$ | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |
| Secondary | $-0.039^{* *}$ | $-0.021^{* * *}$ | $0.033^{* *}$ | $0.020^{* * *}$ | $0.007^{* * *}$ |
| Tertiary | $(0.02)$ | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |
|  | $-0.016^{* *}$ | $-0.012^{* *}$ | $0.012^{* *}$ | $0.012^{* *}$ | $0.005^{*}$ |
|  | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |

## B. 2 Housework

Table 43: Marginal Effect Shopping

|  | $\mathrm{P}($ Always M) | $\mathrm{P}($ Often M) | $\mathrm{P}($ Both equal $)$ | $\mathrm{P}($ Often F) | $\mathrm{P}($ Always F) |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Whole Population | -0.008 | -0.004 | 0.003 | 0.005 | 0.003 |
| By rank of Birth | $(0.01)$ | $(0.00)$ | $(0.00)$ | $(0.00)$ | $(0.00)$ |
| First Birth |  |  |  |  |  |
|  | -0.002 | -0.001 | 0.001 | 0.001 | 0.001 |
| Other Birth | $(0.01)$ | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ |
|  | -0.014 | -0.006 | 0.007 | 0.008 | 0.005 |
| By Education of the Father | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |
| Primary |  |  |  |  |  |
|  | -0.008 | -0.003 | 0.004 | 0.005 | 0.003 |
| Secondary | $(0.02)$ | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.01)$ |
|  | -0.011 | -0.004 | 0.005 | 0.006 | 0.003 |
| Tertiary | $(0.02)$ | $(0.01)$ | $(0.01)$ | $(0.01)$ | $(0.01)$ |
|  | -0.008 | -0.004 | 0.003 | 0.005 | 0.004 |
|  | $(0.01)$ | $(0.00)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ |

Table 44: Marginal Effect Food preparation

|  | $\mathrm{P}($ Always M) | $\mathrm{P}($ Often M) | $\mathrm{P}($ Both equal $)$ | $\mathrm{P}($ Often F) | $\mathrm{P}($ Always F) |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Whole Population | -0.008 | -0.002 | 0.004 | 0.003 | 0.002 |
| By Rank of Birth | $(0.01)$ | $(0.00)$ | $(0.00)$ | $(0.00)$ | $(0.00)$ |
| First Birth |  |  |  |  |  |
|  |  |  |  |  |  |
| Other Birth | 0.011 | 0.004 | -0.006 | -0.006 | -0.003 |
|  | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |
| By Education of the Father | $-0.029^{* *}$ | $-0.002^{* * *}$ | $0.016^{* *}$ | $0.010^{* *}$ | $0.004^{* *}$ |
| Primary | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ | $(0.00)$ |
|  |  |  |  |  |  |
| Secondary | 0.023 | 0.005 | -0.013 | -0.010 | -0.005 |
|  | $(0.02)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |
| Tertiary | 0.002 | 0.000 | -0.001 | -0.001 | -0.000 |
|  | $(0.02)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |
|  | $-0.024^{* *}$ | $-0.006^{* *}$ | $0.013^{* *}$ | $0.011^{* *}$ | $0.006^{* *}$ |
|  | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ |

Table 45: Marginal Effect laundry

|  | $\mathrm{P}($ Always M) | $\mathrm{P}($ Often M) | $\mathrm{P}($ Both equal $)$ | $\mathrm{P}($ Often F) | $\mathrm{P}($ Always F) |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Whole Population | -0.012 | 0.004 | 0.006 | 0.001 | 0.001 |
|  | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ | $(0.00)$ |
| By Birth Order |  |  |  |  |  |
| First Birth | -0.004 | 0.001 | 0.002 | 0.001 | 0.000 |
|  | $(0.02)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ | $(0.00)$ |
| Second+ Birth | -0.020 | 0.008 | 0.009 | 0.002 | 0.001 |
|  | $(0.02)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ | $(0.00)$ |
| By Education of the Father |  |  |  |  |  |
| Primary | -0.003 | 0.001 | 0.001 | 0.000 | 0.000 |
|  | $(0.02)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ | $(0.00)$ |
| Secondary | $-0.048^{*}$ | $0.020^{*}$ | $0.021^{*}$ | $0.005^{*}$ | $0.002^{*}$ |
| Tertiary | $(0.03)$ | $(0.01)$ | $(0.01)$ | $(0.00)$ | $(0.00)$ |
|  | -0.005 | 0.002 | 0.002 | 0.001 | 0.000 |
|  | $(0.02)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ | $(0.00)$ |

Table 46: Marginal Effect Cleaning

|  | $\mathrm{P}($ Always M) | $\mathrm{P}($ Often M) | $\mathrm{P}($ Both equal) | $\mathrm{P}($ Often F) | $\mathrm{P}($ Always F) |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Whole Population | $-0.019^{* *}$ | $-0.004^{* *}$ | $0.016^{* *}$ | $0.005^{* *}$ | $0.002^{* *}$ |
|  | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ | $(0.00)$ |
| By Rank of Birth |  |  |  |  |  |
| First Birth | -0.017 | -0.005 | 0.015 | 0.005 | 0.002 |
|  | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ | $(0.00)$ |
| Other Birth | -0.021 | $-0.003^{*}$ | 0.018 | 0.005 | $0.001^{*}$ |
|  | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ | $(0.00)$ |
| By Education of the Father |  |  |  |  |  |
| Primary | -0.014 | -0.001 | 0.012 | 0.002 | 0.001 |
|  | $(0.02)$ | $(0.00)$ | $(0.02)$ | $(0.00)$ | $(0.00)$ |
| Secondary | -0.033 | $-0.003^{*}$ | 0.028 | 0.006 | 0.002 |
| Tertiary | $(0.02)$ | $(0.00)$ | $(0.02)$ | $(0.00)$ | $(0.00)$ |
|  | -0.015 | -0.005 | 0.014 | 0.005 | 0.002 |
|  | $(0.01)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ | $(0.00)$ |

Table 47: Marginal Effect Repairs

|  | $\mathrm{P}($ Always M) | $\mathrm{P}($ Often M) | $\mathrm{P}($ Both equal $)$ | $\mathrm{P}($ Often F) | P (Always F) |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Whole Population | -0.000 | -0.000 | -0.001 | -0.001 | 0.003 |
| By Rank of Birth | $(0.00)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ | $(0.01)$ |
| First Birth |  |  |  |  |  |
|  | 0.000 | 0.000 | 0.001 | 0.001 | -0.003 |
| Other Birth | $(0.00)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.02)$ |
|  | -0.001 | -0.001 | -0.004 | -0.003 | 0.009 |
| By Education of the Father | $(0.00)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ | $(0.02)$ |
| Primary |  |  |  |  |  |
|  | 0.002 | 0.003 | 0.013 | 0.012 | -0.029 |
| Secondary | $(0.00)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.02)$ |
|  | 0.001 | 0.001 | 0.005 | 0.003 | -0.009 |
| Tertiary | $(0.00)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.03)$ |
|  | -0.002 | -0.003 | -0.012 | -0.006 | 0.023 |
|  | $(0.00)$ | $(0.00)$ | $(0.01)$ | $(0.00)$ | $(0.02)$ |

Table 48: Marginal Effect Disputes

|  | $\mathrm{P}($ Often $)$ | P (Sometimes) | P (Rarely) | P (Never) |
| :--- | :---: | :---: | :---: | :---: |
| Whole Population | -0.001 | -0.003 | 0.001 | 0.003 |
| By Rank of Birth | $(0.00)$ | $(0.01)$ | $(0.00)$ | $(0.01)$ |
| First Birth |  |  |  |  |
|  |  |  | 0.002 | 0.007 |
| Other Birth | -0.002 | -0.007 | $(0.00)$ | $(0.01)$ |
|  | $(0.00)$ | $(0.01)$ | -0.001 | -0.002 |
| By Education of the Father |  | 0.002 | $(0.00)$ | $(0.01)$ |
| Primary | $(0.00)$ | $(0.01)$ |  |  |
|  |  |  | 0.005 | 0.017 |
| Secondary | -0.006 | -0.017 | $(0.01)$ | $(0.02)$ |
|  | $(0.01)$ | $(0.02)$ | -0.001 | -0.004 |
| Tertiary | 0.001 | 0.004 | $(0.01)$ | $(0.02)$ |
|  | $(0.01)$ | $(0.02)$ | 0.001 | -0.000 |
|  | -0.000 | 0.000 | $(0.00)$ | $(0.01)$ |

## B. 3 Satisfaction and disputes

Table 49: Marginal Effect Satisfaction of Domestic tasks sharing

|  | P (Very dissatis.) | P (Quite dissatis.) | P (Quite satis.) | P (Very satis.) |
| :--- | :---: | :---: | :---: | :---: |
| Whole Population | $-0.006^{* * *}$ | $-0.017^{* * *}$ | $-0.017^{* * *}$ | $0.039^{* * *}$ |
| By Rank of Birth | $(0.00)$ | $(0.00)$ | $(0.00)$ | $(0.01)$ |
| First Birth |  |  |  |  |
| Other Birth | $-0.006^{* * *}$ | $-0.020^{* * *}$ | $-0.025^{* * *}$ | $0.051^{* * *}$ |
|  | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.02)$ |
| By Education of the Father | $-0.005^{*}$ | $-0.013^{* *}$ | $-0.011^{* *}$ | $0.029^{* *}$ |
| Primary | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.01)$ |
|  |  |  |  |  |
| Secondary | $-0.005^{*}$ | $-0.016^{*}$ | $-0.019^{*}$ | $0.040^{*}$ |
| Tertiary | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.02)$ |
|  | -0.006 | -0.016 | -0.011 | 0.033 |
|  | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.02)$ |
|  | $-0.006^{* * *}$ | $-0.018^{* * *}$ | $-0.018^{* * *}$ | $0.042^{* * *}$ |
|  | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.01)$ |

Table 50: Marginal Effect Satisfaction on Parental task sharing

|  | P (Very dissatis.) | P (Quite dissatis.) | P (Quite satis.) | P (Very satis.) |
| :--- | :---: | :---: | :---: | :---: |
| Whole Population | $-0.001^{* *}$ | $-0.010^{* * *}$ | $-0.022^{* * *}$ | $0.033^{* * *}$ |
| By Rank of Birth | $(0.00)$ | $(0.00)$ | $(0.01)$ | $(0.01)$ |
| First Birth |  |  |  |  |
| Other Birth | $-0.002^{* * *}$ | $-0.013^{* * *}$ | $-0.039^{* * *}$ | $0.054^{* * *}$ |
|  | $(0.00)$ | $(0.00)$ | $(0.01)$ | $(0.02)$ |
| By Education of the Father | -0.001 | -0.005 | -0.009 | 0.015 |
| Primary | $(0.00)$ | $(0.01)$ | $(0.01)$ | $(0.02)$ |
|  |  |  |  |  |
| Secondary | -0.001 | -0.005 | -0.012 | 0.018 |
| Tertiary | $(0.00)$ | $(0.01)$ | $(0.02)$ | $(0.02)$ |
|  | -0.001 | -0.008 | -0.017 | 0.026 |
|  | $(0.00)$ | $(0.01)$ | $(0.02)$ | $(0.03)$ |
|  | $-0.002^{* *}$ | $-0.013^{* * *}$ | $-0.030^{* * *}$ | $0.045^{* * *}$ |
|  | $(0.00)$ | $(0.00)$ | $(0.01)$ | $(0.02)$ |

C Appendix C: Estimates by subsamples for housework

Table 51: Effect of Paternity Leave on Housework Division, Parity One

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Washing-up | 0.091** | 0.099** | 0.101** | 0.100** | 0.102** |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Shopping | -0.017 | 0.007 | 0.000 | 0.003 | 0.007 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Cooking | -0.035 | -0.028 | -0.028 | -0.029 | -0.023 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Doing the laundry | -0.009 | 0.015 | 0.013 | 0.014 | 0.016 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Cleaning | 0.047 | 0.060 | 0.053 | 0.055 | 0.061 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Doing the repairs | 0.016 | -0.003 | -0.003 | 0.001 | -0.001 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

Table 52: Effect of Paternity Leave on Housework Division, Parity Two +

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Washing-up | $0.106^{* * *}$ | 0.109*** | 0.091** | 0.090** | 0.089** |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Shopping | 0.045 | 0.071* | 0.043 | 0.037 | 0.043 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Cooking | 0.095** | 0.088** | 0.074* | 0.073* | 0.074* |
|  | (0.04) | (0.04) | $(0.04)$ | (0.04) | (0.04) |
| Doing the laundry | 0.043 | 0.061 | 0.048 | 0.043 | 0.043 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Cleaning | 0.075* | 0.085** | 0.059 | 0.055 | 0.057 |
|  | $(0.04)$ | (0.04) | (0.04) | (0.04) | (0.04) |
| Doing the repairs | 0.045 | 0.029 | 0.019 | 0.019 | 0.017 |
|  | $(0.04)$ | $(0.04)$ | (0.04) | (0.04) | (0.04) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

Table 53: Effect of Paternity Leave on Housework Division, Parity One

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Washing-up | 0.091** | 0.099** | 0.101** | 0.100** | 0.102** |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Shopping | -0.017 | 0.007 | 0.000 | 0.003 | 0.007 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Cooking | -0.035 | -0.028 | -0.028 | -0.029 | -0.023 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Doing the laundry | -0.009 | 0.015 | 0.013 | 0.014 | 0.016 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Cleaning | 0.047 | 0.060 | 0.053 | 0.055 | 0.061 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Doing the repairs | 0.016 | -0.003 | -0.003 | 0.001 | -0.001 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

Table 54: Effect of Paternity Leave on Housework Division, Parity Two +

|  | Taken vs Will Take |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Washing-up | $0.106^{* * *}$ | 0.109*** | 0.091** | 0.090** | 0.089** |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Shopping | 0.045 | 0.071* | 0.043 | 0.037 | 0.043 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Cooking | 0.095** | 0.088** | 0.074* | 0.073* | 0.074* |
|  | (0.04) | (0.04) | $(0.04)$ | (0.04) | (0.04) |
| Doing the laundry | 0.043 | 0.061 | 0.048 | 0.043 | 0.043 |
|  | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Cleaning | 0.075* | 0.085** | 0.059 | 0.055 | 0.057 |
|  | $(0.04)$ | (0.04) | (0.04) | (0.04) | (0.04) |
| Doing the repairs | 0.045 | 0.029 | 0.019 | 0.019 | 0.017 |
|  | $(0.04)$ | $(0.04)$ | (0.04) | (0.04) | (0.04) |
| Controls |  |  |  |  |  |
| Child | Yes | Yes | Yes | Yes | Yes |
| Family type | No | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | No | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | No | No |
| Father educ. | No | No | Yes | Yes | Yes |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | No | Yes | Yes |
| Mother Wage. | No | No | No | No | No |
| Father Wage. | No | No | No | Yes | Yes |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |

D Appendix D: Estimates by subsamples for satisfaction and disputes

Table 55: Effect of Paternity Leave on Well-being, Parity One

|  | Taken vs Will Take |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Disputes | 0.004 | 0.021 | 0.021 | 0.021 | 0.023 |
| Satis repart domestic tasks | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ |
|  | $0.127^{* * *}$ | $0.146^{* * *}$ | $0.147^{* * *}$ | $0.147^{* * *}$ | $0.144^{* * *}$ |
| Satis repart parental tasks | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ |
|  | $0.136^{* * *}$ | $0.135^{* * *}$ | $0.133^{* * *}$ | $0.134^{* * *}$ | $0.129^{* * *}$ |
| Controls | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ |
| Child |  |  |  |  |  |
| Family type | Yes | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | Yes | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | Yes | Yes |
| Father educ. | No | No | Yes | No | No |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | Yes | Yes | Yes |
| Mother Wage. | No | No | No | Yes | Yes |
| Father Wage. | No | No | No | No | No |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |
|  |  |  |  |  |  |

Table 56: Effect of Paternity Leave on Well-being, Parity Two +

|  | Taken vs Will Take |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Disputes | -0.028 | -0.016 | -0.007 | -0.006 | -0.006 |
| Satis repart domestic tasks | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ |
|  | $0.097^{* *}$ | $0.094^{* *}$ | $0.078^{*}$ | $0.080^{* *}$ | $0.075^{*}$ |
| Satis repart parental tasks | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ |
|  | 0.057 | 0.052 | 0.041 | 0.042 | 0.039 |
| Controls | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ |
| Child |  |  |  |  |  |
| Family type | Yes | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | Yes | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | Yes | Yes |
| Father educ. | No | No | Yes | No | No |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | Yes | Yes | Yes |
| Mother Wage. | No | No | No | Yes | Yes |
| Father Wage. | No | No | No | No | No |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |
|  |  |  |  |  |  |

Table 57: Effect of Paternity Leave on Well-being, Parity One

|  | Taken vs Will Take |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Disputes | 0.004 | 0.021 | 0.021 | 0.021 | 0.023 |
| Satis repart domestic tasks | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ |
|  | $0.127^{* * *}$ | $0.146^{* * *}$ | $0.147^{* * *}$ | $0.147^{* * *}$ | $0.144^{* * *}$ |
| Satis repart parental tasks | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ |
|  | $0.136^{* * *}$ | $0.135^{* * *}$ | $0.133^{* * *}$ | $0.134^{* * *}$ | $0.129^{* * *}$ |
| Controls | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ |
| Child |  |  |  |  |  |
| Family type | Yes | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | Yes | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | Yes | Yes |
| Father educ. | No | No | Yes | No | No |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | Yes | Yes | Yes |
| Mother Wage. | No | No | No | Yes | Yes |
| Father Wage. | No | No | No | No | No |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |
|  |  |  |  |  |  |

Table 58: Effect of Paternity Leave on Well-being, Parity Two +

|  | Taken vs Will Take |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Disputes | -0.028 | -0.016 | -0.007 | -0.006 | -0.006 |
| Satis repart domestic tasks | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ |
|  | $0.097^{* *}$ | $0.094^{* *}$ | $0.078^{*}$ | $0.080^{* *}$ | $0.075^{*}$ |
| Satis repart parental tasks | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ |
|  | 0.057 | 0.052 | 0.041 | 0.042 | 0.039 |
| Controls | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ | $(0.04)$ |
| Child |  |  |  |  |  |
| Family type | Yes | Yes | Yes | Yes | Yes |
| Fath. and Moth dem. | No | Yes | Yes | Yes | Yes |
| Mother educ. | No | No | Yes | Yes | Yes |
| Father educ. | No | No | Yes | No | No |
| Family inc. | No | No | Yes | Yes | Yes |
| Fath. and Moth Occ. | No | No | Yes | Yes | Yes |
| Mother Wage. | No | No | No | Yes | Yes |
| Father Wage. | No | No | No | No | No |
| Fath./Moth. Rel. Wage. Educ | No | No | No | Yes | Yes |
| Pres. during delivery/Alim | No | No | No | No | Yes |
|  |  |  |  |  |  |


[^0]:    *Ined: Institut national d'études démographiques 133 boulevard Davout - 75020 Paris ${ }^{\dagger}$ Ined
    ${ }^{\ddagger}$ IPP, IFS and UCL

[^1]:    ${ }^{1}$ The total fertility rate is the highest among European countries, reaching 1.9 children per woman in 2017.
    ${ }^{2}$ Fathers are eligible for paternity leave even in the case where they do not live with their child. Since 2013, paternity leave was also made available to step-fathers (non-biological fathers who cohabit with the mother).
    ${ }^{3}$ Maternity leave is compulsory and lasts 16 weeks for a first or second birth. A 6 -month paid fatherspecific parental leave was also implemented in 2014.
    ${ }^{4}$ It lasts 10 days in Belgium and Sweden, about two weeks in Denmark, Poland, Spain, the UK, Slovenia and Estonia.
    ${ }^{5}$ The calculation of the daily earnings is based on the last three months before fathers take leave.

[^2]:    ${ }^{6}$ In order to reinforce gender equality, a new reform implemented fathers' quotas in January 2015: for a first birth, each parent receives 6 months of parental leave. For subsequent births, each parent receives 12 months. Up to now, no information is available regarding fathers' take-up. The allowance is much lower: about $500 € /$ month.
    ${ }^{7}$ More information about this panel can be found at http://www.elfe-france.fr/
    ${ }^{8}$ Born 1-4 April / June 27-28, July 1-4 / September 27-29 October 1-4 / November 28-30 December 1-5.

[^3]:    ${ }^{9}$ The third wave is not used since it does not contain any information on the household division of tasks. ${ }^{10} 0.3 \%$ were interviewed later.
    11 The sample size differs slightly per outcome since some questions were not asked when not relevant. For example, breastfeeding mothers are not concerned about who feeds the child.

[^4]:    ${ }^{12}$ Unfortunately, the third and fourth waves of the survey do not contain any information on paternity leave, and we do not know whether these fathers really took the leave.
    ${ }^{13}$ Appendix A shows conditional effects with logistic regressions, including all the covariates together.

[^5]:    ${ }^{14}$ This was also asked to the father. Information given by the mother is retained in order to have simultaneous information on the taking of parental leave and on the distribution. We kept the mother's answer since the information given by the father on the distribution of tasks is subsequent to the information given on the taking of paternity leave. There is also much more missing information when the father answered, and these non-answers by fathers may be related to their involvement in housework. Furthermore, fathers are more likely to be on leave during their interview since they are more available during leave, which gives us a specific sharing of tasks.

[^6]:    ${ }^{15}$ The regressions with all parameters of the regressions are available upon request.

[^7]:    ${ }^{16}$ It would be even more interesting to observe fathers who took leave just before the mother's interview, in order to completely rule out timing effects; but information on the timing of paternity leave is unfortunately

