Changing Gender Norms across Generations: Evidence from a Paternity Leave Reform

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Abstract: Direct exposure to counter-stereotypical behaviors early in life has been put forward as a promising way to change gender norms across generations. We ask to which extent public policy designed to promote counter-stereotypical behavior among parents influences gender norms for their children. Specifically, we combine the national-level introduction of paternity leave in Spain with a unique, large-scale lab-in-the-field experiment conducted with children born around the policy change. We provide causal evidence that, at age 12, children whose fathers were eligible for paternity leave exhibit more egalitarian attitudes towards gender roles and are more supportive of mothers and fathers being equally engaged in the labor market and in the home. They also engage more in counter-stereotypical day-to-day behaviors and expect to deviate from the male-breadwinner model in the future.

JEL Codes: J08, J13, J16, J18.
Keywords: Gender role attitudes, paternity leave, social norms.

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1. Introduction

After decades of remarkable improvements in women's labor market outcomes, gender gaps in participation and earnings have stalled (OECD 2021). One obstacle on the path to gender equality is that after having children, women make consequential changes to their labor supply that translate into large and persistent losses in labor market earnings (Lundborg et al. 2017, Bertrand 2020). In many countries, the earnings drop related to motherhood explains almost entirely the remaining gender gap in earnings (Kleven et al. 2019a).

The reasons why women's labor supply choices after childbirth differ so dramatically from those of men are not well understood, but recent work has drawn attention to the importance of gender norms (Bertrand et al. 2015, Fortin 2015, Kleven et al. 2019b, Bertrand 2020, Grewenig et al. 2020, Boelmann et al. 2021, Andresen and Nix forthcoming). The persistence of gender norms across generations calls into question whether the remaining gender gap is to close any time soon (Fernandez and Fogli 2009, Bisin and Verdier 2011, Alesina et al. 2013, Farré and Vella 2013). Existing evidence suggests that it may take substantial direct exposure to counter-stereotypical behaviors early in life to change gender norms permanently. For instance, men who were brought up in families where the mother worked are more likely to endorse their wives' employment (Fernandez et al. 2004).[1] Similarly, children growing up in non-traditional families display more gender-egalitarian attitudes (Bertrand 2019).

In this paper, we ask to which extent public policy designed to promote counter-stereotypical behavior among parents can change the gender norms of their children, and as such help closing the gender gap in the next generation. The focus on a policy that targets the behavior of parents is warranted given the abundant evidence on the crucial role that parents play in children's belief and preference formation (Bisin and Verdier 2011, Falk et al. 2021).

We focus on paternity leave, a popular policy that intends to promote fathers' participation in childcare and foster gender equality in the labor market and in the home. Importantly, paternity leave

[1] Fernandez et al. (2004) study the case of World War II as an exogenous shock to maternal labor supply. There is a large literature studying the role of major historical events, such as wars or mass emigration waves, and the subsequent unbalanced sex ratios as a significant factor affecting the rise in female labor force participation over the 20th century (Fernandez et al. 2004, Fogli and Veldkamp 2011, Goldin and Olivetti 2013, Cardoso and Morin 2018).

takes place at the onset of a child's life and may act as a trigger to change traditional specialization patterns within the household over the child's entire early life cycle (i.e., away from the male-breadwinner/ female-homemaker model). There is mounting evidence for the introduction of paternity leave having indeed induced a shift towards a more egalitarian family model (Farré and González 2019, Patnaik 2019, Tamm 2019, Petts et al. 2020, Dunatchik and Özcan 2020). In this paper, we investigate whether paternity leave has the power to change gender norms for the next generation.

Our identification strategy relies on the introduction of paternity leave in Spain in 2007. Fathers whose children were born on or after March 24, 2007, were entitled to a 13-day, fully compensated paternity leave (on top of the two days that were already available before). Importantly, the new law was passed only shortly before implementation and retrospective leave taking was not possible. Thus, it represents a natural experiment allowing us to isolate the effects of paternity leave on the next generation.

To take advantage of this quasi-experimental setting, we conducted a large lab-in-the-field experiment with children born in 2006 and 2007, i.e., the reform year and the previous one. We requested the collaboration of secondary schools in the province of Barcelona and surveyed more than 2,000 children between May 2019 and January 2020, i.e., when the children were 12 to 13 years old. We relied on state-of-the-art methods to elicit comprehensive data on children's gender norms, day-to-day behavior, and expectations regarding their future fertility and labor supply decisions.

We used both survey questions and incentivized experiments to ensure meaningful measures for children's gender norms. First, we employed a widely used battery of survey questions on the roles of men and women in the labor market and in the home (taken from the International Social Survey Program, ISSP). Based on this set of questions, we construct an index of what we call "gender role attitudes".

Second, we introduced a question focusing explicitly on the children's preferred labor supply pattern for parents with children below school age. Here we went beyond what had been studied in the literature and asked children not only about their opinion regarding mothers' labor supply, but also

about their opinion regarding fathers. Thus, we can construct children's individual norms regarding both mothers and fathers.

Finally, we elicited children's perception of the social norms existing for mothers and fathers' labor supply with children below school age. To this end, we built upon Krupka and Weber (2013) and implemented an incentivized coordination game asking about children's perceptions of the prevailing gender norm among their classmates. So far, only adults have played incentivized coordination games.[2] Thus, we paid great care to adapt the game to be suitable for children, allowing us to provide novel, unbiased measures of social norms in children.

To enhance our understanding of whether paternity leave has the power to permanently foster gender equality in the home and in the labor market, we also asked children about their day-to-day contributions to household chores, and about their expectations regarding their own future work and family life.

Combining our unique lab-in-the-field experiment with the natural experiment, we follow a local difference-in-differences strategy to identify the causal effect of paternity leave on children's gender norms, behaviors, and expectations. A compelling feature of the paternity leave reform is that it became effective on March 24, which lies in the middle of the school year (the school-year cut-off date is December 31). As a result, children born shortly before and after the cut-off attend the same school grade, while only children born after the cut-off are directly affected by the paternity leave expansion.

Our baseline specification relies on comparing children born in a 12-week window before and after the paternity leave introduction, i.e., children born between January 1 and June 13 of 2007. To isolate any relative age effect, we use children born in the same time window in the pre-reform year (2006) as a control group. To further strengthen identification, we control for a set of individual family background characteristics as well as school fixed effects.

Our main results suggest that the introduction of paternity leave led to children displaying more gender-egalitarian norms at the onset of adolescence. We estimate an effect of 0.26 standard deviations

[2] One recent example is Bursztyn et al. (2020) who elicit perceived norms about women's labor supply among Saudi Arabian men.

on children's gender role attitudes. Likewise, the share of children endorsing that a woman with children below school age works increases by 12.5 percentage points (an increase by 19 %, or 0.26 standard deviations, from the pre-reform mean). Children's perception of the social norm prevailing among their peers is also affected. The share of children stating that their classmates perceive it as appropriate or at least fairly appropriate that a woman with a child below school age works increases by 13.4 percentage points (an increase by 21 %, or 0.28 standard deviations).

Turning to the effects on children's norms regarding the role of fathers, we find that the share of children stating that their classmates perceive a less than full-time working man with a below school age child as socially appropriate rises by 14.9 percentage points (an increase by 28 %, or 0.33 standard deviations).

The results on children's gender role attitudes and norms are remarkably stable in size and across a battery of robustness tests, including alternative sample specifications and estimation approaches (e.g., a regression discontinuity design or a classed fixed effect specification).

Turning to real life outcomes, the introduction of paternity leave promoted less specialized gender patterns in terms of children's day-to-day contributions at home. Specifically, boys increase their contributions to female-dominated household chores, such as cleaning, by 13.4 percentage points (or 20 %), while girls get more involved in male-dominated chores, such as small repairs and grocery shopping (by 14.5 percentage points, or 25 %, respectively). Moreover, boys born after the reform are less likely to report that they expect to work full-time when they have small children themselves. The respective share falls by 18.5 percentage points (or 75 %). Girls, if anything, are more likely to expect to work full-time when having children. This share increases by 9.4 percentage points (or 55 %), but this effect is not significant at the conventional levels.

All in all, our findings provide compelling evidence that paternity leave induces the next generation to step away from traditional gender norms and stereotypical behaviors. It is still too early to judge about the effects of paternity leave on children's labor supply choices. Nevertheless, taking children's expectations regarding their own future work and family life at face value, paternity leave may result in a reduced child penalty and gender gap in earnings in the next generation.

Our study provides novel evidence on the extent to which public policy can shape gender norms across generations. To the best of our knowledge, there is very limited causal evidence showing that public policy can influence gender norms. Focusing on the Earned Income Tax Credit implemented in the U.S. in 1975, Bastian (2020) documents how the subsequent rise of working mothers changed the U.S. economy and the role of women in society. He provides suggestive evidence that the influx of working mothers led to a higher approval of working women in the same generation.[3] Our study focuses instead on a policy shifting parents' behavior and its potential to change gender norms and labor market decision among the next generation. As such, we also contribute to a scarce, but growing literature on spillover effects of public policies (Dahl et al. 2014, Brollo et al. 2020, Dahl and Gielen 2021).

More generally, our paper enhances our understanding of the determinants of gender norms. We provide causal evidence on the role of parental behavior in shaping children's gender norms, or to put it differently, on vertical socialization mechanisms underlying the formation of norms. As such, our research relates to recent work on horizontal socialization mechanisms, such as school and peers. Dhar et al. (2021) evaluate the impact of a school-based randomized intervention in India that engaged adolescents in classroom discussions about gender equality. The two-and-a-half-year-long program not only fostered more progressive gender attitudes, but also induced more gender-egalitarian behaviors. Dahl et al. (2021) study the effect of young men's exposure to women in a traditionally male-dominated environment on gender attitudes. Their context is the military in Norway, where they randomly assigned female recruits to some squads but not to others during boot camp. While living and working with female colleagues for eight weeks induced more egalitarian gender attitudes, the effects did not persist in the long run.

Our results shed some light on the relative role of parents and peers in shaping children's gender norms up to the onset of adolescence. The fact that paternity leave eligibility causes a discontinuity in perceived social norms among classmates (among those born before and after the reform) suggests that

[3] There is additional cross-country evidence on the impact of childcare provision (Neimanns 2021) and on the impact of same-sex relationship recognition policies (Aksoy et al. 2020) on attitudes in Europe.

children internalize what they learn and observe at home and draw conclusions from their own experiences about others (a phenomenon also known as "false consensus effect", Ross et al. 1977).[4]

The remainder of the paper is organized as follows. The following section provides background information on our data collection, the questionnaire, and the sample. Section 3 describes the natural experiment (the introduction of paternity leave) and the empirical approach. Section 4 explains the results, and section 5 concludes.

2. Data: The Lab-in-the-Field Experiment

2.1. Setting and Study Implementation

The central idea of this study is to use comprehensive data on children's gender norms in a quasi-experimental evaluation framework. The specific question we ask is whether children's gender norms were affected by the introduction of paternity leave in Spain. A necessary condition for the implementation of our empirical approach is a large sample of children born in a narrow window around the reform's enactment date (March 24, 2007). To get at this group of children, and to ensure a large enough number of observations for children from all family backgrounds, we opted to collect our own data and to run a survey in schools.

We collected information on complete cohorts of children born in 2006 and 2007 within 16 selected secondary schools in the province of Barcelona (Spain) in 2019-20. We targeted children attending 5th to 7th grade (age 12-13 years) and thus at the onset of adolescence, a critical time in the development of social norms and identity formation (Kohlberg 1976, Markus and Nurius 1986). Our sampling design allowed us to reach all children within designated social networks (school cohorts and school classes).

Data collection occurred in two phases. The pilot phase took place between May 20 and May 24, 2019. During this phase, we collected data in 3 schools, all together 15 classes with 401 students. The

[4] This may however only be snapshot at the onset of adolescence. Olivetti et al. (2020) find that that labor force participation of high school peers' mothers affects adult women's labor force participation, above and beyond the effect of their own mothers.

second (main) phase happened between January 13 and February 7, 2020. We visited 13 additional schools, 80 classes with 1,926 participants altogether.[5]

Prior to data collection, the study was pre-registered (at OSF) and approved by the ethics and data protection office at Universitat Pompeu Fabra. A week before data collection, schools informed parents about the study by email, giving them the option to withdraw their consent regarding their children's participation. The survey took place during regular instruction time which ensured that we could reach all students (except in case of illness). At the beginning of the survey, we informed students about the general content and purpose of the study as well as the possibility to not participate or drop out at any point during the survey. Students were paid a show-up fee and could earn points for several incentivized parts of the survey, which were later exchanged by vouchers valid at a nearby stationary store. Participants received on average 5.73 €, with a minimum of 3 € and a maximum of 12 €.[6]

Out of the 2,327 students present in the classroom on the day of the study, 9 did not consent to participate, 8 dropped out, 9 were not able to answer the questions without help, and information for 1 participant was not stored.

Data collection took place in a designated room inside the school (e.g., the cafeteria, the library, or the workshop), where we had installed 35 laptops. Students came to the room together with their classmates and as such in groups of 14 to 32 students. To ensure privacy, we set up cardboard screens between the students (see Figure A.1 in the Appendix A). To avoid priming effects and plagiarism, the order of the questions was randomized. Students answered all questions alone and at their own pace. They needed on average 27 minutes to complete the questionnaire. Students who completed the questionnaire early were asked to stay in the room reading in silence (we provided reading materials).

2.2. The questionnaire and the outcome variables

To yield a comprehensive set of measures for children's gender norms, we employed both classical survey and incentivized experimental methods. We further included sets of questions asking students

[5] A third phase was scheduled for March 16-April 3, 2020, but was canceled due to the outbreak of the Covid-19 pandemic (schools were closed in Spain between March 14 and September of 2020, and in-person access of researchers to classrooms was not allowed afterwards).
[6] The show up fee was 2€ in the pilot and 3€ in the main phase.

about their day-to-day behaviors, their expectations regarding their own future employment and fertility, their parents, and in particular their parents' engagement in the home and in the labor market. Table A.1 in the Appendix A provides an overview of our main outcome variables, including summary statistics for the pre-reform sample (children born in 2007 prior to the introduction of paternity leave, i.e., those born between January 1 and March 24, 2007).[7]

Our first measure of interest are children's gender role attitudes. For this purpose, we employed a standard battery of questions, developed by the International Social Survey Programme (ISSP) and widely used in the economics literature on gender norms (see for instance, Giuliano 2018 or Bertrand et al. 2021). Specifically, we asked students to rate on a 5-point Likert scale whether they agreed with a series of statements regarding the role of men and women in the labor market and in the home. Table A.1 Panel A, column (1) shows the share of pre-reform children exhibiting a non-traditional view regarding each statement.[8]

Children in our pre-reform sample largely agree with statements on women's labor market participation in general (e.g., 90.6% agree or strongly agree with the statement "Both men and women should contribute to the household income", 98.3% disagree or strongly disagree with the statement "A men's job is to earn money and a women's job is to look after the home and the family"). However, children are rather concerned when it comes to the consequences women's labor market participation may have for children and family life (e.g., only 58.7% and 63.4% disagree or strongly disagree with the statements "A preschool child suffers when his or her mother works" and "All in all, family life suffers when the woman has a full-time job.").[9]

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[7] The full questionnaire can be found in Appendix B. In addition to the tasks described in this paper, we asked the students to participate in an incentivized real effort task designed to measure competitiveness (Niederle and Vesterlund 2007, Buser et al. 2014) as well as to state their ideal future occupation. Given the outbreak of the pandemic and the unexpected interruption of our data collection and the resulting smaller than expected sample size, we lack precision when it comes to the estimates for the reform effect on economic preferences (e.g., competitiveness, overconfidence or risk aversion), or possible future occupational selection.

[8] Accordingly, for non-traditional statements such as "A working mother can establish just as warm and secure relationship with her children as a mother who does not work" (Q1) or "Both men and women should contribute to the household income" (Q2), the statistics refer to the share who answers "agree" or "strongly agree". For the remaining (traditional) statements such as "A pre-school child is likely to suffer if his or her mother works" (Q3) or "A man's job is to earn money, a woman's job is to look after the home and the family" (Q7), the share who reports to "strongly disagree" or "disagree" is displayed.

[9] Among the adult Spanish population participating in the ISSP 2012, we observe slightly more traditional views: 93.2% agree with Q2, 81.3% disagree with Q7, 47.3% disagree with Q3, and 38.7% disagree with Q4.

Second, we elicited children's individual norms on whether a woman with a child below school age should work full-time, part-time, or not at all.[10] We again drew on a widely used question from the ISSP (see for instance, Doepke and Kindermann 2019, Kleven et al. 2019a). We also asked children about their opinion on whether a man with a child below school age should work full-time, part-time, or not at all. Doing so allows us to assess and compare children's answers for both genders and to acknowledge that children may be egocentric and ideally want their parents to work less and spend more time with them all together. As shown in Table A.1, Panel B, most pre-reform children want both men and women with young children to work part-time (64.3% in the case of mothers, 73.2% in the case of fathers). Yet, there is still a sizable gap between the share of pre-reform children wanting mothers of young children to not work at all (24.7 %) and the share wanting fathers of young children to not work at all (14.0 %). Only a negligible fraction states full-time to be the preferred workload for men or women with young children (3.4 % and 2.1 %, respectively).

Finally, we introduced an incentivized elicitation method to get at children's perception of the prevailing social norm on women's and men's labor supply when having a child below school age. Specifically, we adapted the incentivized coordination game developed by Krupka and Weber (2013) to be appropriate for children. We explained the game to the children as follows: "You will now play a little game with one of your classmates without knowing who she/he is. In this game we will ask you both the same question. If you both give the same answer, you will both earn 4 points. If you do not give the same answer, no one will get any points." We then asked the children to rate on a 4-point Likert scale whether they believed that the randomly matched classmate finds it socially appropriate that a woman with a child below school age works full-time, that woman with a child below school age works part-time, that a father with a below school age child works part-time and that a father with a below school age child works not at all. We were very careful in explaining the meaning of "socially (in)appropriate" as "a behavior that most people believe to be correct or good (incorrect or bad)".

[10] In Spain children are granted public education from the year during which they turn 3 years old. As a result, 98% of all 3-year-olds are enrolled in school, not at last to guarantee a slot in their preferred school (Farré and Ortega 2018).

Children could choose on a scale ranging from "appropriate", "fairly appropriate", "fairly inappropriate" to "inappropriate".

As shown in Table A.1, Panel C, while most pre-reform children believe that a random classmate rates it as appropriate (21.9 %) or at least fairly appropriate (41.9 %) that a mother with a young child works part-time, the share is much lower when it comes to working full-time (4.2 % and 5.6 %, respectively). When it comes to fathers, 27.0 % (46.0 %) of pre-reform children believe that their peers rate it as (fairly) appropriate that a father with a young child works part-time, and still 34.4 % (33.5 %) as (fairly) appropriate that a father with a young child does not work at all.

In our analysis, we solely rely on aggregate measures of the three main outcome variables. Specifically, we conduct a principal components analysis using the seven items on the gender role attitudes and use the resulting first component as an index for gender role attitudes (standardized to mean zero and standard deviation 1 for pre-reform children, see Table A.1 Panel A).[11] To create a measure of individual norms on mothers' and fathers' labor supply, we aggregate the counter-stereotypical answers. Hence, we create a dummy that equals 1 in case the child answers that part-time or full-time work is the preferred labor supply for mothers with a child below school age (66.4 %, see Table A.1, Panel B). For fathers with a child below school age, the dummy equals 1 if the child answers that fathers should work part-time or not at all (87.2 %, see Table A.1, Panel B). Regarding the definition of social norms, we follow a slightly different aggregation scheme for the social norms about mothers and fathers. This is because children perceive on average their classmates to judge more harshly on mothers than on fathers when deviating from the traditional role model (i.e., when a mother deviates from not working and a father from working full-time). Hence, we create a dummy that equals 1 if the child believes that her peers perceive it as "appropriate" or "fairly appropriate" if a mother with a child below school age works part-time or full-time (67.3 %). In the case of the father, we only consider the

[11] We first code the answers to each statement such that a value of 0 corresponds to the most traditional view and a value of 4 to the most non-traditional view. Accordingly, for questions Q1 and Q2 in Panel A of Table 1 we assign a value of 4 if the respondent "strongly agrees", 3 if "agrees", 2 if "neither agrees nor disagrees", 1 if "disagrees" and 0 if "strongly disagrees". For questions Q3 to Q7, a value of 0 if "strongly agrees", 1 if "agrees", 2 if "neither agrees nor disagrees", 1 if "disagrees" and 0 if "strongly disagrees". We then conduct a principal components analysis. The first principal component is positively loaded on all items and explains 26.1% of the overall variance. We refer to it as gender role attitudes index.

answer category "appropriate" and summarize these answer categories for fathers with a child below school age working part-time or not at all (45.1 %).

Turning to gender stereotypical behavior, we collected information on children's participation in household chores. We asked them how often they help at home with the following tasks: doing the laundry, grocery shopping, repairs, cleaning the house and cooking. Answer categories range from at least once a week, occasionally (less than once a week), almost never to never. Table A.1, Panel D shows the percentage of pre-reform children who participate at least once a week or occasionally in each task. Both boys and girls are equally likely to contribute to tasks such as doing the laundry or cooking (83.7 % and 53.3 %, respectively). In contrast, there are substantial gender differences regarding the other three tasks. Boys are much more likely than girls to help with small repairs (59.3 % versus 34.3 %) and grocery shopping (88.7 % versus 79.1 %, respectively), while the participation of girls in cleaning is much higher than that of boys (83.6 % versus 66.2 %).

Finally, to get a glimpse on the labor supply choices children may make in the future, we collected information on children's expectations about their own future family and work life. Specifically, we asked them "How do you see yourself in 20 years from now?" Answer categories were "working full-time and having children", "working part-time and having children" "not working and having children", "working and not having children" and "not working and not having children". As shown in Table A.1, Panel E, the most popular choice among pre-reform boys and girls is to have children and work part-time (34.6 % and 47.0 %, respectively). Yet, there is a substantial gender gap when it comes to having children and work full-time (24.7 % among the boys and only 13.4 % among girls). A substantial share of the pre-reform children, both boys and girls do see themselves as not having children (34.4% while working and 2.3% while not working).

2.3 Sample

We exclude from the sample all children not born in 2006 or 2007 (187 children) and those not born in Spain (146 children). The reason for the second restriction is that the parents of children born abroad were not subject to the paternity leave reform. Our final sample contains 1,987 children born in Spain in 2006 or 2007.

Table A.2 shows the summary statistics for the full sample (see Column 1). Children in our sample are on average 13 years old and are almost equally split by gender (46.7 % are boys). By construction, all children are born in Spain, but roughly one tenth has at least one parent born abroad (in 12.6% of the cases the mother and in 11.7 % the father). Most children live with both parents, but a non-negligible share lives with their father only on some days (14.8 %) or not at all (5.6 %). Among the fathers, 67.5 % work full-time and 24.4 % work part-time, 4.9 % do not work. Among the mothers, 50.4 % work full-time, 37.1 % work part-time and 10.5 % do not work. Half of the mothers went to college (49.8 %), and slightly less of the fathers did so (39.4 %). Yet a non-negligible share of the children does not know whether their mother or their father went to college (15.7 % and 20.7 %, respectively). Children have on average 1.36 siblings, of which slightly more than half are older siblings.

3. Empirical Approach – The Natural Experiment

3.1 The paternity leave reform

Paternity leave policies, designed to promote fathers' participation in childcare and foster gender equality in the labor market and in the home, are now prevalent in many countries. Our focus lies on the introduction of two weeks of paid paternity leave in Spain in 2007.

Prior to the reform, the Spanish labor market was characterized by a significant gender gap in employment patterns.[12] In 2006, the employment rate among 30-45 years-old men reached almost 90%, while only two thirds of all women in this age range were working. At that time, Spain granted 6 weeks of compulsory maternity leave (at full pay), plus 2 days of paid job absence for fathers. Families were granted 10 weeks of parental leave, also at full pay, which could be taken by mothers or fathers, or shared between them.[13] Yet, as shown in Figure 1, very few fathers took parental leave (green line). In contrast, roughly two thirds of all mothers were taking maternity leave and subsequently parental leave (red line).[14] Once having children, many women decided not to work: only 55 % of all women with

[12] All numbers in this section stem from https://www.oecd.org/els/family/database.html accessed on January 3, 2022.
[13] Parental leave was initially regulated by the Law 8/1980, March 10, (Estatuto de los Trabajadores 1980). Eligibility was tied to a formal work contract or to being officially registered as unemployed.
[14] At first sight, this share may appear rather low. However, it can be explained by the rather low share of women under a formal contract in Spain in 2006 (66% of all women aged 30-45 years old).

children aged 0-2 were working, and only 60 % of all women with children aged 3 years and older did so.

At the end of 2006, the national parliament approved a bill ("proyecto de ley") suggesting an extension of the paternity leave period. The law ("ley orgánica 3/2007 de 22 de marzo, para la igualdad efectiva de mujeres y hombres") was finally published on March 23, 2007 and enacted immediately thereafter (the next day). The national government introduced a new 13-day paternity leave period, fully compensated, which could be taken by fathers either at the same time or immediately after the mother took leave. New fathers were eligible starting from births taking place on March 24, 2007, if they were affiliated to Social Security and had worked for at least 180 days over the previous 7 years. As shown in Figure 1, take-up was high, with about 54 % of new fathers using it in 2008 (blue line). The paternity leave permit was extended several times, thereafter, reaching 16 weeks in January 2021. By then, the share of working women with children aged 0-2 years old had risen to 61%, and to 68% and 70% among women with children aged 3-5 years old and women with children aged 6-14, respectively.

In this paper, we study the reduced form effect of the introduction of the two-weeks paid paternity leave in Spain in 2007 on the gender norms, behaviors as well as employment and fertility expectations of the next generation. We interpret the paternity leave reform as a natural experiment shifting children's direct exposure to counter-stereotypical behavior of parents. There is mounting evidence that the introduction of paternity leave permits substantially increases fathers' take-up, with positive and persistent effects on the time that fathers devote to childcare and household chores (Farré and González 2019, Patnaik 2019, Tamm 2019, Petts et al. 2020, Dunatchik and Özcan 2020).[15] For the specific case of Spain, Farré and González (2019) show that, because of the introduction of paternity leave, mothers returned to work earlier, and fathers increased their time in childcare activities not only after the birth of the child, but also several years later. In section 4.4, we provide further evidence that Spanish paternity leave reform triggered a permanent change in parental behavior drawing upon several datasets spanning the entire childhood.

[15] Evidence on the effects of the extensions of paternity leave in the 1990s in the Scandinavian countries is more mixed (Ekberg et al. 2013, Rege and Solli 2013, Cools et al 2015.)

3.2 Empirical strategy

Our identification strategy is based on the introduction of paternity leave in Spain applying to fathers of children born March 24, 2007, or later. We employ a difference-in-differences model comparing children born shortly before and after the cut-off date in the reform (or treated) year, drawing upon children born in the same window of birthdates in a control year.[16] The treated cohort consists of children born in 2007, while the previous cohort (children born in 2006) serves as the control cohort. All children born on or after March 24, 2007 are possibly affected by the paternity leave reform. Using the same window of birthdates in 2006 allows us to net out potential age trends or seasonal differences in the outcome variables (Buckles and Hungerman 2013). Hence, we estimate the following equation:

$$Y_i = \beta_0 + \beta_1 Cohort2007_i + \beta_2 PostMarch24_i + \beta_3 Cohort2007_i * PostMarch24_i + X_i + \varepsilon_i \quad (1)$$

where Y_i stands for the gender norms, behaviors or expectations exhibited by child i. $Cohort2007_i$ is a dummy variable indicating whether child i is born in 2007 (versus 2006), and $PostMarch24_i$ represents a dummy variable taking the value 1 if child i is born on or after March 24 (independently of the calendar year). The interaction term $Cohort2007_i * PostMarch24_i$ takes value 1 for any child born after the introduction of paternity leave. We can thus interpret the coefficient β_3 as the intent-to-treat effect of paternity leave on children's gender norms, expectations, and behaviors.[17]

We restrict the baseline sample to the 873 children born +/- 82 days around the cut-off date of March 24 (i.e., between January 1 and June 13). Hence, we compare children who belong to the same school cohort and are thus subject to the same school cohort specific factors (e.g., the school curriculum). In our preferred specification, we control for individual background characteristics (e.g., gender, parental education, and migration background) and for school fixed effects allowing us to abstract from selection into schools.

[16] The natural experiment under study is obviously suited for a Regression Discontinuity Design (RDD). Given the limited sample size, only some of our outcomes are robust to an RDD specification, while we lack power when it comes to others. Similar identification strategies have been used by Lalive and Zweimüller (2009), Dustmann and Schönberg (2012), Danzer and Lavy (2018), and Schönberg and Ludsteck (2014) in the context of (other) parental leave reforms.

[17] To infer the effect on the treated from the intent-to-treat effect, we must consider the actual take-up rate of paternity leave. We do not know the exact take-up rate for fathers of children born shortly after the implementation of paternity leave in 2007 (the necessary information to calculate take-up is only available at the annual level). Inferring from the take-up rate in the following years, our best estimate is around 55 %.

The remaining identifying assumption is a common date-of-birth trend in our outcome variables across the two cohorts. Figure 2 displays the date-of-birth trend (for all children born between January 1, 2006, and December 31, 2007, summarized in bins of 20 days) in our main outcome. The blue vertical dashed lines indicate our baseline sample window (January 1 to June 13), and the red vertical dashed line represents the cut-off date March 24, 2007. As shown in Figure 2, relatively younger children exhibit clearly more traditional gender role attitudes and norms. Importantly, we observe a common date-of-birth trend for children born before and after the reform in gender role attitudes (Panel a) and social norms (Panel c). The pattern is less clear for individual norms, which is much noisier (Panel c).

We also assess to which extent the pre-and post-reform children are balanced in terms of observable covariates. Table A.2 shows the balancing tests for a series of individual and family background characteristics, Column 2-4 shows the balancing tests for children of the treated cohort (2007) and column 5-7 for the control cohort (2006). By construction there is a strong discontinuity in the running variable (age) around the cut-off date: both children in the treated and the control cohort born after the cut-off are average 0.22 years younger than the children born before the cut-off date). There is also a significant and sizeable difference in the gender composition of the treated children born before versus after the reform (36.2% versus 54.4% are male). Albeit present, the difference in the gender composition is less pronounced among children belonging to the control cohort (44.1% versus 54.1%). Moreover, there is a significant difference in the share of children with migrant background (10.2% versus 17.0% have a foreign-born mother, and 9.8% versus 16.6% have a foreign-born father). As mentioned earlier, our baseline specification controls for the full set of individual and family background characteristics and as such, takes these compositional differences into account.

4. Results

4.1 Effects on children's gender norms

This section describes the estimated effects of the reform on our aggregate measures of gender role attitudes and norms, described in Section 2.2. using the empirical model in equation (1). Table 1 displays the point estimates for β_3, the coefficient of the interaction between the reform indicator (*PostMarch24*)

and the dummy indicating the treated cohort (*Cohort2007*). Column 1 shows the coefficient when estimating equation (1) without controls, column 2 when adding individual and family background characteristics (gender, parental education, and migrant status), and column (3) when further including school fixed effects.

Panel A reports the results for the reform effect on gender role attitudes, individual norms, and social norms about mothers. Starting with gender role attitudes and the most parsimonious specification (column 1), we find a positive (and marginally significant) reform effect on children's gender role attitudes of 0.21 standard deviations. The magnitude of the coefficient increases to 0.26 standard deviations when controlling for individual and family background characteristics (column 2), with an accompanying improvement in precision. When further including school fixed effects, the estimate reflects a significant increase in children's gender role attitudes by 0.27 standard deviations (column 3). In turn, we will only refer to this last, most conservative specification.

Turning to children's individual norms, we find that the introduction of paternity leave exerts a strong effect on children's individual norms about mothers: the share of children stating that a mother with a child below school age should work (either part- or full-time) increases by 12.5 percentage points. Given the share among pre-reform children with individual norms deviating from the stereotypical norm (66.4%), this corresponds to an increase by 18 % or by 0.26 standard deviations.

Finally, children's perceptions regarding the prevailing social norm about mothers also changes due to the introduction of paternity leave: the share of children stating that a randomly chosen classmate perceives it as "appropriate" or at least "fairly appropriate" that mother works (full-time or part-time) increases by 12.1 percentage points (or 25% from a baseline share of 63.7%) or 0.33 standard deviations.[18]

Panel B displays the reform effects on children's norms about the labor supply of men when having a child below school age. Starting with children's individual norms, we find no significant effect of the introduction of paternity leave on children's norms regarding young fathers' labor supply. To

[18] The incentivized coordination game was only introduced after the pilot phase, which is why the baseline specification only draws upon the data from the main data collection phase.

recall, in the eyes of most children, fathers should work part-time or not at all (87.2%). If we consider this extremely high baseline, it is not surprising that the introduction of paternity leave did not exert any effect at this margin. Turning to children's perception of the social norm, we find a significant increase in the share stating that a randomly chosen classmate would find it appropriate that a father works part-time or not at all. This share rises by 14.8 percentage points, which corresponds to an increase by 33% or 0.30 standard deviations.

Overall, the results in Table 1 provide compelling and robust evidence of substantial spillover effects of paternity leave on to the next generation. No matter which measures we look at, we find that the policy promoted gender-egalitarian role attitudes and norms among children of eligible parents. In fact, parents exert a very strong influence on the formation of children's gender norms, an influence that seems to go beyond the influence that children's peers may have at this age (12-13 years old). If children were perfectly informed about their peers' gender norms, the policy reform could not exert any effect on children's perception of the norms prevailing among their classmates. Yet, instead, children seem to internalize what they learn and observe at home and draw conclusions from their own experiences about the experiences of others (a phenomenon known as "false consensus effect", Ross et al. 1977).

4.2 Robustness

Table 2 reports the results from a battery of robustness tests. For comparison, Table 2 Column 1 repeats the estimates from our most preferred specification, which includes individual control variables and school fixed effects. It replicates the estimates in Table 1, column 3.

When analyzing the effects of a policy change, one major concern is anticipation or selective sorting. Our sample only comprises children born between January 1 and June 13, 2007, and thus conceived September 2006 or earlier. The policy change was discussed in parliament and the media earliest by mid-December 2006. Thus, strategic planning of the pregnancy to enjoy paternity leave within our sample is unlikely to impossible. Postponement of the actual birth is difficult and given medical concerns not possible for more than a couple of weeks. Yet, to take this possibility into account, we estimate our baseline specification using a sample where we exclude the births right around the cut-off date (between March 13 and 31). Results are robust and shown in Table 2, column 2.

We probe robustness to two alternative sample specifications, first excluding the data collected during the pilot phase (data from 3 schools, resulting in a sample of 754 observations) and second including all children born in 2006 and 2007 (resulting in a sample of 1987 observations for attitudes and individual norms, and 1708 for social norms). The resulting estimates are robust (except for the individual norms about mothers), but slightly less precise (see Table 2 column 3 and 4, respectively).

We also investigate the robustness of our estimates to alternative estimation strategies. First, we include a set of class fixed effects considering potential sorting into classes and spillover effects within class (which if anything should bias our results downward). Results are extremely robust and shown in Table 2 column 5. Second, we exploit the cut-off date and employ a regression discontinuity design (RDD). Specifically, we add the running variable (relative age within each cohort) to our difference-in-differences specification which results in a so-called RDD-DD specification. Results are remarkably robust to this specification, both in terms of magnitude and precision (see Table 2, Column 6). We then turn to a classical RDD design using the full sample (children born in 2006 and 2007) and controlling for the running variable, as a first order polynomial (Table 2, Column 7) and as a second order polynomial (Table 2, Column 8).[19] We find very robust estimates for the reform effect on individual norms and social norms. The estimate for gender role attitudes, however, loses in magnitude (by up to 50%) and precision. Also, the estimates for social norms about fathers drop in size and loose precision.

Finally, our results for gender attitudes are robust to alternative aggregation schemes. Table 2, column 9 shows the difference-in-differences results when using a principal component analysis on all 7 original items from the ISSP questionnaire and 2 further items that we added to the questionnaire.[20] Table 2, column 10 shows the results when using the unweighted average of the answers given to the 7 original items taken from the ISSP questionnaire and column 11 when using the weighted average with weights constructed by normalizing the variables to have the same standard deviation and then recovering the weights from the inverse covariance matrix (Anderson 2008).

[19] We use the rdrobust command in Stata and rely on all children born in 2006 and 2007 to determine the optimal bandwidth.

[20] We asked children to rate on a 5-point Likert scale whether they agreed to the following two statements: "When a woman earns more than her husband, there are certainly problems" and "Both mother and father should take a parental leave permit from work after the birth of their son or daughter".

4.3 Effects on children's behaviors and expectations

An open question is to which extent the paternity leave reform has the power to induce gender-egalitarian behavior and labor market choices contributing to a closure of the gender earnings gap in the future. Children in our sample are obviously too young to investigate any labor market outcomes. Yet, the collected information on children's day-to-day contributions to several household chores can enhance our understanding whether the paternity leave reform may shift gender specialization at home. Information on children's expectations regarding their own future employment and family plans allows us to get a first glimpse on the potential effects of paternity leave on the future gender gap in labor market outcomes. Given the gender differences in labor market and home production and possible heterogeneity in the reform effects, we conduct the following analyses separately by gender.

Table 3, Panel A and B show the estimated reform effects on boys' and girls' contributions to male and female dominated tasks at home. As shown in Panel A, if the father was eligible for paternity leave, girls are more likely to contribute to male dominated tasks, such as going grocery shopping or doing small repairs. In our most preferred specification, the reform effect corresponds to an increase by 14.5 percentage points or 26 %. Boys, in contrast, are more likely to contribute to female dominated tasks, the reform effect corresponds to 13.4 percentage points or 20 %. While the estimated effect is not significant at the conventional levels, the gender-specific estimates are significantly different from another.

Table 3, Panel C reports the results for children's family and labor market expectations in 20 years' time. We focus on the option "working full-time and having children" as women's decision to reduce their labor supply – both at the extensive and the intensive margin – has been shown to cause the gender gap in earnings after the birth of the first child. Our results exhibit a gender-specific pattern. Boys whose father was eligible for paternity leave are 18.7 percentage points or 76 % less likely to see themselves working full-time and having children. This effect is quite sizeable, mostly because of the relatively low share of pre-reform boys planning to work full-time and having children in the future (24.7%).[21] Girls, in contrast, are more likely to see themselves working full-time and having children.

[21] We do not find any effect on children's fertility intentions. The results are available upon request.

The estimated reform effect corresponds to an increase in 9.7 percentage points or 72 % - again a sizeable effect driven by the relatively low share of pre-reform girls planning to work full-time and having children. Yet, the reform effect for girls is not statistically significant at the conventional levels.

Overall, the results in Table 3 provide strong evidence that paternity leave is a powerful tool to shift not only the gender role attitudes and norms of the next generation, but to sustainably combat the gender gap in the labor market. As shown in Table A.3 in the Appendix A, the results are robust the entire battery of robustness tests – alternative sample specifications (i.e., excluding the observations around the cut-off, using the full sample of children born in 2006 and 2007, excluding the pilot sample) and alternative estimation strategies (i.e., the RDD-DD, RDD with a first and a second order polynomial), with the exception of the RDD estimate for the reform effect on boys' expectations regarding their own employment and fertility.

4.4. Mechanisms

We have argued that paternity leave acts as a policy triggering counter-stereotypical behavior among parents from a child's birth onward, i.e., paternity leave induces fathers to contribute more to childcare and household chores, potentially freeing mothers' time that they can spend in the labor market. To strengthen this argument, we draw upon different datasets that provide information on parents' engagement in the labor market and in the home at different points after childbirth. Specifically, we use the Spanish Time-Use Survey (2009-10) and our own data to document fathers' contribution to childcare and household chores when children are 2-3 years old and 12-13 years old, respectively.[22] We further rely on the Spanish Labor Force Survey to document mothers' and father's labor market choices over the first decade of their child's life.[23]

Table 4 displays the reform effects on paternal engagement in childcare and household chores using a difference-in-differences approach (like equation 1, but with the covariates varying depending

[22] We find no significant effects on maternal engagement in housework or childcare time. Results are available upon request.

[23] We go substantially beyond the findings reported in Farré and González (2019) who find that women who gave birth after the introduction of paternity leave were 4 percentage points more likely to return to work within the first 6 months after childbirth, and 2.5 percentage points within the first 12 months. Moreover, they find that fathers who were entitled to paternity leave spent on average almost an hour per day more on childcare when the child was 2-3 years old.

on the data source).[24] Panel A reports the estimated reform effects when using the Spanish Time-Use Survey (of 2009-10) and thus 2-3 years after childbirth. Given the rather small sample size of the Spanish Time Use Survey, we concentrate immediately on the results using the full sample of fathers whose children were born in 2006 and 2007 (see Table 4, column (2)). Fathers eligible for paternity leave spend on average 18.6 minutes per day more on household chores and childcare. While the combined effect is not significant at the conventional levels, splitting time devoted to childcare into the different activities undertaken with a child reveals that paternity leave induces fathers to spend significantly more time with their children doing recreational activities, such as reading, playing, and talking. On average, eligible fathers increase their time devoted to recreational activities with their child by 44.8 minutes per day. These effects are sizeable considering that prior to the introduction of paternity leave fathers spend on average 95 minutes per day on childcare and 34 minutes on recreational activities with their children.

Panel B displays the reform effects on children's perception of fathers' contribution to household chores using our own data and thus 12-13 years after childbirth. The reported estimates stem from a difference-in-difference specification using equation (1) and controlling for individual level controls (gender, parental education, and migrant status) and school fixed effects. We find that fathers eligible for paternity leave are 14.4 percentage points or 21.9% more likely to do at least some of the laundry. These findings indicate that paternity leave may have affected fathers' involvement in (some) household tasks even in the long run.

Finally, we analyze the effects of paternity leave on mothers' and fathers' employment after childbirth. We rely on the Spanish Labor Force Survey from 2006 to 2019 and use the sample of parents whose child was born between January and June 2006 and January and June 2007. Table 5 reports the difference-in-differences estimates using equation (1) and controlling for parental background characteristics (e.g., child' gender and birth order as well as parental age, education, marital status, and citizenship) and region fixed effects. In line with Farré and González (2019), we find that women whose

[24] The Spanish Time-Use Survey allows us to control for individual-level control variables (child's gender and birth order as well as parents' age at childbirth, marital status, citizenship, education) and region fixed effects.

partners were eligible for paternity leave worked more in the first three years after childbirth (Table 5, Panel A). Specifically, women with children aged 0-2 years old are 3.2 percentage more likely to be employed and work on average 1 hour more per week. This effect, however, fades out when children are 3 years and older, i.e., as soon as children enter compulsory schooling. The introduction of paternity leave does not alter fathers' labor supply, neither in the short-run nor in the long-run (Table 5, Panel B).

Taken together, these result support the claim that the introduction of paternity leave triggered counter-stereotypical behavior among eligible parents not only immediately after childbirth but also in the long-run.

5. Conclusions

Despite remarkable improvements in women's labor force participation and labor earnings over the last decades, gender gaps in terms of employment and earnings are still sizable and persistent. Much of the current debate on the mechanisms underlying the remaining gender gap deals with the existing social norms on the role of the women in childcare and household production. Many scholars go as far as proclaiming gender norms to constitute the last barrier to gender equality (Kleven et al. 2019a, Bertrand 2020). Yet, gender norms are very persistent and transmitted from one generation to the next.

We ask the question whether paternity leave, a policy designed to promote gender equality in the home and in the labor market, can change the gender norms of the next generation. To this end, we exploit the introduction of paternity leave in Spain in 2007 and compare children born shortly before and after the policy change. Importantly, fathers of children born after the policy change are entitled to paternity leave and as such are likely to exhibit counter-stereotypical behavior from the onset of a child's life onwards. In other words, the paternity leave reform can be interpreted as an exogenous shift to parental stereotypical behaviors.

To take advantage of this natural experiment, we collect our own data on children's gender norms, day-to-day behaviors and expectations on their own future employment and fertility plans using a large-scale lab-in-field experiment. Using this unique data in a difference-in-differences framework, we provide compelling evidence that paternity leave induces the next generation to step away from

traditional gender norms and stereotypical behaviors. Specifically, children whose fathers were entitled to paternity leave exhibit more egalitarian attitudes towards gender roles and are more supportive of mothers and fathers being equally engaged in the labor market and in the home. They also engage more in counter-stereotypical day-to-day behaviors and expect to deviate from the male-breadwinner model in the future.

It is still too early to judge about the effects of paternity leave on children's labor supply choices. Nevertheless, taking children's expectations regarding their own future work and family life at face value, paternity leave may result in a reduced child penalty and gender gap in earnings in the next generation. Thus, paternity leave stands as a powerful instrument to erase sticky gender stereotypes and norms and to overcome seemingly set-in-stone behaviors at least in the long-run.

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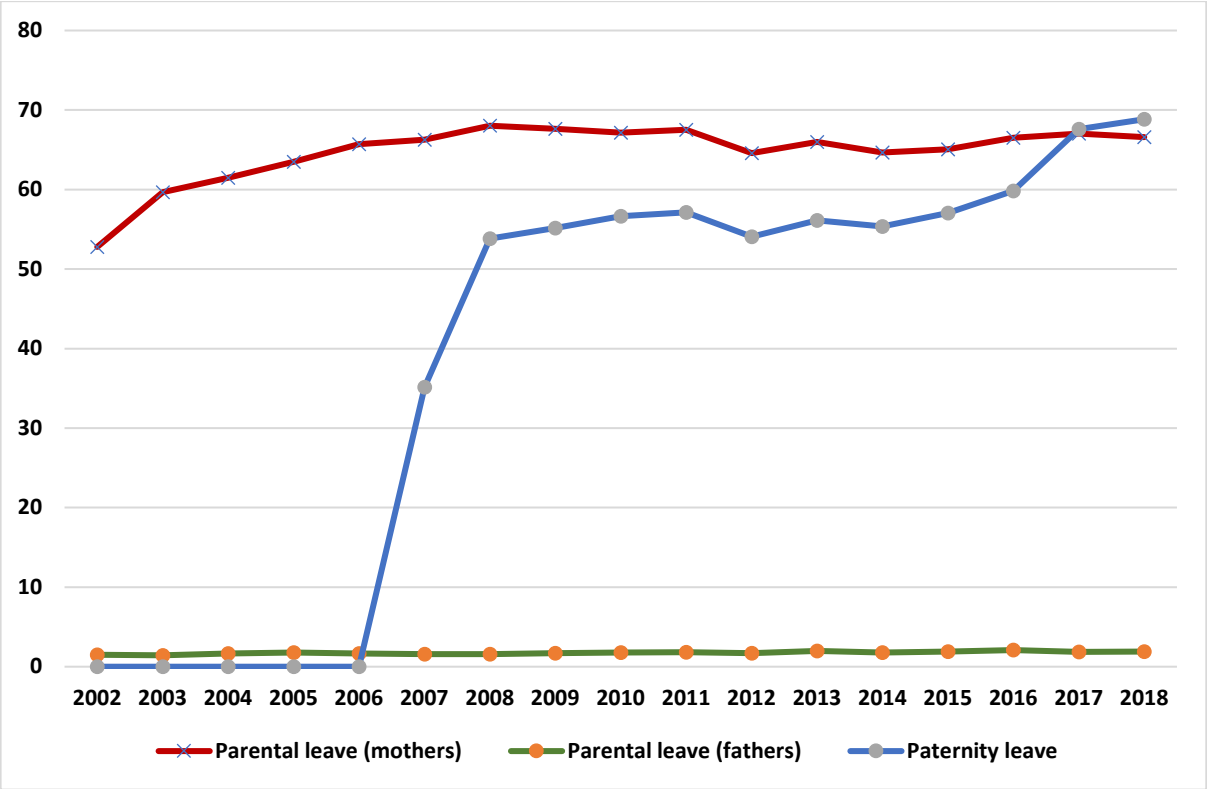
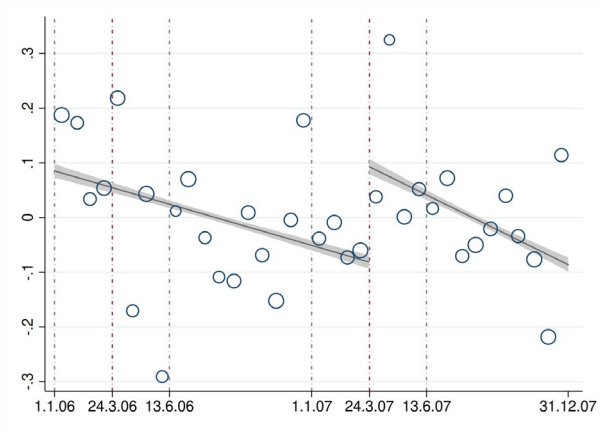
Figures and Tables

Figure 1: Take-up of maternity leave, paternity leave and parental leave in Spain

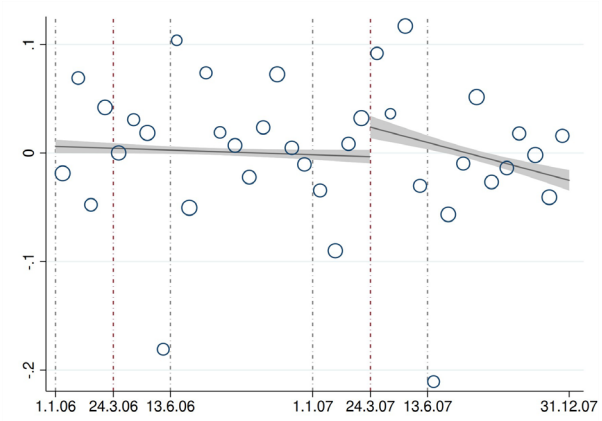


Note: The red line represents the percentage of mothers on paid parental leave, the blue line represents the percentage of fathers on paternity leave, and the green line represents the percentage of fathers that used some weeks of the shared parental leave permit.

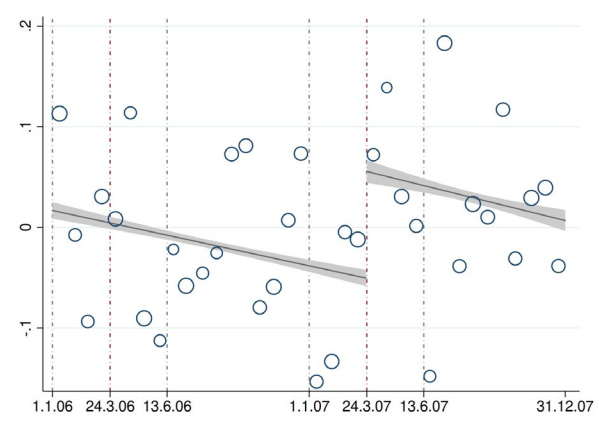
Figure 2: Trends in children's gender attitudes and norms



(a) Gender role attitudes index



(b) Individual norms about mothers



(c) Social norms about mothers

Table 1: Reform effects on children's gender role attitudes and norms

	(1)	(2)	(3)
Panel A: Children's gender role attitudes and norms about mothers			
Gender role attitudes index	0.205*	0.264**	0.266**
Pre-reform mean [sd] = 0 [1]	(0.123)	(0.116)	(0.118)
N	873	873	873
Individual norms about mothers	0.109*	0.123**	0.124**
Pre-reform mean [sd] = 0.664 [0.473]	(0.057)	(0.056)	(0.057)
N	873	873	873
Social norms about mothers	0.163**	0.163**	0.161**
Pre-reform mean [sd] = 0.637 [0.482]	(0.065)	(0.067)	(0.069)
N	754	754	754
Panel B: Children's norms about fathers			
Individual norms about fathers	0.023	0.037	0.024
Pre-reform mean [sd] = 0.872 [0.334]	(0.047)	(0.048)	(0.049)
N	873	873	873
Social norms about fathers	0.163**	0.164**	0.148*
Pre-reform mean [sd] = 0.451 [0.499]	(0.077)	(0.080)	(0.082)
N	754	754	754
Individual controls		Yes	Yes
School fixed effects			Yes

Notes: Each coefficient stems from a separate regression and corresponds to the OLS estimate of the coefficient on the interaction term (Cohort 2007 * PostMarch23) in equation (1). Column (1) shows the results without controls, column (2) when controlling for gender, in- dividual and family background characteristics, and column (3) when adding further school fixed effects. Panel A shows the result for the gender role attitudes index which is the first element resulting from a principal component analysis (standardized to mean 0 and standard deviation 1 for pre-reform children) of the seven ISSP questions on gen- der roles. Individual norm about mothers is a dummy variable that equals 1 if the child believes that a mother with a child below school age should work full-time or part-time and 0 otherwise. Social norm about mothers is a dummy variable that equals 1 if the child answers that it is "socially appropriate" or "fairly socially appropriate" that a mother with a child below school age works full-time or part-time, and 0 otherwise. Individual norm about fathers is a dummy variable that equals 1 if the child believes that a father with a child below school age should work part-time or not at all, and 0 otherwise. Social norm about fathers is a dummy variable that equals 1 if the child answers that it is "socially appropriate" that a father with a child below school age works part-time or not at all, and 0 otherwise. The lower number of observations in Panel C is because the incentivized coordination game was not implemented among the students in the pilot survey. Standard errors are clustered at the session/class level and shown in parentheses where $^{*}p<0.1$, $^{**}p<0.05$, $^{***}p<0.01$

Table 2: Robustness checks for the reform effect on children's gender role attitudes and norms

	Baseline	Alternative sample specification			Alternative estimation strategies				Alternative Indices		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Pref. spec.	Donut	Excl. pilot	Full sample	Class FE	RDD DiD	RDD P1	RDD P2	PCA 9Q	Equal 7Q	ICW 7Q
Panel A: children's gender role attitudes and norms about mothers											
Gender roles attitudes index	0.266**	0.324**	0.270**	0.179*	0.243**	0.272**	0.129	0.171	0.248**	0.356**	0.259**
	(0.118)	(0.126)	(0.135)	(0.099)	(0.121)	(0.119)	(0.145)	(0.195)	(0.116)	(0.162)	(0.122)
N	873	760	754	1987	869	873	1987	1987	873	873	873
Individual norms about mothers	0.124**	0.113*	0.024	0.102	0.143**	0.126**	0.146**	0.203**			
	(0.057)	(0.061)	(0.047)	(0.063)	(0.060)	(0.057)	(0.063)	(0.090)			
N	873	760	1987	754	869	873	1987	1987			
Social norms about mothers	0.161**	0.179**	0.140***	0.161**	0.170**	0.163**	0.157***	0.192**			
	(0.069)	(0.077)	(0.050)	(0.069)	(0.072)	(0.069)	(0.060)	(0.085)			
N	754	657	1708	754	750	754	1708	1708			
Panel B: children's norms about fathers											
Individual norms about fathers	0.024	0.002	-0.021	-0.015	0.030	0.022	-0.021	-0.026			
	(0.049)	(0.050)	(0.038)	(0.050)	(0.053)	(0.049)	(0.062)	(0.079)			
N	873	760	1987	754	869	873	1987	1987			
Social norms about fathers	0.148*	0.139*	0.116*	0.148*	0.159*	0.144*	0.090	0.106			
	(0.082)	(0.082)	(0.062)	(0.082)	(0.090)	(0.080)	(0.067)	(0.095)			
N	754	657	1708	754	750	754	1708	1708			

Notes: Each coefficient displayed in this table comes from a separate regression. Column (1) shows our preferred specification using equation (1) and controlling for gender, individual and family background characteristics, and school fixed effects. Column (2) drops all children born closely around to the cut-off date, i.e., children born between 13.3.2007 - 31.3.2007 and 13.3. - 31.3.2006. Column (3) excludes all data collected in the pilot phase. Column (4) draws upon all children born in 2006 and 2007. Column (5) estimates the baseline equation (1) but replaces the school fixed effects by class fixed effects. Column (6) displays the estimates from a RD-DD design which corresponds to equation (1) but add a first order polynomial of the running variable (the day of birth which corresponds to the relative age in class). Column (7) and (8) correspond to classical RDD specification controlling a first order polynomial or second order polynomial, respectively, of the running variable date of birth and drawing upon all children born in 2006 and 2007. We estimate the RDD specification using the rdrobust command in Stata and employing a triangular kernel function for the local-polynomial estimator. Column (9) includes two additional non-ISSP questions on gender attitudes. Column (10) weights each ISSP question equal. Column (11) uses inverse-covariance weighting for the ISSP questions. Standard errors are clustered at the class level and shown in parentheses. $* p < 0.1$, $** p < 0.05$, $*** p < 0.01$

Table 3: Reform effects on children's behaviors and expectations

	(1)	(2)	(3)
Panel A: Contribution to male dominated tasks			
Boys	0.017	0.014	-0.034
Pre-reform mean [sd] = 0.744 [0.308]	(0.061)	(0.063)	(0.070)
N	353	353	353
Girls	0.136**	0.143**	0.145**
Pre-reform mean [sd] = 0.567 [0.346]	(0.061)	(0.065)	(0.068)
N	397	397	397
p-value	0.167	0.153	0.068
Panel B: Contribution to female dominated tasks			
Boys	0.133	0.115	0.134
Pre-reform mean [sd] = 0.663 [0.476]	(0.081)	(0.079)	(0.085)
N	353	353	353
Girls	-0.055	-0.070	-0.079
Pre-reform mean [sd] = 0.836 [0.372]	(0.069)	(0.069)	(0.073)
N	397	397	397
p-value	0.077	0.079	0.057
Panel C: Expectation to work full-time and have children			
Boys	-0.203**	-0.212**	-0.187**
Pre-reform mean [sd] = 0.247 [0.434]	(0.092)	(0.092)	(0.089)
N	357	357	357
Girls	0.071	0.092	0.097
Pre-reform mean [sd] = 0.134 [0.342]	(0.087)	(0.086)	(0.082)
N	397	397	397
p-value	0.031	0.016	0.019
Individual controls		Yes	Yes
School fixed effects			Yes

Notes: Each coefficient stems from a separate regression and corresponds to the OLS estimate of the coefficient on the interaction term (Cohort 2007 * PostMarch23) in equation ??. Column (1) shows the results without controls, column (2) when controlling for gender, individual and family background characteristics, and column (3) when adding further school fixed effects. Panel A shows the result for the contribution to male dominated tasks (making small repairs and grocery shopping). Panel B shows the result for the contribution to female dominated tasks (cleaning). Panel C shows the result on children expecting to work full-time and having children in 20 year's time. The p-value gives the significance of a t test testing the equality of coefficients for boys and girls. Standard errors are clustered at the session/class level and shown in parentheses. *p < 0.1, **p < 0.05, ***p < 0.01

Table 4: The reform effects on paternal engagement in childcare and household chores

	(1) Jan-June 2006 & 07	(2) 2006 &2007
Panel A: Paternal engagement 2-3 years after childbirth in …		
Childcare & Housework (min/day)	23.0	18.6
Pre-reform mean [sd] = 201 [172]	(67.2)	(48.7)
Childcare (min/day)	13.8	22.0
Pre-reform mean [sd] = 95 [99]	(42.7)	(33.4)
i) Educational activities (min/day)	0.6	4.4
Pre-reform mean [sd] = 2.4 [16]	(10.2)	(5.6)
ii) Recreational activities (min/day)	26.1	44.8***
Pre-reform mean [sd] = 34 [48]	(17.5)	(16.4)
iii) Physical care (min/day)	-16.1	-26.3
Pre-reform mean [sd] = 46 [66]	(27.6)	(21.3)
N	141	303
Panel B: Paternal engagement 12-13 years after childbirth in …		
Laundry	0.142***	0.096**
Pre-reform mean [sd] = 0.617 [0.487]	(0.053)	(0.043)
N	870	1984
Cleaning	-0.037	-0.064
Pre-reform mean [sd] = 0.598 [0.491]	(0.057)	(0.049)
N	869	1977
Cooking	0.022	0.004
Pre-reform mean [sd] = 0.692 [0.463]	(0.059)	(0.046)
N	869	1977

Note: Each coefficient comes from a different regression. Dependent variables are specified on the first column of each row. Panel A uses data from the 2009-10 Spanish Time-Use Survey, in column (1), a sample limited to parents whose youngest child was born between January and June 2006 and 2007, and in column (2) a sample limited to parents whose youngest child was born in 2006 or 2007. The regressions based on the Spanish Time-Use Survey control for second-order polynomials in age at birth of both parents, indicators for whether the parents were married, were of foreign nationality, whether each parent had at least a high school education, whether the child is the first-born and the gender of the child. Panel B uses our own data when children are 12-13 years old. In column (1) the sample is limited to children born between January 1 and June 13 in 2006 and 2007, in column (2) the sample is restricted to all children born in 2006 and 2007. All regressions based on our own data control for child's gender, age and migration stats. Robust standard errors in parentheses. ***p<0.01, ** p<0.05, * p<0.1

Table 5: Reform effects of parental labor supply

	(1) Ages 0-2	(2) Ages 3-5	(3) Ages 0-11
Panel A: Mothers' labor force participation			
Employed	0.032**	-0.003	-0.006
	(0.014)	(0.014)	(0.007)
Hours worked last week	1.046*	0.472	-0.152
	(0.550)	(0.541)	(0.277)
N. obs.	15,929	17,270	65,265
Panel B: Fathers' labor force participation			
Employed	0.006	0.005	-0.005
	(0.009)	(0.011)	(0.0052)
Hours worked last week	0.639	0.447	-0.456
	(0.590)	(0.590)	(0.303)
N	15,929	17,270	65,265

Note: Each coefficient comes from a different regression. The sample includes all mothers or fathers from the 2006q1 to 2019q4 EPA who live with a child born between January and June 2006 or between January and June 2007, and who live with the father/mother of their reference child. Coefficients reported correspond to the treatment indicator that takes value 1 for parents who had a child born from April 2007 onwards. All regressions control for region fixed effects, a quadratic trend in the age of the mother and father at the time of the interview, indicators for secondary and college educated mothers and fathers, and foreign-born mothers and fathers, and indicators for mothers whose child was born in 2007 and for mothers whose child was born between April and June. Standard errors are shown in parentheses: *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Appendix A: Additional Figures and Tables

Figure A.1: The data collection process

Note: Mobile laboratory installed in one of the schools.

Note: Students at one of the schools answering the questionnaire.

Table A.1: Summary statistics: norms, behaviors, and expectations (pre-reform sample)

	(1) pooled	(2) girls	(3) boys	(4) diff
Panel A: gender role attitudes				
"Agree" or "strongly agree" with:				
(Q1) A working mother can establish just as warm and secure relationship with her children as a mother who does not work.	0.668 [0.472]	0.647 [0.480]	0.706 [0.458]	-0.059 (0.064)
(Q2) Both men and women should contribute to the household income.	0.906 [0.292]	0.893 [0.310]	0.929 [0.258]	-0.036 (0.040)
"Disagree" or "strongly disagree" with:				
(Q3) A pre-school child is likely to suffer if his or her mother works.	0.587 [0.493]	0.627 [0.485]	0.518 [0.503]	0.109 (0.067)
(Q4) All in all, family life suffers when the woman has a full-time job.	0.634 [0.483]	0.653 [0.478]	0.600 [0.493]	0.053 (0.066)
(Q5) A job is all right, but what most women really want is a home and children.	0.698 [0.460]	0.733 [0.444]	0.635 [0.484]	0.098 (0.062)
(Q6) Being a housewife is just as fulfilling as working for pay.	0.617 [0.487]	0.640 [0.482]	0.576 [0.497]	0.064 (0.066)
(Q7) A man's job is to earn money and a woman's job is to look after the home and family.	0.983 [0.130]	0.987 [0.115]	0.976 [0.152]	0.010 (0.018)
Gender role attitudes index	-0.000 [1.000]	0.116 [0.993]	-0.205 [0.984]	0.322** (0.134)
Panel B: individual norms				
A mother with a child below school age				
should not work.	0.247 [0.432]	0.220 [0.416]	0.294 [0.458]	-0.074 (0.059)
should work part-time.	0.643 [0.480]	0.660 [0.475]	0.612 [0.490]	0.048 (0.065)
should work full-time.	0.021 [0.145]	0.027 [0.162]	0.012 [0.108]	0.015 (0.020)
A father with a child below school age				
should not work.	0.140 [0.348]	0.133 [0.341]	0.153 [0.362]	-0.020 (0.047)
should work part-time.	0.732 [0.444]	0.733 [0.444]	0.729 [0.447]	0.004 (0.060)
should work full-time.	0.034 [0.182]	0.033 [0.180]	0.035 [0.186]	-0.002 (0.025)
Individual norms about mothers	0.664 [0.473]	0.687 [0.465]	0.624 [0.487]	0.063 (0.064)
Individual norms about fathers	0.872 [0.334]	0.867 [0.341]	0.882 [0.324]	-0.016 (0.045)
Panel C: social norms				
How socially appropriate is it that a mother with a child below school age works part-time?				
fairly appropriate	0.419 [0.494]	0.403 [0.492]	0.444 [0.500]	-0.041 (0.070)
appropriate	0.219 [0.414]	0.261 [0.441]	0.148 [0.357]	0.113* (0.058)
How socially appropriate is it that a mother with a child below school age works full-time?				
fairly appropriate	0.056 [0.230]	0.075 [0.264]	0.025 [0.156]	0.050 (0.032)
appropriate	0.042 [0.201]	0.052 [0.223]	0.025 [0.156]	0.028 (0.028)
How socially appropriate is it that a father with a child below school age works part-time?				
fairly appropriate	0.460 [0.500]	0.465 [0.501]	0.453 [0.502]	0.012 (0.080)
appropriate	0.270 [0.445]	0.303 [0.462]	0.219 [0.417]	0.084 (0.071)

continued on next page

Table A.1 (continued): Summary statistics: norms, behaviors and expectations (pre-reform sample)

	(1) pooled	(2) girls	(3) boys	(4) diff
How socially appropriate is it that a father with a child below school age does not work at all				
fairly appropriate	0.335	0.336	0.333	0.002
	[0.473]	[0.474]	[0.474]	(0.067)
appropriate	0.344	0.343	0.346	-0.002
	[0.476]	[0.477]	[0.479]	(0.067)
Social norms about mothers	0.637	0.664	0.593	0.072
	[0.482]	[0.474]	[0.494]	(0.068)
Social norms about fathers	0.451	0.463	0.432	0.031
	[0.499]	[0.500]	[0.498]	(0.070)
Panel D: household chores				
Doing the laundry	0.837	0.858	0.802	0.056
	[0.370]	[0.350]	[0.401]	(0.052)
Small repairs	0.437	0.343	0.593	-0.249***
	[0.497]	[0.477]	[0.494]	(0.068)
Grocery shopping	0.827	0.791	0.887	-0.096*
	[0.379]	[0.408]	[0.318]	(0.053)
Cleaning	0.771	0.836	0.662	0.173***
	[0.421]	[0.372]	[0.476]	(0.058)
Cooking	0.533	0.545	0.512	0.032
	[0.500]	[0.500]	[0.503]	(0.071)
Male dominated chores	0.633	0.567	0.744	-0.177***
	[0.342]	[0.346]	[0.308]	(0.047)
Female dominated chores	0.771	0.836	0.662	0.173***
	[0.421]	[0.372]	[0.476]	(0.058)
Panel E: employment and family expectations				
In 20 year's time, how do you see yourself?				
Not working and not having children	0.023	0.015	0.037	-0.022
	[0.151]	[0.122]	[0.190]	(0.021)
Working and not having children	0.344	0.358	0.321	0.037
	[0.476]	[0.481]	[0.470]	(0.067)
Not working and having children	0.033	0.022	0.049	-0.027
	[0.178]	[0.148]	[0.218]	(0.025)
Working part-time and having children	0.423	0.470	0.346	0.124*
	[0.495]	[0.501]	[0.479]	(0.069)
Working full-time and having children	0.177	0.134	0.247	-0.113**
	[0.382]	[0.342]	[0.434]	(0.053)

Notes: The summary statistics is restricted to children born between 01.01.2007 and 23.03.2007. Panel A displays the share of pre-reform children providing a non-traditional answer to the battery of gender role attitudes questions taken from the ISSP. For question 1 and 2 it shows the percentage who "strongly agree" or "agree". For questions 3, 4, 5, 6 and 7, it displays the percentage who "strongly disagree" or "disagree". The gender role attitudes index is the first element resulting from a principal component analysis of the seven questions. The index is normalized to have mean 0 and standard deviation 1 for pre-reform children. Panel B displays respondents' opinion about the optimal labor supply of parents with young children. Missing categories are "I don't know" and "I don't want to answer". Individual norm about mothers is an indicator that takes value 1 if the child answered that it is optimal when a mother with child below school age works full-time or part-time. Individual norm about fathers is an indicator that takes value 1 if the child answered that it is optimal when a father with child below school age works part-time or not at all. Panel C shows the results of the incentivized coordination game. For every question it displays the percentage of children who answered that it is "fairly appropriate" and the percentage of children who answered that it is "appropriate". The social norm about mothers indicates the share who answered that it is at least "somewhat socially appropriate" that a mother with a child below school age works part-time or full-time. The social norm about fathers indicates the share who answered that is "socially appropriate" that a father with a child below school age works part-time or does not work at all. Panel D shows the share that contributes at least occasionally to each domestic task. Panel E shows the expectations of respondents in 20 years' time regarding children and labor market participation. The standard deviation is given in brackets. Column (4) displays a Wald test on gender differences and the respective standard errors are in parentheses: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$

Table A.2: Balancing Tests

	06/07	+/-82 days in 2007			+/-82 days in 2006		
	(1) Pooled	(2) Post	(3) Pre	(4) diff	(5) Post	(6) Pre	(7) diff
Age	13.264	12.669	12.888	-0.218***	13.609	13.828	-0.219***
	[0.535]	[0.191]	[0.204]	(0.019)	[0.276]	[0.271]	(0.026)
Male	0.467	0.544	0.362	0.182***	0.541	0.441	0.101**
	[0.499]	[0.499]	[0.482]	(0.048)	[0.499]	[0.498]	(0.047)
Where is your mother born?							
Spain	0.847	0.793	0.872	-0.080**	0.853	0.859	-0.006
	[0.361]	[0.406]	[0.334]	(0.036)	[0.355]	[0.349]	(0.033)
Not in Spain	0.126	0.171	0.102	0.069**	0.110	0.128	-0.018
	[0.332]	[0.377]	[0.303]	(0.033)	[0.314]	[0.335]	(0.031)
Where is your father born?							
Spain	0.847	0.777	0.860	-0.082**	0.881	0.859	0.022
	[0.361]	[0.417]	[0.348]	(0.037)	[0.325]	[0.349]	(0.032)
Not in Spain	0.117	0.166	0.098	0.068**	0.092	0.119	-0.027
	[0.321]	[0.373]	[0.298]	(0.032)	[0.289]	[0.324]	(0.029)
Do you live with your mother?							
Yes	0.844	0.845	0.826	0.019	0.839	0.868	-0.028
	[0.363]	[0.363]	[0.380]	(0.036)	[0.368]	[0.339]	(0.034)
Most days	0.063	0.057	0.068	-0.011	0.069	0.057	0.012
	[0.243]	[0.232]	[0.252]	(0.024)	[0.254]	[0.233]	(0.023)
Some days	0.080	0.083	0.098	-0.015	0.078	0.062	0.016
	[0.272]	[0.276]	[0.298]	(0.028)	[0.269]	[0.241]	(0.024)
No	0.013	0.016	0.009	0.007	0.014	0.013	0.001
	[0.112]	[0.124]	[0.092]	(0.010)	[0.117]	[0.114]	(0.011)
Do you live with your father?							
Yes	0.784	0.777	0.791	-0.014	0.798	0.767	0.032
	[0.412]	[0.417]	[0.407]	(0.040)	[0.402]	[0.424]	(0.039)
Most days	0.013	0.010	0.013	-0.002	0.014	0.013	0.001
	[0.112]	[0.102]	[0.113]	(0.010)	[0.117]	[0.114]	(0.011)
Some days	0.148	0.155	0.157	-0.002	0.138	0.141	-0.003
	[0.355]	[0.363]	[0.365]	(0.035)	[0.345]	[0.349]	(0.033)
No	0.056	0.057	0.038	0.019	0.050	0.079	-0.029
	[0.230]	[0.232]	[0.192]	(0.021)	[0.219]	[0.271]	(0.023)
How much does your mother work?							
Full-time	0.504	0.487	0.498	-0.011	0.541	0.489	0.052
	[0.500]	[0.501]	[0.501]	(0.049)	[0.499]	[0.501]	(0.047)
Part-time	0.371	0.383	0.383	0.000	0.335	0.383	-0.048
	[0.483]	[0.487]	[0.487]	(0.047)	[0.473]	[0.487]	(0.046)
Does not work	0.105	0.104	0.098	0.006	0.110	0.110	-0.000
	[0.307]	[0.306]	[0.298]	(0.029)	[0.314]	[0.314]	(0.030)
How much does your father work?							
Full-time	0.675	0.648	0.621	0.026	0.711	0.718	-0.007
	[0.469]	[0.479]	[0.486]	(0.047)	[0.454]	[0.451]	(0.043)
Part-time	0.244	0.280	0.298	-0.018	0.211	0.189	0.022
	[0.430]	[0.450]	[0.458]	(0.044)	[0.409]	[0.393]	(0.038)
Does not work	0.049	0.031	0.064	-0.033	0.046	0.053	-0.007
	[0.217]	[0.174]	[0.245]	(0.021)	[0.210]	[0.224]	(0.021)
Did your mother go to college?							
Yes	0.498	0.513	0.489	0.024	0.509	0.485	0.025
	[0.500]	[0.501]	[0.501]	(0.049)	[0.501]	[0.501]	(0.048)
No	0.345	0.347	0.336	0.011	0.326	0.370	-0.044
	[0.476]	[0.477]	[0.473]	(0.046)	[0.470]	[0.484]	(0.045)
Did your father go to college?							
Yes	0.394	0.383	0.374	0.009	0.427	0.392	0.035
	[0.489]	[0.487]	[0.485]	(0.047)	[0.496]	[0.489]	(0.047)
No	0.399	0.352	0.400	-0.048	0.385	0.449	-0.064
	[0.490]	[0.479]	[0.491]	(0.047)	[0.488]	[0.499]	(0.047)
# siblings	1.359	1.249	1.404	-0.156	1.413	1.352	0.060
	[1.103]	[1.114]	[1.126]	(0.109)	[1.049]	[1.121]	(0.103)

continued on next page

Table A.2: Balancing Tests

	06/07	+/-82 days in 2007			+/-82 days in 2006		
	(1) Pooled	(2) Post	(3) Pre	(4) diff	(5) Post	(6) Pre	(7) diff
# of older siblings	0.756	0.658	0.902	-0.244***	0.757	0.687	0.070
	[0.961]	[0.923]	[1.060]	(0.097)	[0.921]	[0.909]	(0.087)
# of younger siblings	0.603	0.591	0.502	0.089	0.656	0.665	-0.009
	[0.764]	[0.738]	[0.656]	(0.067)	[0.801]	[0.843]	(0.078)
N	873	193	235		218	227	

Notes: The sample used for the balancing test is restricted to children born between 01.01.2006 and 12.06.2006 and to children born between 01.01.2007 and 12.06.2007. Column (1) pools the answers for all children born in this period. Each answer displays the share that gave the respective answer except for age and the # of siblings. In the case of the birthplace, labor supply, and education of parents, children could also answer "I do not know". Standard deviations are shown in brackets. Column (4) and (7) displays a Wald test on Post-Pre differences and the respective standard errors are in parentheses: *p < 0.1, **p < 0.05, ***p < 0.01

Table A.3: Robustness checks of the reform effects on children's behaviors and expectations

	Baseline	Alt. sample specifications			Alternative estimation strategies			
	(1) Pref. spec.	(2) Donut	(3) Excl. pilot	(4) Full sample	(5) Class FE	(6) RDD DiD	(7) RDD P1	(8) RDD P2
Panel C: contribution to male dominated household chores								
Boys	-0.034	-0.049	-0.035	-0.034	-0.034	-0.033	-0.077	0.005
	(0.070)	(0.077)	(0.052)	(0.070)	(0.070)	(0.071)	(0.067)	(0.100)
N	353	307	823	353	353	353	823	823
Girls	0.145**	0.134*	0.082*	0.145**	0.145**	0.144**	0.144**	0.179**
	(0.068)	(0.074)	(0.047)	(0.068)	(0.068)	(0.068)	(0.068)	(0.086)
N	397	346	876	397	397	397	876	876
p-value	0.068	0.088	0.096	0.068	0.068	0.070	0.020	0.187
Panel D: contribution to female dominated household chores								
Boys	0.134	0.118	0.058	0.134	0.134	0.140*	0.197**	0.370***
	(0.085)	(0.087)	(0.075)	(0.085)	(0.085)	(0.082)	(0.083)	(0.111)
N	353	307	822	353	353	353	822	822
Girls	-0.079	-0.090	-0.117*	-0.079	-0.079	-0.079	-0.063	-0.106
	(0.073)	(0.083)	(0.062)	(0.073)	(0.073)	(0.073)	(0.070)	(0.086)
N	397	346	876	397	397	397	876	876
p-value	0.057	0.083	0.072	0.057	0.057	0.046	0.017	0.001
Panel E: employment and family expectations								
Boys	-0.187**	-0.163*	-0.189**	-0.187**	-0.187**	-0.183**	-0.067	-0.150
	(0.089)	(0.095)	(0.078)	(0.089)	(0.089)	(0.089)	(0.085)	(0.103)
N	357	311	830	357	357	357	830	830
Girls	0.097	0.135	0.078	0.097	0.097	0.097	0.030	0.029
	(0.082)	(0.086)	(0.059)	(0.082)	(0.082)	(0.083)	(0.081)	(0.108)
N	397	346	878	397	397	397	878	878
p-value	0.019	0.021	0.006	0.019	0.019	0.021	0.409	0.230

Notes: Each coefficient displayed in this table comes from a separate regression. Column (1) shows our preferred specification using equation (1) and controlling for gender, individual and family background characteristics, and school fixed effects. Column (2) drops all children born closely around to the cut-off date, i.e., children born between 13.3.2007 - 31.3.2007 and 13.3. - 31.3.2006. Column (3) excludes all data collected in the pilot phase. Column (4) draws upon all children born in 2006 and 2007. Column (5) estimates the baseline equation (1) but replaces the school fixed effects by class fixed effects. Column (6) displays the estimates from a RD-DD design which corresponds to equation (1) but add a first order polynomial of the running variable (the day of birth which corresponds to the relative age in class). Column (7) and (8) correspond to classical RDD specification controlling a first order polynomial or second order polynomial, respectively, of the running variable date of birth and drawing upon all children born in 2006 and 2007. We estimate the RDD specification using the *rdrobust* command in Stata and employing a triangular kernel function for the local-polynomial estimator. The p-value gives the significance of a t test testing the equality of coefficients for boys and girls. Standard errors are clustered at the class level and shown in parentheses. *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$

Appendix B: Questionnaire

START

INFORMATION AND CONSENT
We are conducting a research project to analyze the impact of public policies on the cognitive and non-cognitive development of children and adolescents. The principal investigator on the project is Dr. Lídia Farré from the University of Barcelona.

I CONFIRM that:

- the information about the research project has been read to me,
- I have been able to ask questions about the project,
- I have received enough information about the project.

I UNDERSTAND that my participation in the project is voluntary and that I can withdraw from it at any time without having to justify my decision. I GIVE MY CONSENT to take part in this research project

Yes – No

ATTITUDES

We are now going to ask you some questions. Please answer these questions sincerely. We want to know what you really think. No one will know how you chose to respond. There are no right or wrong answers.

Read the following statements and say whether you: Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree.

- A mother who goes out to work can have just as good a relationship with her children as a mother who does not go out to work.
- It can be bad for a child under the age of 3 if her mother goes out to work.
- When a mother spends the whole day (morning and afternoon) out working, family life can suffer.
- Having a job is fine, but what most women want is to form a family and have children.
- Taking care of the home and family can make a woman just as happy as having a job.
- Both partners, should bring money into the home.
- The man should be the breadwinner while the woman should take care of the home and family.
- When a woman earns more than her husband, there are certainly problems.
- Both the mother and father should take leave from work for a few weeks after the birth of their son or daughter.

Do you think the **father** should work full-time (mornings and afternoons), part-time (mornings or afternoons only) or should not work at all when his child has not yet started school (under the age of 3).

Do you think the **mother** should work full-time (mornings and afternoons), part-time (mornings or afternoons only) or should not work at all when her child has not yet started school (under the age of 3).

- Shouldn't work at all.
- Should work part-time (mornings or afternoons only).
- Should work full-time (mornings and afternoons).
- I don't know
- I prefer not to answer

Imagine a family with a child who is still too young to go to school (under the age of 3). What do you consider the best way to organize their family and work life?

- The mother stays at home and the father goes out to work full-time (mornings and afternoons).
- The mother works part-time (mornings or afternoons only) and the father goes out to work full time (mornings and afternoons).
- Both the mother and father go out to work full-time (mornings and afternoons).
- Both the mother and father work part-time (mornings or afternoons only).
- The father works part-time (mornings or afternoons only) and the mother go out to work full-time (mornings and afternoons).
- The father stays at home and the mother go out to work full-time (mornings and afternoons).
- I don't know.

CONTEST

In this part of the study you have to complete three different tasks to win points. The number of points you win will depend on the number of correct answers you give when completing the tasks. Before beginning each task, we will give you instructions on how you can win points.

Test run

In the three tasks, you will be asked to add up 3 numbers. To get used to doing the task on the computer, you will now be allowed a 30-second test run. During the test run you cannot win any points.

Task 1 - Individual task

You will now have 2 minutes to do the sums. For each sum you get right, you will win 1 point. If you make a mistake, no points are deducted. This task is called the **individual task**.

Task 2 - Quiz

You have been put in a group with three boys or girls from your class (but you do not know who they are). As in task 1, you will have 2 minutes to do the sums. The boy or girl from your group that correctly solves most sums will receive 4 points for each correct answer. The rest of the group will not win any points. This task is called the **quiz**.

Task 3 - Choose the task type you want to do to win points

As in the previous tasks, you will have 2 minutes to do the sums. But now you have to choose which task you want to do: the *individual task* or the *quiz*. If you choose the *individual task*, you will win 1 point for each sum you get right. If you choose the *quiz*, you will only win points if you solve more sums than those solved by the same boys and girls in your group in task 2 above. If you choose the quiz, you will win 4 points for each correct answer.
Which task do you prefer to do to win points?
Individual task – Quiz

Task 3 - Individual task

You have chosen the individual task. As before, you have 2 minutes to do the sums. For each sum you get right, you will win 1 point. If you make a mistake, no points are deducted.

Task 3 – Quiz

You have chosen the quiz. As before, you have 2 minutes to do the sums. Now you will only win points if you solve more sums than those solved by the same boys and girls in your group in task 2 above. In this case, you will win 4 points for each correct answer.

This question is about the **quiz** you took in **task 2**. How well do you think you did in relation to the other members of your group? If you answer correctly, you will earn 4 points.

I finished:

First, Second, Third, Last

We played this same game with boys and girls in the same grade as you but at a different school. Think again about the **quiz** you took in **task 2**.

How many boys and girls do you think there were among the three who got **the most points** at the **other** school? If you answer correctly, you will win 4 points.

How many boys and girls do you think there were among the three who got **the fewest points** at the **other** school? If you answer correctly, you will win 4 points.

3 boys, 2 boys and 1 girl, 1 boy and 2 girls, 3 girls

Now, to win points, you have to choose to take part in one of the following lotteries. It's like tossing a coin in the air and seeing if it lands as heads or tails. If you choose Lottery 1, you are guaranteed to win 5 points. In the other lotteries, the number of points you win depends on how lucky you are. If you choose Lottery 2, you can win either 4 point or 8 points, etc.

Lottery 1 - 5 points or 5 points
Lottery 2 - 4 points or 8 points
Lottery 3 - 3 points or 10 points
Lottery 4 - 2 points or 12 points
Lottery 5 - 1 point or 14 points
Lottery 6 - 0 points or 15 points

NORMS

You will now play a game with a classmate but you won't know who he or she is. In this game, we will ask you both the same question. For example: **Do you think it will rain tomorrow?** If you both give the same answer, you will each win 2 points. If you give different answers, neither of you will win any points. If you have any doubts, please raise your hand.

Test Question 1: If your partner says "Yes, it'll rain tomorrow", what must you answer to win two points?

Yes, it'll rain tomorrow - No, it won't rain tomorrow

Correct answer.
Incorrect answer. To win points, you must give the same answer as your partner.

Test Question 2: If your partner thinks that you will answer: "No, it won't rain tomorrow", what must your answer be to win two points?

Yes, it'll rain tomorrow - No, it won't rain tomorrow
Correct answer.
Incorrect answer. If your partner thinks that you will answer: "No, it won't rain tomorrow", he or she will answer: "No, it won't rain tomorrow". When he or she answers, "No, it won't rain tomorrow", you must answer: "No, it won't rain tomorrow" to win points.

Test Question 3: To win points in this game, do you think it's important that it rains tomorrow?
Yes – No
Correct answer.
Incorrect answer. In this game, tomorrow's weather (whether it rains or not) is not important to win points. What is important is that you and your partner give the same answer.

Let's start the game. We are now going to ask you and your partner if you think it'll rain tomorrow. If you give the same answer, you will each win 2 points. If you give different answers, neither of you will win any points.

Do you think it will rain tomorrow?
Yes, it'll rain tomorrow - No, it won't rain tomorrow

Let's continue playing the game. We are now going to ask you and your partner if you think it is appropriate to copy in an exam. When we say "appropriate", we refer to behavior that most people think is correct or good. In contrast we say that behavior is "inappropriate" when most people think it is incorrect or bad. If you and your partner give the same answer, you will each receive 4 points. Copying in an exam:

Is appropriate, Is fairly appropriate, Is fairly inappropriate, Is inappropriate

We are now going to ask you and your partner four more questions. Remember, only if you give the same answer will you each receive 4 points.

- That a **mother** goes out to work **full-time** (mornings and afternoons) when her child has not yet started school (under the age of 3).
- That a **mother** goes out to work **part-time** (only mornings or afternoons) when her child has not yet started school (under the age of 3).
- That a **father** goes out to work **part-time** (only mornings or afternoons) when his child has not yet started school (under the age of 3).
- That a **father does not go out to work** at all so as to look after his child when the child has not yet started school (under the age of 3).

  Is appropriate, Is fairly appropriate, Is fairly inappropriate, Is inappropriate

How do you think most people in your class responded to the following statement: "The man should be the breadwinner while the woman should take care of the home and family". If you answer correctly, you will win 5 points.

Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree.

OUTCOMES

We are now going to ask you some questions about how you see yourself in the future. Please answer these questions sincerely and, remember, no one will know how you chose to respond.

How do you see yourself in 20 years time?

- I'll have children and not go out to work
- I'll have children and go out to work part-time (only mornings or afternoons)
- I'll have children and go out to work full-time (mornings and afternoons)
- I'll go out to work and I'll have no children
- I'll not go out to work and I'll have no children

What do you want to be when you grow up? Choose just ONE of the jobs on the list:

- Football player
- Police officer
- Primary or Secondary school teacher
- Scientist
- Architect
- Engineer
- Doctor
- Firefighter
- Vet

- Computer scientist
- Hairdresser
- Singer or Musician
- Nurse
- Actor
- Gymnast or Dancer
- Designer
- Journalist
- Lawyer or Judge
- Biologist

If the job you'd like to do is not on the list, write it here:

DEMOGRAPHICS

What year were you born in?
What month were you born in?
January, February, March, April, May, June, July, August, September, October, November, December

What day were you born on?

Between the 1st and the 12th , between the 13th and the 23rd, between the 24th and the 31st

Are you a boy or a girl? Boy, Girl

Where were you born?
Where was your **mother** born?
Where was your **father** born?
In Catalonia, somewhere in the rest of Spain, in another country, I don't know

Morocco, Romania, Ecuador, Another European country, Another African country, Another American country, An Asian country, Other, I don't know

Do you live with your **mother**?
Do you live with your **father**?
Yes; No; Yes, some days; Yes, most days

Does your **mother** have a job?
Does your **father** have a job?
Yes, a full-time job (mornings and afternoons)
Yes, a part-time job (only mornings or afternoons)
No; I don't know

Did your **mother** go to college?
Did your **father** go to college?
Yes, No, I don't know

How many **older brothers** do you have?
How many **older sisters** do you have?
How many **younger brothers** do you have?
How many **younger sisters** do you have?
0; 1; 2; more than 2
Including stepbrothers and stepsisters

MECHANISM

We are now going to ask you some questions about you and your family. You have to tell us who normally does the chores around the house. We also want to know about you and which of the chores you do.

Who normally does these chores around your house?

- Wash the clothes and put them away.
- Do small repair jobs. For example, hang a picture, repair a door knob, paint a wall.
- Go to the supermarket or the market.
- Clean the house.
- Cook.
  Always my mother; My mother more than my father; Always my father; My father more than my mother; Both my father and my mother; Another person; My parents don't live together; I don't know

What about you? When do you do these chores or when do you help out with them?

At least once a week; Occasionally (less than once a week); Almost never; Never

We want you now to think about your parents,

- Who helps you with your homework?
- Who stays at home when you are sick?
- Who spends more time with you on weekends?
- Who's home when you get back from school?
- Who do you talk to when you're worried or have a problem?
- Who's home when you eat at night?
- Who asks you if you've had a good day?

Always my mother; My mother more than my father; Always my father; My father more than my mother; Both my father and my mother; Another person; My parents don't live together; I don't know

Now we would like to know if you think your father is a supporter of feminism.

Yes, No, I don't know, I prefer not to answer

OPTIONAL

We are now going to ask you some more questions about yourself. Please answer these questions sincerely and, remember, no one will know how you chose to respond.

- When someone does me a favor, I am more than willing to return that favor.
- I assume people's intentions are always good.
- I am in the habit of putting off until later work I know it would be better to finish right away.

  This statement does not describe me at all; This statement describes me perfectly
- Do you like to take risks or take risky actions?
- Do you like to make donations to a good cause without expecting anything in return? Not at all, A lot
- I usually put off until tomorrow the jobs I should get done today

This statement does not describe me at all; This statement describes me perfectly

To finish, we would like you to answer the following questions. You should answer either True or False

- I always show respect to the elderly:
- Sometimes I don't feel like doing what the teacher asks us to do:
- I sometimes feel like throwing or breaking things:
- I am never disrespectful to my parents or answer them back:
- When I make a mistake, I'm the first to admit it:
- I sometimes laugh at people:
- I always wash my hands before eating:
- I sometimes feel like lazing around and not going to school:
- I have never been tempted to break the rules or the law:
- Sometimes I don't feel like helping my parents out even though I know they need my help around the house:
- I sometimes say things just to impress my friends:
- I never shout when I'm angry:

- What do cows drink?
- If I have 3 apples and you take away 2, how many apples do you have?
- A bat and a ball cost $1.10 in total. The bat costs $1.00 more than the ball. How much does the ball cost?

PAYMENT

Thank you very much for taking part. Your voucher is on the next page and shows you how much you have won.

The following page shows how many euros you have contributed to the voucher we will give to your school.