Can Public Policies Break the Gender Mold? Evidence from Paternity Leave Reforms in Six Countries

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Abstract

We investigate the impact of paternity leave policies on gender role attitudes in the next generation. We measure gender-stereotypical attitudes using an Implicit Association Test with 3,000 online respondents in six countries. Using an RD design, we observe a significant reduction (-0.20 SD) in gender-stereotypical attitudes among men born post-paternity leave implementation. This shift influences career choices, as men whose fathers were affected by the reform are more inclined to pursue counter-stereotypical jobs, particularly in high-skilled occupations like healthcare and education. Our findings highlight how paternity leave fosters egalitarian gender norms and affects the occupational choices of the next generation.

A growing body of evidence demonstrates that the persistence of gender inequalities in labor market outcomes can be attributed to the strong specialization of men in market work and women in home production following the arrival of children (see e.g. Lundborg, Plug, & Rasmussen, 2017). This suggests that the normative roles of males-as-breadwinners and females-as-homemakers still very much drive career choices.

In response, public policies have been designed to favor the convergence of men's and women's roles, with the aim of lifting barriers to gender equality in economic outcomes. In recent decades, many policy makers have focused on paternity leave as a way to rebalance the traditional roles of parents in the household.[1] Recent evaluations show that paternity leave reforms have successfully increased the presence of fathers in the home after childbirth (Cools, Fiva, & Kirkebøen, 2015; Persson & Rossin-Slater, 2023 forthcoming), as well as their long-term involvement in childcare and household chores (Farré & González, 2019; Kotsadam & Finseraas, 2011; Patnaik, 2019; Tamm, 2019). Existing evidence also suggests small effects on fathers' (and mothers') labor market outcomes (Andresen & Nix, 2022; Ekberg, Eriksson, & Friebel, 2013; Kleven, Landais, Posch, Steinhauer, & Zweimüller, forthcoming).

One important question that remains is the extent to which the greater involvement of fathers in child-rearing can promote more egalitarian attitudes in the next generation. And so, in this paper, we evaluate whether public policies, such as paternity leave, can promote counter-stereotypical attitudes that are transmitted from parents to children.

We use data on young adults exposed (or not) to a father who was eligible for paternity leave following reforms in six European countries with different cultural, social, and economic

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[1] "Paternity leave" is defined as a policy that allows men to take time off from their job after the birth of a child, while subsidizing their earnings and allowing them to return to said job. We focus on parental leave policies that reserve time off for the father, thus not including leave entitlements that can be shared by both parents.

backgrounds: Belgium, Denmark, France, Iceland, Norway, and Sweden. We measure attitudes about gender roles using data from "Project Implicit,"[2] which provides publicly available Implicit Association Tests (IAT). In particular, we use data from the "Gender-Career" association test, which aims at measuring subconscious associations between women and family and between men and career. The main advantage of using IATs is avoiding the "social desirability bias" that arises when respondents answer survey questions in a manner that would be perceived more favorably by others (Carlana, Ferrara, & Pinotti, 2022). For this reason, previous research reveals that IATs are better at capturing a person's attitudes than survey questionnaires (Egloff & Schmukle, 2002).

Using a Regression Discontinuity Design, we compare young adults born right before and right after the reforms that first introduced paternity leave in six countries during the 1990's and early 2000's. We find that men exposed to eligible fathers display less gender-stereotypical attitudes, that is, they are less likely to associate women with home-making and men with career. The magnitude of the effect is meaningful since it corresponds to a reduction of 0.2 standard deviation across countries, where Sweden (-0.3 std.) and Belgium (-0.5 std.) stand out. Only men appear to be affected by the counter-stereotypical example that a father on paternity leave provides, while we do not observe any change in women's attitudes in any of the countries considered.

Building on this result, we examine how the change in gender role attitudes could translate into counter-stereotypical behaviors in the labor market. Using data from the European Union survey on Statistics on Income and Living Conditions (SILC), we find that treated male

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[2] Project implicit is a multi-university initiative founded by Dr. Tony Greenwald (University of Washington), Dr. Mahzarin Banaji (Harvard University) and Dr. Brian Nosek (University of Virginia). It is a non-profit organization providing a "virtual laboratory" for collecting data on implicit social cognition on the internet. Currently, 18 implicit association tests are hosted on the Project Implicit's website and have received IRB approval from the University of Virginia. For more information: https://www.projectimplicit.net/resources/about-the-iat/

respondents (born right after the paternity leave reforms) living in Denmark, Norway, and Sweden, are more likely to work in a female-dominated occupation (by 4.5 percentage points), with the effect again most pronounced in Sweden, as well as in high-skilled occupations (e.g. health and teaching professionals). We argue that, by changing gender norms, paternity leave reforms can contribute to reducing gender segregation in the labor market. This seems particularly important since "occupational ghettos" have been found to be very persistent over time (Charles & Grusky, 2005), even in countries where women's participation in the labor market has reached levels comparable to that of men.

We believe that this study fills an important gap since preference formation and social norms have been found to be an important contributor to the persistence of gender inequality across generations (Nollenberger, Rodríguez-Planas, & Sevilla, 2016). In addition, while a growing literature evaluates the effects of paternity leave reforms on parents, little is known about the extent to which the effects are transmitted to the next generation. To the best of our knowledge, only two studies, still unpublished, consider potential spillover effects of paternity leave from parents to children. Farré, Felfe, González, and Schneider (2021) find that at age 12, children whose fathers were eligible for paternity leave in Spain exhibit more egalitarian attitudes towards gender roles and engage more in counter-stereotypical behaviors at home. Mikkelsen and Peter (2022) reveal that the Swedish "daddy month" reform of 1995, which provided 30 days of earmarked parental leave for fathers, increased the probability that girls choose math-intensive programs in secondary education.

We contribute to this burgeoning literature on the intergenerational effects of paternity leave along three dimensions. First, we provide the first cross-country evidence of an intergenerational effect of paternity leave on gender norms. We believe that our diverse pool of countries, from Scandinavia to Western Europe, provides crucial external validity. Second, we are the first to consider effects on adults, while the previous studies surveyed children or

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adolescents. We think this is a significant contribution since young adolescents still live with their parents, while most young adults live on their own and socialize with co-workers or classmates at university. Our study reveals that changes in gender norms induced by paternity leave reforms are persistent all the way through adulthood, even after leaving the family nest. Third, while accumulating evidence reveals that paternity leave reforms have had no strong effect on the labor supply decisions of the generation directly affected by the reforms, our study reveals spillover effects on the next generation. Indeed, we demonstrate that the young men exposed to a father on paternity leave adopt counter-stereotypical behaviors in the labor market.

I.   Paternity Leave Reforms in Six Countries

We evaluate the intergenerational spillover effects of paternity leave using reforms in six countries that were early adopters: Belgium (Jul. 2002), Denmark (Jan. 1995), France (Jan. 2002), Iceland (Jan. 2001), Norway (Apr. 1993) and Sweden (Jan. 1995). The Scandinavian countries introduced so-called "daddy months," earmarking one month of parental leave for fathers only. As a result, take-up increased to 60 percent in Denmark (Haataja, 2009), 80 percent in Iceland (Olafsson & Steingrimsdottir, 2020), 60 percent in Norway (Cools et al., 2015; Rege & Solli, 2013), and 80 percent in Sweden (Ekberg et al., 2013). Meanwhile, Belgium and France introduced a two-week long paternity leave exclusively for fathers, with a similarly high take-up rate from the start, up to 50 percent of fathers in Belgium (Fontenay & Tojerow, 2020), and 70 percent in France (Gosselin & Lepine, 2018).

Because the paternity leave introduction in our six countries dates back to the 1990's and early 2000's, the children born around the reform date have since entered adulthood. Indeed, our data shows that when taking the Implicit Association Test, our sample of respondents was on average 23 years old (Appendix Table A1). Our sample is therefore composed of young adults

who, depending on their birthdate, were exposed or not to counter-stereotypical gender roles in their household during childhood and adolescence.

II.   Measuring Gender Norms using the Implicit Association Test

Previous research has mostly relied on survey questions to measure gender role attitudes, asking for instance, whether women with young children should work or stay at home (Doepke & Kindermann, 2019). While survey questions might be able to measure long term changes across cohorts, they could fail to capture differences between individuals born in close proximity because of "social desirability biases," which push respondents to answer questions in a manner that make them look good to their peers, concealing their true opinions (Carlana et al., 2022).

The Implicit Association Test (IAT) is designed to neutralize social desirability bias by relying on subconscious mental associations. The IAT dates back to the seminal work of Greenwald, McGhee, and Schwartz (1998) and relies on test-takers' speed of response to capture the strength of their subconscious mental associations. Egloff and Schmukle (2002) show that IAT scores are, in fact, difficult to manipulate, and a growing number of studies reveal how the score strongly correlates with real-world psychological responses and economic decision-making (Bertrand, Chugh, & Mullainathan, 2005; Bursztyn, Chaney, Hassan, & Rao, 2023 forthcoming; Carlana, 2019; Glover, Pallais, & Pariente, 2017).

In our case, the participants who take part in the "Gender-Career" IAT on the Project Implicit website are asked to quickly sort words into categories: associating (i) "male" and "female" names with (ii) words related to "career" or "family." Because words and pairings are changed several times, the speed at which participants perform the task conveys information about implicit association. Our main outcome is a standardized index with higher values representing a stronger association between men and career and between women and family. Appendix

Figure A1 reveals that younger cohorts who take the "Gender-Career" IAT display less stereotypical associations across all the countries considered.

The dataset that we use is publicly available from the Project Implicit website. We keep all respondents who live in the six countries that adopted paternity leave in the 1990's or early 2000's and who answered the online survey between 2016 and 2022. In addition to the test scores, IAT respondents are asked to provide information about gender, race, and nationality. This provides us with important information to verify that respondents born right before and right after the reforms are similar in observables.[3]

Most importantly, the rich dataset allows us to evaluate the effect of paternity leave across generations for men and women separately. We hypothesize that same-gender role models may have a stronger effect, so that young men might be more influenced by their fathers' counter-stereotypical behaviors. Our hypothesis relies on previous research showing strong influence of fathers on their sons' attitudes and behaviors, including smoking (Loureiro, Sanz-de-Galdeano, & Vuri, 2010), health and nutrition (Thomas, 1994), occupational choices (Lo Bello & Morchio, 2022), educational choices (Azam & Bhatt, 2015), and the decision to have children at a young age (Sipsma, Biello, Cole-Lewis, & Kershaw, 2010).

III. Empirical strategy

To measure the causal effects of paternity leave reforms across generations, we exploit the natural experiments provided by the policy changes in six countries. Using a Regression Discontinuity Design (RDD), we compare young adults born before and after the reform cutoffs:

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[3] The survey is provided in all of the national languages.

(1) $$y_i = \alpha + 1[t_i \geq c]\beta + 1[t_i \geq c] \cdot f_r(t - c, \gamma_r) + 1[t_i < c] \cdot f_l(c - t, \gamma_l) + \epsilon_i,$$

where y is the IAT score of respondent i, born in month t around the reform cutoff c. f_r and f_l are unknown functions with parameter vectors γ_r and γ_l, capturing trends in the outcome of interest. We can interpret β as the estimated discontinuity for a respondent born just before versus just after the paternity leave reform. We do not observe paternity leave take-up in our data, so that our estimates should be interpreted as intent-to-treat (ITT) effects. We do know from previous studies in the six countries that the reforms led to high take-up, so that our ITT estimates should be driven by a meaningful share of the population.

Our estimates are produced using local polynomial regressions with the Stata command "rdrobust" (Calonico, Cattaneo, & Titiunik, 2014a) and a uniform kernel (i.e. no weighting). We report heteroskedasticity-robust standard errors clustered at the month of birth (our running variable), following seminal work by Lee and Card (2008). We also report standard errors and "bias-aware" confidence intervals following the procedure suggested by Kolesár and Rothe (2018) for the RDD when the running variable only takes a moderate number of distinct values.[4]

Assuming no sorting in births around the reform date, we can interpret the estimated discontinuity at the cutoff as the causal effect of the paternity leave on the next generation's gender roles attitudes. This assumption is supported by the many papers that have previously studied the effects of the paternity leave reforms on parents in the six countries considered (see e.g. Avdic & Karimi, 2018; Cools et al., 2015; Ekberg et al., 2013; Fontenay & Tojerow, 2020; Olafsson & Steingrimsdottir, 2020; Rege & Solli, 2013).

We formally check for the absence of bunching in the number of observations around the reform cutoff in our dataset using a McCrary density test (2008). Our results in Table 1 suggest that

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[4] The Stata package "rdhonest" only allows for RDD estimation with a linear polynomial, so we provide results for this specific case along other robustness checks in Table 3.

parents did not manipulate the date of childbirth (e.g., through c-section or induced birth) to become eligible for paternity leave, and/or that exposure to paternity leave is unrelated to the likelihood of taking the gender-career IAT test. Table 1 also reveals that predetermined characteristics of the IAT respondents are well balanced across the reform cutoff, whether it is the proportion of women, nonwhite individuals, Christians, or individuals with migration background. As suggested by previous evidence from the literature, the parents of respondents born before/after the reform were also equally likely to be working (see e.g. Andresen & Nix, 2022; Ekberg et al., 2013).

Regarding the composition of our sample, respondents took the IAT test online voluntarily on the Project Implicit website. The last panel of Table 1 reveals that most respondents took the IAT because of university or work assignment (61 percent). Others found out about the IAT on the news or from colleagues and decided to take the test as a result (32 percent). Most importantly, the reasons to take the test are perfectly balanced around the reform cutoff, so that we can rule out that IAT participants born after the reform were keener to participate in a survey on gender norms.

IV. Effects of Paternity Leave on the Next Generation

A. Gender Role Attitudes

We now report the results on the effect of paternity leave on the gender role attitudes of the next generation. We start by pooling together IATs for all the respondents in the six countries. Figure 1 shows the discontinuity in test scores at the reform cutoff (vertical bar) for men in Panel A and women in Panel B. We use a bandwidth that spans a couple of years around the reform to be able to check visually for the absence of season of birth effects that could influence the result. We clearly observe that men born right after the reform, and potentially exposed to a father on paternity leave, display less gender-stereotypical attitudes. In other words, male

respondents affected by the paternity leave reform are less likely to associate women with home-making and men with career. Meanwhile, we do not detect any change in attitudes for female respondents.

In Table 2, we estimate the discontinuity at the reform cutoff using a polynomial of order 0 and a sample that includes 24 months before and after the reform threshold. We choose this one as our main specification because our graphical exploration revealed no sign of a trend in the outcome variable in the small window around the reform. We find that young men born right after the paternity leave reform are less likely to associate men with career and women with family. The magnitude of the effect is a reduction of 0.20 standard deviations in stereotypical association. Confirming our visual inspection, we find no effect on young women. Table 2 also provides effects for each country separately. Two countries stand out with particularly large effects on men by as much as 0.48 standard deviations in Belgium and 0.33 standard deviations in Sweden, both effects being highly statistically significant. In all other countries but one (Norway) the effect on men is also negative and similar in magnitude to the overall effect, but not statistically significant at conventional levels, most likely because of small sample sizes. We also find consistently no effect on women in each of the six countries considered.

In Appendix Table A2, we provide additional evidence that our results are not driven by our model specification. Indeed, we show that the effect is always negative for male respondents whether we use a linear or quadratic model, as well as when we restrict the bandwidth to 18 or 12 months around the reform cutoff. Most importantly, we show that our results are robust to using the data-driven procedure of Calonico, Cattaneo, and Titiunik (2014b) to choose the bandwidth ("BW = CCT" in Appendix Table A2). The robustness of our results is also confirmed when computing "honest confidence intervals," as suggested by Kolesár and Rothe (2018) when dealing with a discrete running variable ("Honest CI" in Appendix Table A2).

As mentioned, most respondents participate in the IAT because of a university or work assignment. As such, we can expect that the type of workers who have been asked by their employer to take the test might differ from the general population. In fact, Appendix Table A1 reveals that 70 percent of the participants attended tertiary education, while only 6 percent have low educational attainment (primary or lower secondary school). Our sample of respondents therefore sensibly differs from the typical educational attainment of the population in the six countries considered. We reweight our sample so as to better reflect the educational attainment of the general population, the goal being to make our sample closer to being representative of the overall population.[5] Results reported in Panel B of Table 2 suggest that the effect on male IAT respondents is, if anything, larger when reweighing the sample. The effects remain essentially unchanged in Belgium and Sweden, and are now larger and statistically significant in France (at the 10 percent level).

In a final exercise, we use two survey questions asked to participants after taking the IAT to evaluate whether the change in gender role attitudes can also be captured with explicit measures of association. The exact question is "How strongly do you associate career/family with men/women?"[6] We find no evidence of a discontinuity for either male or female respondents when using the explicit survey questions (see Panel A of Appendix Table A3). In other words, survey data can fail to detect the changes captured by the IAT, plausibly because of social desirability bias. We confirm the limitations of survey questions in capturing changes induced by paternity leave reforms by using the European Values Study, a nationally representative survey conducted in three of the six countries considered in our study: Denmark, Norway, and

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[5] According to OECD data for the six countries considered in our study, 17 percent of the general population has primary or lower secondary education, 39 percent are high school graduates, and 44 percent reached tertiary education.

[6] The answer ranges from 1 "Strongly female" 2 "Moderately female" 3 "Slightly female" 4 "Neither male nor female" 5 "Slightly male" 6 "Moderately male" 7 "Strongly male."

Sweden. Using the same empirical strategy, but with year of birth as the running variable (because month is not provided due of data anonymization), we find again that survey questions may fail to detect any effect of paternity leave reforms (Panel B of Appendix Table A3).[7] We therefore encourage researchers interested in measuring policy impacts on gender norms to favor the IAT, particularly so if comparing individuals born only a few months apart, which is the case of most studies using an RDD around a reform cutoff.

B. Occupational Choice

In the previous subsection, we demonstrate that paternity leave reforms had a long-lasting impact on the next generation's gender role attitudes, most crucially among men. We now turn to examining whether this change in attitudes affected real-life decisions. In particular, we investigate whether the young men exposed to a father on paternity leave adopted less gender-stereotypical behaviors when entering the labor market. We argue after Charles and Grusky (2005) that studying policies that could reduce "occupational ghettos" is important since gender occupational segregation has been found to be very persistent over time, even in countries where other types of gender inequality have lessened (e.g. labor force participation or wage gap). Most crucially, while women have increasingly entered male-dominated occupations over the past decades (Busch, 2020; Mandel, 2012), the presence of men in typically female-dominated occupations is still very scarce (Torre, 2014). Conservative attitudes and values seem to be a crucial barrier (Davis & Greenstein, 2009), and therefore, the change in gender norms brought about by paternity leave reforms may be a new driving force pushing men into counter-stereotypical roles. In fact, previous research in sociology suggests that young men with more

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[7] We build a standardized index summing answers to five questions: "When a mother works for pay, the children suffer," "A job is alright but what most women really want is a home and children," "All in all, family life suffers when the woman has a full-time job," "A man's job is to earn money; a woman's job is to look after the home and family," "When jobs are scarce, men have more right to a job than women."

egalitarian attitudes are more likely to aspire toward more female-dominated occupations (Baird, 2012; Correll, 2001).

We use data from the survey on Statistics on Income and Living Conditions (SILC), which is probably the best effort within the European Union to collect data related to education, labor market and income. Most importantly for our study, the questionnaire is harmonized across countries and highly similar over time. We aggregate cross-sectional survey waves from 2006 to 2020 and keep those respondents born within 5 years of the paternity leave reform cutoff (e.g. for Denmark, where the reform took place in Jan. 1995, we keep respondents born between 1990 and 1999). Since we are primarily interested in occupational segregation, we further restrict the sample to adult respondents (i.e. aged at least 18 years old). Because of this last restriction, our sample only includes three of the six countries, those that adopted paternity leave in the 1990s: Denmark, Norway and Sweden.[8]

Appendix Table A4 provides descriptive statistics on the sample of 45,950 SILC respondents born within a five-year bandwidth around the reform cutoff, aged over 18 at the time of the survey, and residing in Denmark, Norway or Sweden. The average respondent is 21.5 years old, and very few are married or have children. One out of five respondents has completed post-secondary education, while four out of five are working.[9] The SILC questionnaire includes a question on occupation following the ISCO-08 classification, with a total of 43 different occupations. We compute the share of women in each occupation. Appendix Table A5 reveals that women are disproportionately represented among personal care workers (87%), keyboard clerks (86%), cleaners/helpers (81%) and health professionals (80%). Our main outcome

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[8] The last survey wave of SILC that contains the quarter of birth is 2020 for Belgium and France, and 2018 for Iceland. Because the paternity leave reforms took place in the early 2000s in those countries, respondents are not yet 18 when taking the survey.
[9] The probability to work takes the value 1 if the respondent reports wage earnings higher than 0.

variable is a dummy that takes on the value 1 if a SILC respondent is working in one of the 17 occupations in which the majority of workers are women, and 0 otherwise.

Our empirical strategy follows again Equation (1), except that the running variable is now the quarter of birth (due to the SILC anonymization strategy). In a similar exercise than before, Figure 2 shows the probability to work in a female-dominated occupation in three-month bins, for cohorts born during the five years before and after the reform cutoff. Panel A of Figure 2 reveals that the share of men working in female-dominated occupation evolves around 45 percent in the 20 quarters before the paternity leave reforms. Then, we observe a sharp discontinuity at the reform cutoff, with an estimated increase of 4.5 percentage points in the fraction of men working in a female-dominated occupation (Panel A of Table 3). The effect is particularly large for Sweden (Panel B of Table 3), precisely the country in which we measured the largest change in gender role attitudes after the paternity leave reform in 1995. In accordance with our previous results on gender norms, we also find both in Figure 2 (Panel B) and the second column in Table 3 (Panel A) that there is no effect on women. We check (in Appendix Table A6) that these results are not driven by labor force participation or human capital decisions, and we find that there is no change at the reform cutoff in the probability to work or having completed post-secondary studies.

In a final exercise, we further distinguish between low-skilled and high-skilled occupations by mapping the ISCO-08 major groups to skill levels using the correspondence table of the International Labour Office (2012). We split our sample between SILC respondents working in low-skilled occupations (levels 1 and 2) and high-skilled occupations (levels 3 and 4). The second row of Panel A in Table 3 reveals that treated men are more likely to work in a female-dominated occupation classified as highly skilled (e.g. health or teaching professionals). We find no effect on low-skilled occupations.

V. Conclusions

We study the effect of paternity leave policies on attitudes about gender roles in the next generation. We follow a Regression Discontinuity Design where the running variable is the month of birth, and study the results in an Implicit Association Test about gender, for young adults born shortly before and after the introduction of paternity leave in six different European countries. We find that men exposed to fathers who were eligible for paternity leave display significantly less gender-stereotypical attitudes as adults. This effect is similar in five out of the six countries in our sample (about 0.2 of a standard deviation), while we find no effect for women. The reforms induced a high fraction of eligible fathers to take between two weeks and one month of paternity leave. Previous studies have documented persistent effects of paternity leave on fathers' involvement in childcare and household chores. We thus conjecture that the main mechanism behind our results is a role-model effect, such that boys who grow up with a father who is more involved in the home and the family throughout their childhood develop less gender-stereotypical attitudes.

Building on the observed change in gender role attitudes, we use survey data to examine how this translates into counter-stereotypical behaviors in the labor market. We find that male respondents born just after the paternity leave reforms in Denmark, Norway, and Sweden are 4.5 percentage points more likely to work in a female-dominated occupation, particularly in Sweden (and in high-skilled jobs), underscoring the potential of paternity leave reforms to mitigate gender segregation in the labor market.

Our results highlight the potentially far-reaching effects of policies that affect gender roles in households with children, if attitudes are shaped by parental behaviors during childhood. It remains to be seen the extent to which the changes in gender role attitudes, as well as the

counter-stereotypical behaviors that we observe in the labor market, will translate into smaller child penalties (and thus gender gaps) in earnings in the next generation.

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Panel A: Sample of Male Respondents
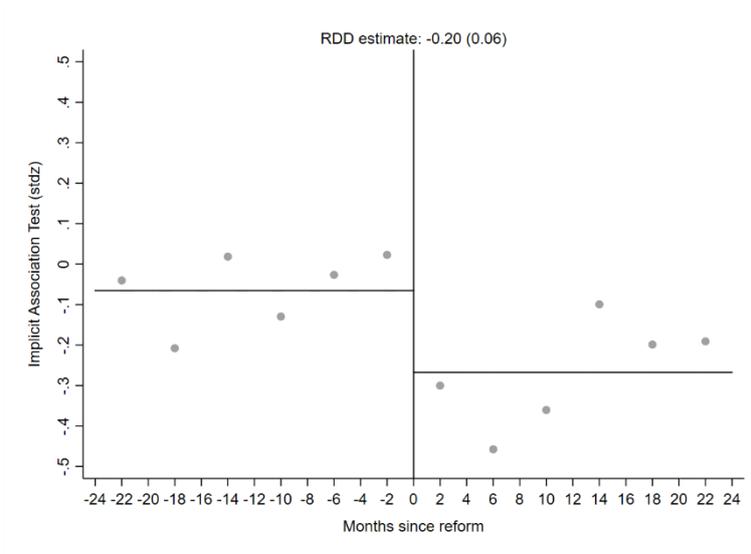
Panel B: Sample of Female Respondents
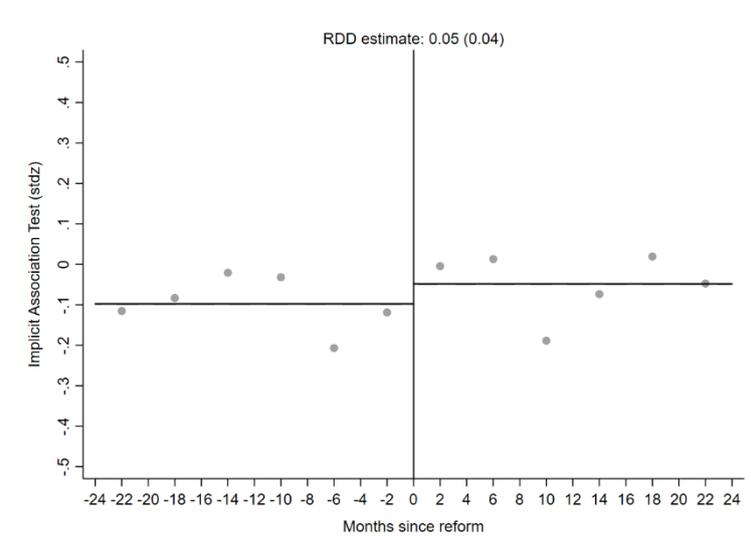
Figure 1: Change in Implicit Association Test Score at the Reform Cutoff.

Notes: Average IAT score in four-month bins. The vertical bar corresponds to the reform cutoff, normalized to 0 in each of the six countries. The horizontal bars on each side of the cutoff are from local polynomial regression of order 0. The RDD estimate reported on the top of the graph corresponds to coefficient β in equation (1). Sample of respondents to the "Gender-Career" IAT on the Project Implicit website who live in Belgium, Denmark, France, Iceland, Norway and Sweden.

Panel A: Sample of Male Respondents
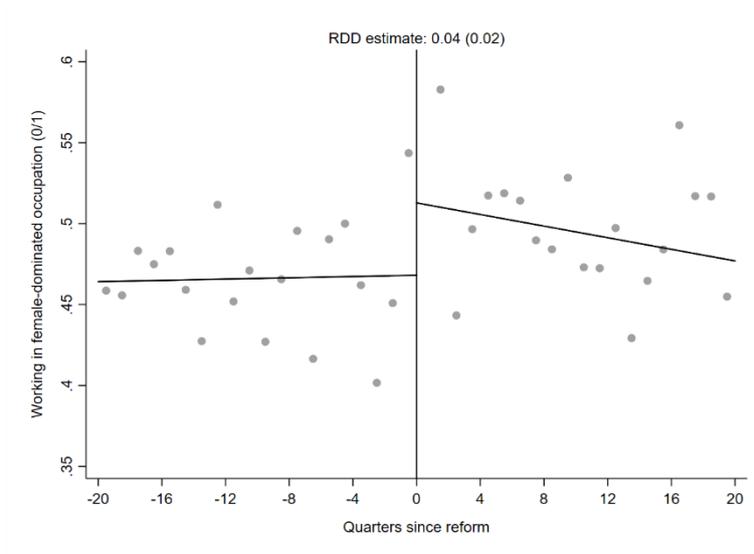
Panel B: Sample of Female Respondents
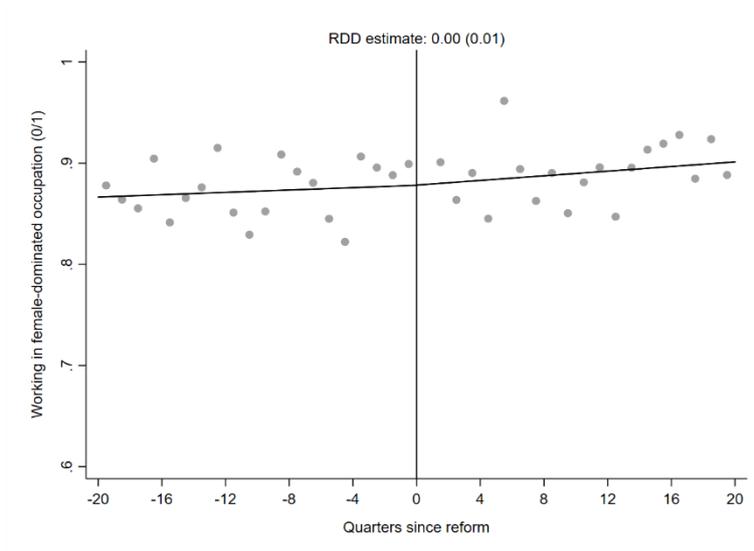
Figure 2: Change in the Probability to Work in a Female-Dominated Occupation at the Reform Cutoff.

Notes: Share of SILC respondents aged over 18, who work in a female-dominated occupation (ISCO-08 classification) in three-month bins. The vertical bar corresponds to the reform cutoff, normalized to 0 in each of the three countries (Denmark, Norway and Sweden). The trends on each side of the cutoff are from local polynomial regression of order 1. The RDD estimate reported on the top of the graph corresponds to coefficient β in equation (1).

Table 1: Balance in Covariates

	Coef. (SE)	Mean	Nb. observations
McCrary density test			
Discontinuity at reform cutoff (log diff.)	-0.017 (0.060)		
Pre-determined characteristics			
Female (0/1)	0.018 (0.017)	0.603	3100
Nonwhite (0/1)	0.001 (0.014)	0.131	2961
Christian (0/1)	0.016 (0.017)	0.339	3075
Migration background (0/1)	-0.017 (0.014)	0.248	3098
Family structure during youth			
Primary caregiver = Mother (0/1)	-0.012 (0.018)	0.764	3104
Primary caregiver = Mother + Working (0/1)	-0.002 (0.018)	0.568	3104
Secondary caregiver = Father (0/1)	-0.011 (0.017)	0.665	3104
Secondary caregiver = Father + Working (0/1)	-0.013 (0.018)	0.650	3104
Reasons to take test			
Assignment from school/work (0/1)	0.020 (0.025)	0.614	1523
Personal - news, colleagues, internet (0/1)	-0.036 (0.022)	0.320	1523
Other (0/1)	0.016 (0.011)	0.066	1523

Notes: The first panel titled "McCrary density test" checks for the absence of bunching in the number of births after the reform cutoff using a McCrary density test (2008). The rest of the table reports in the first column RDD estimates from local polynomial regression of order 0 and corresponding to coefficient β in equation (1). Standard errors (reported in parentheses) are clustered at the birth of month level (i.e. running variable). The second and third column report the mean and number of observations, respectively. Sample of respondents to the "Gender-Career" IAT on the Project Implicit website who live in Belgium, Denmark, France, Iceland, Norway and Sweden.

<p style="text-align:center">Table 2: Effect of Paternity Leave Reforms on Gender Norms</p>

	Standardized Implicit Association Test					
	Panel A: Unweighted sample			Panel B: Weighted sample		
	Both	Men	Women	Both	Men	Women
	(1)	(2)	(3)	(4)	(5)	(6)
All countries						
RDD coef.	-0.037	-0.202 ***	0.049	-0.050	-0.274 ***	0.070
(SE)	(0.033)	(0.066)	(0.045)	(0.040)	(0.076)	(0.049)
Nb. observations	3104	1080	2020	3042	1056	1982
Belgium						
RDD coef.	-0.058	-0.480 ***	0.148	-0.017	-0.405 **	0.160
(SE)	(0.102)	(0.185)	(0.116)	(0.110)	(0.190)	(0.125)
Nb. observations	396	129	267	386	125	261
Denmark						
RDD coef.	-0.035	-0.175	0.056	-0.011	-0.132	0.075
(SE)	(0.059)	(0.109)	(0.081)	(0.076)	(0.125)	(0.103)
Nb. observations	737	285	452	728	282	446
France						
RDD coef.	-0.088	-0.150	-0.051	-0.158 **	-0.279 *	-0.079
(SE)	(0.064)	(0.135)	(0.069)	(0.077)	(0.148)	(0.090)
Nb. observations	920	296	620	904	291	609
Iceland						
RDD coef.	0.089	-0.224	0.207	0.111	-0.360	0.264
(SE)	(0.201)	(0.325)	(0.232)	(0.213)	(0.354)	(0.259)
Nb. observations	78	25	53	73	21	52
Norway						
RDD coef.	0.032	0.137	-0.042	-0.038	0.057	-0.109
(SE)	(0.109)	(0.208)	(0.129)	(0.126)	(0.234)	(0.140)
Nb. observations	306	108	198	299	106	193
Sweden						
RDD coef.	-0.036	-0.333 ***	0.129	-0.011	-0.406 **	0.196
(SE)	(0.083)	(0.122)	(0.115)	(0.094)	(0.152)	(0.118)
Nb. observations	667	237	430	652	231	421

Notes: The table reports RDD estimates from local polynomial regression of order 0 and corresponding to coefficient β in equation (1). Standard errors (reported in parentheses) are clustered at the birth of month level (i.e. running variable). Bandwidth of 24 months around reform cutoff. The left panel reports estimates for an unweighted sample, while the right panel is for a reweighted sample reflecting educational attainment of the general population. Sample of respondents to the "Gender-Career" IAT on the Project Implicit website who live in Belgium, Denmark, France, Iceland, Norway and Sweden.

Table 3: Effect of Paternity Leave Reforms on Occupational Choice

	Female-dominated occupation (0/1)	
	Men	**Women**
	RDD coef. (SE) Obs.	RDD coef. (SE) Obs.
Panel A - All countries		
All occupations	0.045 **	0.000
	(0.018)	(0.013)
	13573	11643
High-skilled occupations	0.106 ***	0.044
	(0.039)	(0.031)
	3082	3290
Low-skilled occupations	0.026	-0.014
	(0.020)	(0.014)
	10481	8353
Panel B - Country breakdown		
Denmark	0.011	-0.038
	(0.041)	(0.032)
	2990	2395
Norway	0.035	0.005
	(0.025)	(0.018)
	6425	5560
Sweden	0.087 **	0.018
	(0.035)	(0.024)
	4158	3688

Notes: The table reports RDD estimates from local polynomial regression of order 1 and corresponding to coefficient β in equation (1). Robust standard errors are reported in parentheses. Bandwidth of 20 quarters around the reform cutoff. The running variable is the quarter of birth. Sample of respondents to the SILC survey, aged 18 or above from Denmark, Norway and Sweden.
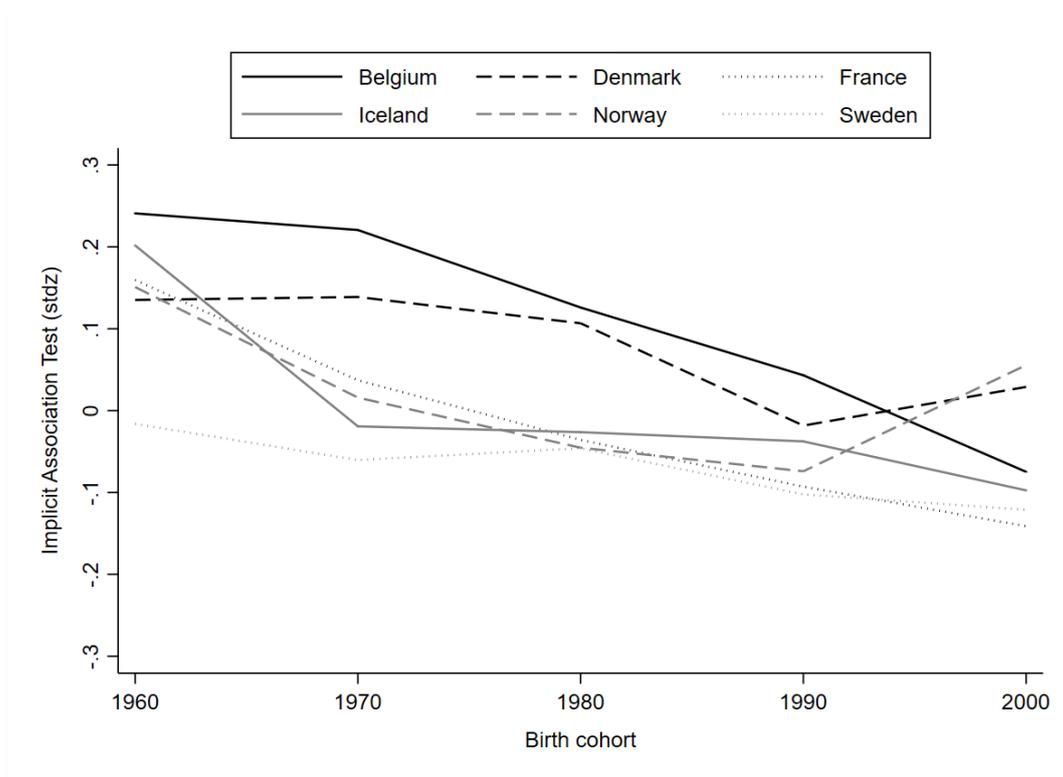
Figure A1: Implicit Association Test Score across Birth Cohorts in Six Countries

Notes: Lower score on the standardized IAT indicates a lower stereotypical association between women and family and between men and career. Sample of respondents to the "Gender-Career" IAT on the Project Implicit website who live in Belgium, Denmark, France, Iceland, Norway and Sweden.

Table A1: Descriptive Statistics on the Sample of IAT Respondents

	IAT sample	OECD data	Belgium	Denmark	France	Iceland	Norway	Sweden
	6 countries							
Age	22.89		19.07	25.72	19.88	19.62	26.18	25.06
	(3.50)		(1.38)	(2.08)	(1.56)	(1.64)	(2.09)	(2.11)
Primary / lower secondary edu. (0/1)	0.06	0.17	0.22	0.01	0.08	0.30	0.01	0.01
	(0.24)		(0.42)	(0.07)	(0.27)	(0.46)	(0.08)	(0.11)
High school graduate (0/1)	0.24	0.39	0.61	0.10	0.29	0.33	0.07	0.18
	(0.43)		(0.49)	(0.31)	(0.45)	(0.47)	(0.25)	(0.38)
Tertiary education (0/1)	0.70	0.44	0.17	0.89	0.63	0.37	0.93	0.81
	(0.46)		(0.38)	(0.31)	(0.48)	(0.49)	(0.26)	(0.39)
Children (0/1)	0.02		0.01	0.04	0.01	0.01	0.04	0.02
	(0.15)		(0.11)	(0.19)	(0.12)	(0.11)	(0.20)	(0.15)

Notes: The table reports the mean and standard deviation (in parentheses) for different outcomes. IAT Sample correspond to the sample of respondents to the "Gender-Career" IAT on the Project Implicit website who live in Belgium, Denmark, France, Iceland, Norway and Sweden. OECD data are population averages from the OECD.

Table A2: Robustness Checks

	Standardized Implicit Association Test		
	Both	Men	Women
	(1)	(2)	(3)
Poly. = 0			
RDD coef.	-0.037	-0.202 ***	0.049
(SE)	(0.033)	(0.066)	(0.045)
Nb. observations	3104	1080	2020
Poly. = 1			
RDD coef.	-0.050	-0.392 ***	0.116
(SE)	(0.064)	(0.126)	(0.100)
Nb. observations	3104	1080	2020
Poly. = 2			
RDD coef.	0.068	-0.539 ***	0.354 ***
(SE)	(0.090)	(0.192)	(0.124)
Nb. observations	3104	1080	2020
BW = CCT			
RDD coef.	-0.046	-0.303 ***	0.049
(SE)	(0.035)	(0.089)	(0.059)
Nb. observations	2865	549	1451
BW = 12			
RDD coef.	-0.060	-0.303 ***	0.062
(SE)	(0.046)	(0.092)	(0.075)
Nb. observations	1574	549	1024
BW = 18			
RDD coef.	-0.039	-0.228 ***	0.056
(SE)	(0.041)	(0.082)	(0.057)
Nb. observations	2340	806	1533
BW = Honest; Poly. = 1			
RDD coef.	-0.001	-0.432 **	0.051
(SE)	(0.095)	(0.175)	(0.067)
Honest CI	[-0.214 ; 0.212]	[-0.821 ; -0.043]	[-0.096 ; 0.198]
Nb. observations	2091	675	3498

Notes: The table reports RDD estimates based on equation (1) and from local polynomial regression with different polynomial orders. Standard errors (reported in parentheses) are clustered at the birth of month level (i.e. running variable). The lower panels also report estimates with different bandwidths around the reform cutoff, including the data-driven bandwidth suggested by the procedure of Calonico et al. (2014b) and the "honest confidence intervals" from Kolesár and Rothe (2018). Sample of respondents to the "Gender-Career" IAT on the Project Implicit website who live in Belgium, Denmark, France, Iceland, Norway and Sweden.

Table A3: Effect of Paternity Leave Reforms on Gender Norms measured with Survey Questions

	Stereotypical association index (standardized)		
	All sample	Men	Women
Panel A – IAT survey questions (All countries)			
RDD coef.	-0.007	-0.023	0.001
(SE)	(0.035)	(0.048)	(0.044)
Nb. observations	3011	1045	1963
Panel B – European Values Study (DK,NO,SE)			
RDD coef.	0.038	0.029	0.055
(SE)	(0.155)	(0.244)	(0.191)
Nb. observations	701	330	371

Notes: Panel A reports RDD estimates from local polynomial regression of order 0 and corresponding to coefficient β in equation (1). Standard errors (reported in parentheses) are clustered at the birth of month level (i.e. running variable). Bandwidth of 24 months around reform cutoff. The "stereotypical association index" is based on answers to the explicit question: "How strongly do you associate career/family with males/females?". Sample of respondents to the "Gender-Career" IAT on the Project Implicit website who live in Belgium, Denmark, France, Iceland, Norway and Sweden. Panel B reports results for a subset of countries available in the European Values Study: Denmark, Norway and Sweden. Because of data anonymization, the running variable for Panel B is year of birth. Bandwidth of 5 years around the reform cutoff. Robust standard errors are reported in parentheses. The "stereotypical association index" is based on answers to 5 questions: "When a mother works for pay, the children suffer," "A job is alright but what most women really want is a home and children," "All in all, family life suffers when the woman has a full-time job," "A man's job is to earn money; a woman's job is to look after the home and family," "When jobs are scarce, men have more right to a job than women."

Table A4: Descriptive Statistics on the Sample of SILC Respondents

	All	Men	Women
Female (0/1)	0.47	0.00	1.00
	(0.50)	(0.00)	(0.00)
Age (years)	21.48	21.41	21.56
	(3.15)	(3.11)	(3.20)
Married (0/1)	0.04	0.02	0.05
	(0.19)	(0.15)	(0.22)
Work (0/1)	0.83	0.81	0.85
	(0.38)	(0.39)	(0.36)
Post-secondary education (0/1)	0.19	0.15	0.24
	(0.39)	(0.36)	(0.42)
Children (0/1)	0.03	0.02	0.03
	(0.16)	(0.15)	(0.17)
Denmark (0/1)	0.26	0.25	0.26
	(0.44)	(0.43)	(0.44)
Norway (0/1)	0.41	0.41	0.41
	(0.49)	(0.49)	(0.49)
Sweden (0/1)	0.34	0.34	0.33
	(0.47)	(0.47)	(0.47)
Number of observations	45950	24275	21675

Notes: The table reports the mean and standard deviation (in parentheses) for different outcomes. Sample of respondents to the SILC survey from Denmark, Norway and Sweden, aged at least 18 years old.

Table A5: Share of Women in ISCO-08 Occupations

Occupation	Share of women	Skill level
Personal care workers	0.875	2
General and keyboard clerks	0.859	2
Cleaners and helpers	0.808	1
Health professionals	0.798	4
Food preparation assistants	0.780	1
Health associate professionals	0.778	3
Customer services clerks	0.753	2
Teaching professionals	0.694	4
Subsistence farmers, fishers, hunters and gatherers	0.667	2
Sales workers	0.631	2
Legal, social, cultural and related associate professionals	0.602	3
Legal, social and cultural professionals	0.579	4
Numerical and material recording clerks	0.560	2
Other clerical support workers	0.548	2
Business and administration associate professionals	0.547	3
Personal service workers	0.515	2
Business and administration professionals	0.502	4
Hospitality, retail and other services managers	0.440	3
Agricultural, forestry and fishery labourers	0.423	1
Administrative and commercial managers	0.376	4
Food processing, wood working, garment and other craft	0.373	2
Street and related sales and service workers	0.364	1
Assemblers	0.362	2
Stationary plant and machine operators	0.344	2
Production and specialised services managers	0.337	4
Handicraft and printing workers	0.307	2
Science and engineering professionals	0.306	4
Market-oriented skilled agricultural workers	0.271	2
Refuse workers and other elementary workers	0.260	1
Labourers in mining, construction, manufacturing and transport	0.225	1
Information and communications technology professionals	0.223	4
Chief executives, senior officials and legislators	0.212	4
Protective services workers	0.208	2
Information and communications technicians	0.191	3
Science and engineering associate professionals	0.173	3
Non-commissioned armed forces officers.	0.170	4
Armed forces occupations, other ranks.	0.125	1
Commissioned armed forces officers.	0.119	4
Market-oriented skilled forestry, fishery and hunting workers	0.071	2
Drivers and mobile plant operators	0.070	2
Metal, machinery and related trades workers	0.044	2
Building and related trades workers, excluding electricians	0.033	2
Electrical and electronic trades workers	0.032	2

Notes: Share of women in Denmark, Norway and Sweden who work in each of the 43 ISCO-08 occupations. Data from the SILC survey.

Table A6: Effects of Paternity Leave Reforms on Labor Force Participation and Human Capital

	Work (0/1)		Post-secondary education (0/1)	
	Men	Women	Men	Women
All countries				
RDD coef.	0.002	0.010	0.006	-0.007
(SE)	(0.011)	(0.011)	(0.009)	(0.012)
Nb. observations	24275	21675	23815	21240

Notes: The table reports RDD estimates from local polynomial regression of order 1 and corresponding to coefficient β in equation (1). Robust standard errors are reported in parentheses. Bandwidth of 20 quarters around the reform cutoff. The running variable is the quarter of birth. Sample of respondents to the SILC survey, aged 18 or above, from Denmark, Norway and Sweden.