Economic consequences of parenthood: Evidence for Argentina

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Abstract

Establishing a causal relationship between parenthood and individual economic outcomes, such as education or employment, is complex due to endogeneity concerns. To study this relationship, I exploit a novel source of exogenous variation: contraceptive failure. For the case of Argentina, I compare those who used contraceptive methods at the time of having a child (i.e., experienced a failure) *vs*. those who also used these methods, but did not have a child. The source of information allows me to distinguish pregnancies that resulted in births from those that were interrupted (spontaneous or induced abortions).

The findings show that motherhood significantly reduces the chances of working (-17% in relation to the control group) and of having reached some type of higher education -tertiary or university- (-5%). This result is partially reversed in the case of fatherhood: fathers have a greater chance of working (6%). In both cases, the impact is reduced as the age of the child increases. In intergenerational terms, the results show less investment in child care in cases of unplanned children. This has important implications for health and gender policy.

Keywords: parenthood, contraceptive failure, employment, education, Argentina

1. Introduction

The advent of birth control pills in the 1960s implied a reduction in the cost of delaying motherhood: they allow an active sexual life with a low risk of pregnancy and their contraceptive effect is quickly reversible. In addition, the pills were the first female contraceptive -until then contraception depended mostly on men. This resulted in a profound transformation in the lives of women: they delayed the age at first birth and marriage, invested more in their education -especially university education- and participated more in the labor market (Goldin & Katz, 2002; Bailey, 2006). The positive consequences even extend to the children of these women (Ananat & Hungerman, 2012).

Despite the possibility of choosing when to become a mother, the arrival of a child represents a profound disruption in women's lives (Bailey, 2010; Olivetti & Petrongolo, 2017; Chung *et al*., 2017; Cukrowska-Torzewska & Matysiak, 2020; Andresen & Nix, 2022; Cortés & Pan, 2023). Kleven *et al*. (2019a, 2019b) show that the child penalty (i.e., the drop in income of women in relation to that of men after the birth of the child) ranges from 20%-60% in a group of six developed countries and does not disappear in the long run. Channels for this effect include lower labor participation, fewer hours worked, and lower wages. Thus, the child penalty explains almost the entire gender wage gap in those countries. Adda *et al*. (2017) advance in the same direction and disaggregate, in the case of Germany, the child penalty between lower labor participation (which explains up to three-quarters of the reduction in income) and the loss of skills or less investment in education (which explains the remaining reduction).

The negative impact derived from parenthood is not limited to income but extends to multiple dimensions that include lower chances of working (Biró *et al*., 2019; Berniell *et al*., 2022), worse work performance - conditional to work - (Healy & Heissel, 2022a; 2022b), greater chances of working informally (Berniell *et al*., 2021) and lower educational achievement (Stevenson *et al*., 2021).

In recent years, extensive literature has proliferated in quantifying the causal impact of parenthood on educational, employment, and income outcomes (Cortés & Pan, 2023). However, establishing

a causal relationship in this topic is difficult. First, the people who decide to have children may be different -in observable and unobservable dimensions- from those who decide not to have them (e.g., those who decide not to have children may be more ambitious or talented). This would invalidate a simple comparison between both groups by confusing causality with adverse selection. Second, even if people are similar to each other, thanks to the existence of contraceptive methods, they can strategically choose the moment to have children (e.g., after having completed university education). Here the comparison between the two groups (have *vs*. do not have children) would capture the impact of having a child together with the differences that arise from the stage of life in which people find themselves. Again, the comparison would not be valid. Third, even if a person has not had children, their results can be influenced by the expectation of having children in the future. Thus, a person could reduce their participation in the labor market by anticipating the care tasks that they will have to face or insert themselves into sectors that provide greater labor flexibility (Goldin, 2014; Adda *et al*., 2017; Berniell *et al*., 2023). As before, the comparison between those who have and do not have children would be invalid by underestimating the total impact. Fourth, comparing by exploiting the variation in the number of children usually excludes from the sample those people who decide not to have children and ignores the existence of non-linear relationships (i.e., the impact of the first child is usually greater than that of subsequent children).

To overcome the previous limitations, the empirical literature in Economics has relied on identifying exogenous sources of variation in relation to having a child. First, a large body of work (Angelov *et al*., 2016; Kleven *et al*., 2019a; 2019b) has used event study designs to estimate the dynamic effect of having children. These designs exploit the exogeneity of the time of birth to compare between people who had children at different ages. Recent evidence suggests, however, that this type of study can generate biased estimates since the timing of birth can be endogenous: people choose to have children when their income curve begins to flatten, and thus those who choose to have them later have an income curve with higher growth -in relation to those who chose to have it earlier-. In other words, lower (and unobservable) potential earnings contribute to bringing forward the moment of birth, and, therefore, the assumption of exogeneity does not hold and the estimates are invalid (Bensnes, Huitfeldt & Leuven, 2023).

Second, a group of works has resorted to exploiting the variation provided by in vitro fertilization treatments -IVF- from an instrumental variable strategy (Lundborg *et al*., 2017; Gallen, Joensen, Johansen & Veramendi, 2023). Here, the exogeneity is given by the fact that conditional on participating in a fertilization program, the success of the treatment is plausibly random. The limitations of this strategy lie in the fact that the population that accesses these treatments may not be representative -on average, those who resort to treatment are older at the time of first birth, have higher incomes, and work more hours. That is, the group of people who access treatment could have more alternatives to reduce the negative impact of a birth and, thus, the estimated effect based on this strategy would underestimate the true effect. In addition, recent evidence seems to indicate that the success of the treatment correlates with the educational level of the mother (Groes *et al*., 2017). That is, the instrument's exogeneity condition is violated.

Other identification strategies include variation in: the age of eligibility for purchasing birth control pills (Goldin & Katz, 2002; Bailey, 2006; Ananat & Hungerman, 2012; Bailey *et al*., 2012), the gender of the two first children (Angrist & Evans, 1998), the number of children in one birth -i.e., twin births *vs*. single birth- (Bronars & Grogger, 1994; Black *et al*., 2005; Guo *et al*., 2018;), spontaneous or induced abortions (Miller, 2011; Biró *et al*., 2019; Berniell *et al*., 2022) or self-reported infertility shocks (Agüero & Marks, 2008). In these cases, concerns about exogeneity in the sources of variation have also been reported (Bhalotra & Clarke, 2019; González, 2023).

In this context, the objective of this paper is to analyze the causal impact of parenthood on two critical dimensions of well-being (employment and education) in a developing country -Argentina-. To do this, I exploit a novel source of exogenous variation: the failure of the contraceptive method. This allows me to compare employment and educational outcomes among people who did not wish to have children (i.e., were using some form of contraception). Of this group, some people experienced contraceptive failure resulting in pregnancy and subsequent birth (treatment group), while others did not (control group). Both groups are similar to each other in those characteristics that are not expected to be affected by parenthood (e.g., age, age of the partner, age of sexual initiation, religiosity, performance of health check-ups, etc.). This reinforces the hypothesis that contraceptive failure is exogenous to individuals and represents a genuine source of exogenous variation. The data comes from a representative survey of the urban adult population of Argentina (National Survey on Sexual and Reproductive Health) elaborated by the National Statistics Institute of the same country (INDEC, 2014).

The findings of the work show that the birth of a child represents a profound disruption in the lives of women: they are up to 17% less likely to be working and 5% less likely to have achieved some type of higher education (tertiary or university), in relation to the mean of the control group. These effects are especially negative in the first decade (0-9 years) of the child's life -stage in which parental care is more intensive-. The negative effect in labor terms disappears when the child reaches an older age (10 or more years), but the same does not happen in educational terms. Asymmetrically, men are more likely to be working (6% more) or to achieve higher education (11% more). Thus, these findings show that, in a context of high labor informality and medium income -such as Argentina-, parenthood is a shock that can contribute to bilaterally increasing gender labor and educational gaps (i.e., it harms women and benefits men).

This paper contributes to the literature on the economic consequences of parenthood in three aspects. First, it is the first study to provide causal evidence on the topic by examining Argentina -a developing country-. Typically, the literature has focused on the United States, the Nordic countries, and Europe. A possible exception is the recent work by Kleven, Landais & Leite-Mariante (2023). This responds to a greater availability of data in these regions and represents a gap in the empirical literature: How generalizable are the results from developed countries to developing countries characterized by high labor informality? This work contributes to closing this gap. Second, this paper examines the impact of parenthood on women, but also on men. In this way, I can identify two different channels that explain the gender gaps in the labor market and education (i.e., the worsening of women and the improvement of men). Each channel gives rise to different policy recommendations. Frequently, the literature has focused on the analysis of women. Third, I can identify those pregnancies that ended in spontaneous or induced abortions. By separating these cases, I can interpret the results as an average treatment effect -rather than an intention to treat. A substantial portion of the antecedents does not achieve this disaggregation and, therefore, its causal interpretation is more limited.

This work is related to the literature that examines the impact of parenthood on employment and educational outcomes (Cortés & Pan, 2023; Berniell *et al*., 2021), with special emphasis on developing countries (Agüero & Marks, 2011; Narita & Montoya Díaz, 2016; Berniell *et al*., 2023; Cruces & Galiani, 2007; Tortarolo, 2014). It is also linked to the literature that explores the impact of expanding access to contraceptives and fertility (Goldin & Katz, 2002; Bailey, 2006; Lindo & Packham, 2017). On the other hand, this work is inserted in the literature that analyzes the impact of failures in contraceptive methods on fertility and labor results (Miller, 2011; Gallen *et al*., 2023).

Hereinafter, Section 2 describes the sources of information used and Section 3 details the identification strategy. Then Section 4 presents the main results and finally, Section 5 discusses the main Conclusions.

2. Sources of information

In this work, I use microdata from the National Survey on Sexual and Reproductive Health (ENSSR, 2013) prepared by the National Institute of Statistics and Censuses of Argentina (INDEC, 2014). This survey, representative of the adult urban population (14-49 years in women and 14-59 years in men), seeks to generate information about the state of sexual and reproductive health in men and women. The microdata are obtained from a direct interview and arise from a two-stage probabilistic sampling (selection of census radiuses and then of homes within each radius) representative of all urban localities with 2000 or more inhabitants. This includes 91.4% of the Argentine population.

The ENSSR contains information on the number of pregnancies and lifetime contraceptive use, age of the child and parents, marital and employment status, education, breastfeeding, and subjective preferences for more children. Thus, this survey is a unique source of information of its kind: it allows me to identify those births that arose from a failure in contraception. Furthermore, advantageously, this survey has the same information for both men and women. For this reason, I can compare the impact of parenthood between both genders -detecting heterogeneous effects-.

Table 1, below, presents basic descriptive statistics and compares men and women. From this it emerges that both groups present similar socio-economic indicators: on average, they are between 30-33 years old, they have more than two children and their youngest child is of school age (8 to 11 years). Furthermore, the vast majority of respondents reside in the Central or Pampas region, have already had their first sexual relationship, and use some type of contraceptive. The indicator for which the greatest differences appear is that of Employed (=1 if the person is employed, 0 if unemployed). In this case, the difference in means amounts to 25 percentage points in favor of men. To a lesser extent, the Higher Education indicator suggests that women with some degree of higher education (tertiary or university) surpass men by 9 percentage points.

Table 1: Descriptive statistics for men and women

	Men		Women	
Indicator	Mean	Standard deviation	Mean	Standard deviation
Age	33.19	13.51	30.38	10.79
Number of children	2.58	1.60	2.50	1.60
Age of the last child	11.45	8.57	8.70	6.64
Employed (in %)	.77	.42	.52	.50
Higher education	.24	.42	.33	.47
In couple	.49	.50	.53	.50
Resident in the Pampeana and Centro regions	.67	.47	.67	.47
Resident in the NEA and NOA regions	.21	.41	.21	.41
Use contraceptives	.61	.49	.57	.49
Already had first intercourse	.89	.31	.86	.34

Source: Own elaboration based on ENSSR

3. Methodology

The identification strategy of this work exploits a novel source of exogenous variation: the failure of contraceptive methods. I can compare people, a priori, similar to each other, who did not want to have children (i.e., they used contraceptive methods). Within this group of people, some of them experienced a contraceptive failure that resulted in a birth. Thus, the identification strategy

consists of comparing a group of people who used contraceptives and never experienced a birth (control group) *vs*. a group of people using contraceptives that failed and resulted in a birth (treatment group). The equation that reflects the estimation strategy of this work (equation 1) is analytically detailed below:

$$y_i = \beta_1 Treated_i + \beta_2 X_i + \gamma_r + \mu_i \qquad (1)$$

where y_i refers to the outcome *y* (education or employment) for person *i*. $Treated_i$ is a dummy variable that takes the value 1 if person *i* has had a child while using contraceptive methods (IUD, implants, pills or condoms). To avoid identifying a cumulative impact throughout life, I include within this group those women who had only one child (i.e., I exclude those who had two or more). The control group ($Treated_i$=0) includes those people who have used contraception and have never had children. Thus, β_1 captures the causal effect of parenthood by exploiting an exogenous source of variation (i.e., contraceptive method failure). X_i is a vector of covariates that includes age and γ_r are fixed effects by region -this allows me to control for heterogeneity that differs between regions, but not over time-. Finally, μ_i is the model error term. Equation 1 is estimated, separately, for women and men. This breakdown by gender allows me to identify the presence of heterogeneous effects derived from a shock such as parenthood.

To improve the comparability between both groups (treatment *vs*. control), I cut the sample. First, as mentioned above, I only include in the treatment group those who have had only one child (to avoid capturing the cumulative impact of successive children). Second, within the control group, I only include people who have never had children and who, in addition, have used contraceptive methods. Third, I eliminate those people who state that they have not started sexually (i.e., they did not have their first sexual relationship). Fourth, I eliminate those people who declare that they cannot have children (i.e., infertility). Fifth, I eliminate those people who report having experienced a spontaneous or induced abortion (i.e., I retain those people who completed the pregnancy). This allows me to interpret the results as an average treatment effect and not simply an intent to treat.

The sample cuts provide greater reliability in the estimation strategy (i.e., compare similar people with each other except that some experienced a failure in their contraceptive method). In this regard, Table 2 shows that both groups (treatment *vs*. control) are highly similar in multiple dimensions: age, age of sexual initiation and the couple, religiosity, region of residence, and care against sexually transmitted diseases. Indeed, both groups (treatment and control) tend to have, on average, a similar age and have started sexually at the same moments in their lives and with partners of the same age. As expected, treated women have been tested, at least once, for sexually transmitted diseases (HIV/AIDS and hepatitis B) in a greater proportion than those in the control group. This is logical given that during pregnancy this type of controls is frequent. On the other hand, these controls are not frequent in men -who do not undergo controls associated with pregnancy-. When comparing men, no significant differences emerge. This reinforces the assumption that both groups (treated and control) are similar to each other except for the fact that the former experienced a failure in their contraceptive method and, therefore, reinforces the identification strategy of this work.

Table 2: Balance of means between treatment and control group

	Men			Women		
Indicator	Treated	Control	Difference	Treated	Control	Difference
Age	32	33	-1	28	30	-2
Age at first intercourse	18	18	0	17	18	-1

Age of person with whom had first sexual intercourse	24	25	-1	20	23	-3
Religiosity	.60	.77	-.17*	.79	.80	-.01
Resident in the Pampeana and Centro regions	.71	.67	.03	.57	.67	-.09*
Resident in the NEA and NOA regions	.14	.21	-.06*	.24	.21	.03
Test to detect HIV/AIDS	.42	.40	.02	.76	.55	.21**
Test to detect hepatitis	.20	.20	.00	.46	.29	.17***

Source: Own elaboration based on ENSSR. Note: * significant at 10%, ** significant at 5%, *** significant at 1%.

To assess the robustness of the results, Equation 1 is re-estimated to incorporate multiple checks. First, I proceed with the exclusion of controls and fixed effects to show that the results do not depend on their inclusion. Second, I disaggregate by age range of the child. It is expected that, if they exist, the negative effects derived from parenthood are concentrated in the child's first years a stage in which he requires more intensive care from her parents. Thus, I consider two age ranges (0-9 years and 10 or more years).

Third, I consider two additional outcomes of interest: a dummy variable that captures preferences for having more children in the future and the length of time (in months) that the woman has breastfed her child. The first of these variables allows me to identify the impact of parenthood on future fertility decisions of couples. In the second case, I can make progress in identifying the intergenerational impact: as it is an unplanned child, the parents could invest fewer resources in her care. In this regard, I analyze a fundamental dimension of neonatal care: the time (in months) of breastfeeding. In this particular case, the control group is made up of those women who had a child and did seek to have one (i.e., they did not use contraceptive methods and stated that they had sought that birth).

4. Results

Table 3 presents the results that arise from estimating equation 1 under different specifications. For each gender and outcome of interest, two estimates are presented: the first without fixed effects and controls and the second with all of them. The results are revealing: the shock caused by motherhood affects women in a profoundly negative way. They are up to 14 percentage points less likely to be working (conditional on belonging to the economically active population) and up to 1.8 percentage points less likely to have achieved some type of higher education (tertiary or university). This is equivalent to a reduction of 17% and 5%, respectively, in relation to the mean of the control group.

Table 3: Parenthood and development

	Women				Men			
Outcome	Employed	Employed	Higher educ.	Higher educ.	Employed	Employed	Higher educ.	Higher educ.
Coefficient	-.1440***	-.1005***	-.0148***	-.0181***	.0538***	.0590***	.0193*	.0173**
Standard error	.0020	.0020	.0025	.0025	.0009	.0009	.0011	.0087
Mean Y control group	.8546	.8546	.3324	.3324	.9461	.9461	.1766	.1766
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Fixed effect	No	Yes	No	Yes	No	Yes	No	Yes
R^2	0.0154	0.0795	0.0001	0.0426	0.0036	0.0384	0.0132	0.0393
N	310,761	310,761	494,921	494,921	827,382	827,382	920,356	920,356

Source: Own elaboration based on ENSSR. Note: * significant at 10%, ** significant at 5%, *** significant at 1%. Employed is a dummy variable that takes the value 1 if the person is

working and 0 otherwise, conditional on belonging to the economically active population. Higher education is a dummy variable that takes the value 1 if the person has achieved some type of higher education (tertiary or university).

In a markedly asymmetric fashion, Table 1 shows that men's outcomes improve substantially after a shock such as fatherhood. These have greater chances of working (6% more in relation to the average of the control group) and of having achieved some type of higher education (11% more in relation to the average of the control group). From this it emerges that the shock given by parenthood contributes to the labor and educational gender gap in a bidirectional way: on the one hand, it worsens the results of women and, on the other, substantially improves those of men.

Table 4 below shows that the labor and educational impacts on women derived from maternity are substantially heterogeneous depending on the age of the child. Thus, in the first decade of life (0-9 years) -which requires special care from the parents- mothers experience a substantial drop in the chances of working (-20% in relation to the average of the group of control). However, once the children reach a greater maturity -in the following decade- this negative impact completely disappears and is even slightly reversed (+9%). This could reflect a greater need to generate income -given the presence of the child- which translates into the active incorporation of women into the labor market once the child has gone through the most critical stage of care.

The previous result of the reversal of the gaps (among those who experienced a contraceptive failure *vs*. those who did not) is not repeated when comparing in terms of educational achievement: here, the gap between those who achieved some type of higher education is maintained over time (-5%). This result could respond to the fact that after investing several years in caring for the child, women (re)enter the labor market -consistently with the previous result- thus reducing -permanently- the time available for her academic training. Consistent results, in terms of the reduction of gaps according to the age of the child, are reported for the case of men (Table A.1 in the Appendix).

Table 4: Parenthood and development in women according to the age of the child

Outcome	Employed		Higher education	
	0-9 years	10+ years	0-9 years	10+ years
Coefficient	-.1712***	.0851***	-.0166***	-.0172***
Standard error	.0031	.0035	.0028	.005
Mean Y control group	.8546	.8546	.3324	.3324
Controls	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes
R^2	0.0914	0.0603	0.2217	0.0627
N	111,093	199,668	194,618	300,303

Source: Own elaboration based on ENSSR. Note: * significant at 10%, ** significant at 5%, *** significant at 1%. Employed is a dummy variable that takes the value 1 if the person is working and 0 otherwise, conditional on belonging to the economically active population. Higher education is a dummy variable that takes the value 1 if the person has achieved some type of higher education (tertiary or university).

Table 5, below, shows that the negative impact derived from parenthood not only reaches the mother and father but also extends to the next generation (children resulting from unplanned births). In particular, it is observed that, when comparing women who experienced a failure in their contraception *vs*. those who actively sought to have a child, the group of women who experienced failure reduced breastfeeding time by five months. This is a huge reduction equivalent to 97% of the average breastfeeding time of the control group. That is, those women

who go through an unplanned birth invest substantially less in breastfeeding. This is especially critical for the long-term development of the child (World Health Organization, 2021). Table 5 also shows that those women who experience contraceptive failure significantly reduce their desire for future children (-14%).

Table 5: Parenthood and impact on care practices and future fertility

Outcome	Breastfeeding time (in months)	Does not want to have another child
Coefficient	-5.48***	.036***
Standard error	.0921	.0020
Mean Y control group	5.6	.2505
Controls	Yes	Yes
Fixed effects	Yes	Yes
R^2	0.1068	0.2469
N	255,207	494,535

Source: Own elaboration based on ENSSR. Note: * significant at 10%, ** significant at 5%, *** significant at 1%. Breastfeeding measures the time (in months) that the mother has breastfed her child. Does not want to have another child is a dummy variable that takes the value 1 if the person does not want to have another child in the future, and 0 otherwise.

The results of this work were consistent with previous evidence. The reported impact in terms of employment status is similar to those reported in previous work for developed countries (Biró *et al*., 2019; Berniell *et al*., 2022). The same is true in terms of educational achievement (Stevenson *et al*., 2021). In this sense, this work extended known findings to the context of a developing country with high labor informality -Argentina- (González & Santos, 2020; González *et al*., 2021).

Although several previous works account for the negative impact of motherhood, the evidence for men is scarce (Healy & Heissel, 2022a; 2022b). In this regard, the results of the work showed that the shock given by parenthood can bidirectionally widen the gender gaps in the labor market and education (i.e., it harms women and benefits men). This is consistent with previous evidence on the existence of a fatherhood premium (Dias *et al*., 2020). Although I do not have data to examine the mechanism behind this asymmetric impact, previous evidence has pointed to a possible explanation: due to maternity, the mother may choose to rest -especially during the last weeks of pregnancy- and after the birth, she usually breastfeeds the child. This forces her to withdraw, at least temporarily, from the labor and educational market and worsens her results. Since parenthood also generates associated expenses (e.g., periodic check-ups and after delivery, investment in upbringing and care), the household must generate income to cover them. Thus, it is often the man who enters or increases his participation in the labor market and specializes in generating income outside the household. This, in turn, could allow him to access a higher education instance -possibly associated with his occupation-.

5. Conclusions

Throughout this study, I have examined the causal impact of parenthood on individual development in terms of employment and education. The results showed that parenthood substantially harms women: those who experienced a contraceptive method failure, which resulted in a birth, are up to 17% less likely to be working and 5% less likely to have achieved some type of higher education (tertiary or university) in comparison with those that did not experience a failure. In the case of men, the results were essentially the opposite: those who

experienced contraceptive failure are up to 6% more likely to be working and 11% more likely to have achieved some type of higher education. Thus, parenthood not only contributes to generating gaps between those who have children *vs*. those who do not have them but also bidirectionally widens the gender gaps.

In this regard, public policy has typically focused on helping women who have children. This includes special transfers for pregnancy or longer maternity leaves. However, the findings of this work showed that men also play a relevant role in terms of gender gaps in the face of a shock such as parenthood. Therefore, policymakers must incorporate this into their policy formulations.

An additional aspect to consider, as emerged from Table 4, is that most of the negative effects derived from parenthood are concentrated in the child's first decade of life. This is especially true in terms of the chances of being working. For this reason, policymakers should recognize this heterogeneity and strengthen assistance to mothers and fathers of younger children (0-9 years). Considering all of the above, policy improvements should contemplate the extension of paternity leave -to equate its duration with maternity leave- and thus reduce the gender labor gap. On the other hand, childcare programs should be strengthened and extended to facilitate the (re)insertion to work of mothers and fathers with young children.

The health and early development policy should improve the indicators of breastfeeding duration in the case of unplanned births. As highlighted by the World Health Organization, guaranteeing at least six months of breastfeeding is critical for the future development of the newborn. The paper's findings showed that, in unplanned births, the duration of breastfeeding is especially reduced and this can be a long-term burden on development especially in low and middle-income countries.

In the future, it seems relevant to extend these results in two directions. First, new dimensions can be included in the analysis -especially individual income and time use indicators. To do this, the source of information must expand to include these dimensions. Second, an estimation strategy with panel data could be interesting when having information from the same person at multiple moments in time. From here the dynamic effects derived from parenthood could be estimated. Again, the source of information must expand for this.

Appendix

Table A.1: Parenthood and development in males according to the age of the child

Outcome	Employed		Higher education	
	0-9 years	10+ years	0-9 years	10+ years
Coefficient	.1485***	.0065***	-.1457***	.7853***
Standard error	.0015	.0014	.0015	.0028
Mean Y control group	.9461	.9461	.1766	.1766
Controls	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes
R^2	0.1760	0.0590	0.1491	0.1247
N	184,803	642,579	188,167	732,189

Source: Own elaboration based on ENSSR. Note: * significant at 10%, ** significant at 5%, *** significant at 1%. Employed is a dummy variable that takes the value 1 if the person is working and 0 otherwise, conditional on belonging to the economically active population. Higher education is a dummy variable that takes the value 1 if the person has achieved some type of higher education (tertiary or university).

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