

# Identifying the Response of Fertility to Financial Incentives

## Web Appendix

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# 1 Summary Statistics

In Table A.1, “Number of children” refers to the beginning of the year. Income variables  $R_{LF}$  are measured in thousands of euros per month; for households in which the woman is not working, we define  $R_{10}$  and  $R_{11}$  to be the expectations of the simulated income. Diplomas are ordered from highest to lowest.

Tables A.2, A.3, and A.4 give the joint distribution of the  $(L, F)$  variables by number of children at the beginning of the year.

Variable	Minimum	Q1	Median	Mean	Q3	Maximum
Age of the woman	20.00	28.00	32.00	31.51	35.00	39.00
Age at end of studies	8.00	17.00	18.00	18.90	20.00	35.00
Years out of school	3.00	8.00	12.00	12.61	17.00	28.00
Diploma 1	0.00	0.00	0.00	0.07	0.00	1.00
Diploma 2	0.00	0.00	0.00	0.14	0.00	1.00
Diploma 3	0.00	0.00	0.00	0.17	0.00	1.00
Diploma 4	0.00	0.00	0.00	0.31	1.00	1.00
Diploma 5	0.00	0.00	0.00	0.09	0.00	1.00
Number of children	0.00	0.00	1.00	1.022	2.00	2.00
Married	0.00	0.00	1.00	0.65	1.00	1.00
$R_{00}$	0.46	1.14	1.40	1.53	1.79	5.28
$R_{01}$	0.54	1.42	1.88	1.91	2.23	5.70
$R_{10}$	0.66	1.90	2.22	2.36	2.68	7.49
$R_{11}$	0.85	2.07	2.41	2.55	2.89	8.01

Table A.1: Summary Statistics

Employed	Birth	No birth
Yes	9.6%	53.6%
No	10.0%	26.8%

Table A.2: Employment and Fertility, no child (5,370 observations)

Employed	Birth	No birth
Yes	5.2%	42.6%
No	14.2%	38.0%

Table A.3: Employment and Fertility, one child (5,784 observations)

Employed	Birth	No birth
Yes	0.9%	36.4%
No	6.8%	55.9%

Table A.4: Employment and Fertility, two children (5,737 observations)

## 2 Estimates for the Wage Equation

Wage Equation		
Variable	Estimate	Std Error
Age at end of study	0.12	0.01
id. squared	-2.07	0.27
Time since end of study	0.05	0.00
id. squared	-1.05	0.10
Diploma 1	0.66	0.02
Diploma 2	0.46	0.01
Diploma 3	0.28	0.01
Diploma 4	0.15	0.01
Diploma 5	0.14	0.01
1997 survey	7.24	0.12
1998 survey	7.22	0.12
1999 survey	7.22	0.12
$\sigma$	0.27	0.00

Table B.1: Wage Equation

### 3 Estimates for the Participation Equation

$\tau_0$		
Variable	Estimate	Std Error
Age 25	3.65	0.39
28	4.29	0.48
32	6.14	0.58
35	6.78	0.66
38	7.19	0.72
College	2.50	0.48
One child	0.84	0.44
Two children	1.28	0.61
$C_0$ Parity 1	0.40	0.13
$C_1$ Parity 1	-0.11	0.10
$C_0$ Parity 2	0.18	0.12
$C_1$ Parity 2	-0.27	0.09
$C_0$ Parity 3	-0.21	0.11
$C_1$ Parity 3	0.00	0.15

$$\tau_1 = \tau_0 - \frac{20.6}{(3.77)} + \frac{0.79}{(0.15)} \text{Age} + \frac{8.01}{(5.58)} \mathbf{1} \text{ Third birth}$$

Table C.1: Standard Errors of Labor Supply Disturbances

$D_0$		
Variable	Estimate	Std Error
Age 25	5.61	0.35
28	4.33	0.42
32	3.56	0.47
35	3.94	0.47
38	5.66	0.43
1998 Survey	-0.65	0.21
1999 Survey	-1.69	0.23
Dip. 1	-0.10	0.52
Dip. 2	-3.06	0.49
Dip. 3	-2.53	0.39
Child. $\leq 3$	0.93	0.32
id. $\leq 6$	0.51	0.26
One child	1.73	0.43
Two children	4.90	0.53
Unmarried	-0.67	0.23

$$D_1 = D_0 - 17.03 + 0.83 \mathbf{1}_{\text{College}} + 18.88 \mathbf{1}_{\text{Third birth}} + 0.65 \mathbf{1}_{\text{Unmarried}} + 1.41 \text{Age} - 2.73 \frac{\text{Age squared}}{100}$$

(10.24) (0.67) (10.82) (0.52) (0.74) (1.33)

Table C.2: Constant Terms in Labor Supply

## 4 Estimates for the Fertility Equations

In all three tables, “age  $nn$ ” refers to the value of the spline at the knot that corresponds to age  $nn$ .

Variable	Estimate	Standard Error
Incentive effects: $a_1$		
age 24	0.11	0.03
age 28	0.06	0.04
age 32	-0.07	0.05
college graduate	0.04	0.03
Incentive effects: $a_0$		
age 24	0.12	0.05
age 28	0.05	0.05
age 32	-0.07	0.07
college graduate	0.03	0.05
Cost of child: $CC$		
age 24	0.33	0.16
age 28	0.51	0.18
age 32	0.62	0.22
unmarried	-0.04	0.48
unmarried $\times$ age	0.02	0.02
college graduate	0.13	0.63
college graduate $\times$ age	-0.00	0.02

Table D.1: Fertility Effects for First Birth

Variable	Estimate	Standard Error
Incentive effects: $a_1$		
age 26	0.01	0.02
age 30	0.05	0.02
age 34	0.04	0.02
college graduate	0.04	0.04
one child is 1	0.01	0.03
one child is 2	-0.04	0.05
one child is 3	0.03	0.05
Incentive effects: $a_0$		
age 26	0.04	0.04
age 30	0.07	0.04
age 34	0.06	0.03
college graduate	0.02	0.01
one child is 1	-0.01	0.04
one child is 2	-0.05	0.01
one child is 3	0.02	0.01
Cost of child: $CC$		
age 26	0.07	0.19
age 30	0.61	0.16
age 34	1.13	0.16
unmarried	1.65	0.31
unmarried $\times$ age	-0.05	0.01
college graduate	0.76	0.43
college graduate $\times$ age	-0.02	0.01
one child is 1	1.16	0.22
one child is 2	0.17	0.18
one child is 3	-0.17	0.17
one child is 4	-0.47	0.07
one child is 5	-0.33	0.07
one child is 6	-0.12	0.08

Table D.2: Fertility Effects for Second Birth

Variable	Estimate	Standard Error
Incentive effects: $a_1$		
age 27	0.00	0.04
age 32	0.07	0.03
age 36	0.05	0.04
college graduate	0.11	0.07
one child is 1	0.58	0.21
one child is 2	0.33	0.14
one child is 3	0.02	0.04
Incentive effects: $a_0$		
age 27	0.04	0.08
age 32	0.09	0.05
age 36	0.07	0.06
college graduate	0.07	0.11
one child is 1	0.60	0.32
one child is 2	0.37	0.22
one child is 3	0.04	0.06
Cost of child: $CC + A(S)$		
age 27	0.36	0.34
age 32	1.47	0.28
age 36	1.75	0.27
unmarried	2.25	0.58
unmarried $\times$ age	-0.07	0.02
college graduate	-0.69	1.15
college graduate $\times$ age	0.06	0.04
one child is 1	1.73	0.55
one child is 2	-0.01	0.36
one child is 3	-0.44	0.30
one child is 4	-0.13	0.10
one child is 5	-0.18	0.10
one child is 6	-0.13	0.10
children between 7 and 10	-0.14	0.09
boy then girl, age 27	0.17	0.12
boy then girl, age 32	0.36	0.11
boy then girl, age 36	0.38	0.15
girl then boy, age 27	0.17	0.15
girl then boy, age 32	0.03	0.10
girl then boy, age 36	-0.05	0.10

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Table D.3: Fertility Effects for Third Birth



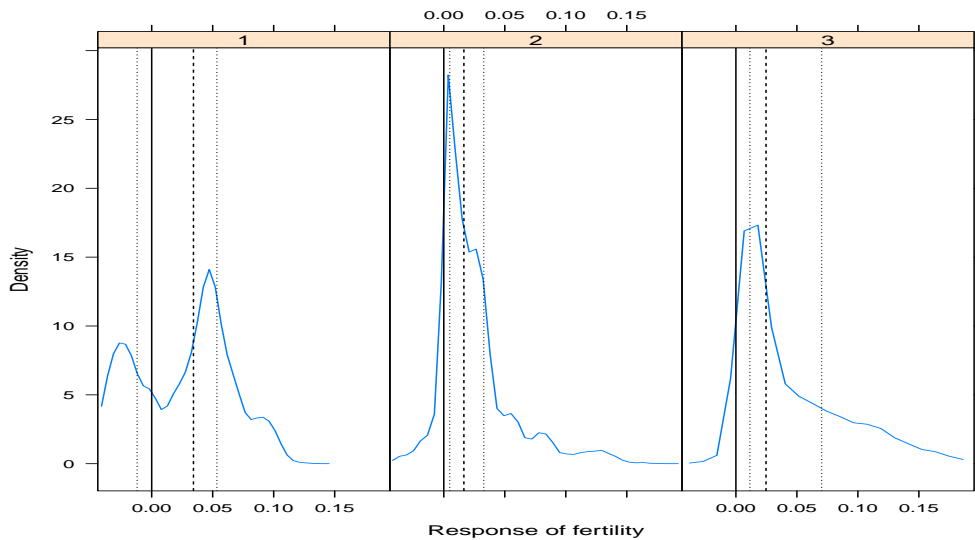


Figure D.1: Distribution of the Estimated Responsiveness of Fertility to Incentives

Figure D.1 plots the distribution of the estimated response of fertility to our policy reform in the sample, by parity: the left-most panel concerns childless households and the right-most panel households with already two children. The dashed vertical lines in each panel indicate the three quartiles of the distribution of responsiveness, and the solid line corresponds to zero responsiveness.