

# Fathers' use of parental leave, fathers' involvement in childcare, and mothers' careers



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There are two distinct parts in this research

**First part:** Do fathers who take childbirth leave become more involved in their children's care?

**Second part:** Is there a negative association between the involvement of the father in childcare and the motherhood labor penalty?

The background of the slide features a large, faint watermark of the University of Cambridge seal. The seal is circular and contains a central shield with a red and white checkered pattern. Above the shield is a crown, and a swan is depicted on the right side, facing left. The Latin motto 'UNIVERSITAS ARMATA TRIUMPHANS' is written around the top and sides of the seal, and 'COMPLUTENSIS' is written at the bottom. The text 'First part' is overlaid on the seal in a red font within a light blue rectangular box.

**First part**

- Starting point: **Increasing shared responsibility between men and women for childcare** is very necessary to make progress on gender equality in the labor market
- Mismatch hypothesis, Statistical discrimination...



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- Mismatch hypothesis, Statistical discrimination...
- One of the most important mechanisms for increasing shared responsibility in childcare is the **reform of parental leave systems**, introducing full gender equality in the system and encouraging fathers to use the leaves (non-transferable and paid parental leaves).
- Empirical evidence shows that males respond positively to longer and well-paid leaves (the case of Iceland,...)

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- Mismatch hypothesis, Statistical discrimination...
- One of the most important mechanisms for increasing shared responsibility in childcare is the **reform of parental leave systems**, introducing full gender equality in the system and encouraging fathers to use the leaves (non-transferable and paid parental leaves).
- Empirical evidence shows that males respond positively to longer and well-paid leaves (the case of Iceland,...)
- But **do fathers who take longer childbirth leaves become subsequently more involved in their children's care?** Providing empirical evidence on this issue is the main task of this first part of our research

## Causality in both directions (Tanaka and Waldfogel 2007):

- **"Using leave" → "greater involvement"**. Some fathers might have taken childbirth leave just because they did not want to miss this social benefit (taking the opportunity to have a paid leave from work). But as they were during that period in close contact with their children, they might have had a new experience (they might have experienced a change) that subsequently led them to become more involved in the care of their young children.

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- **"Greater propensity to involvement" → "Using leave"**. Other fathers already had a more egalitarian gender attitude and a high willingness to be actively involved in the care of their children. And this is the reason why they took leave.



## There is some empirical evidence about this relation:

**U.S.:** Seward *et al.* (2006) <http://www.tandfonline.com/doi/abs/10.1080/13668800500421093#.UzLFOkhDUI>

Nepomnyaschy and Waldfogel (2007) <http://www.tandfonline.com/doi/abs/10.1080/13668800701575077#.UzLFkfhDUI>

**U.K.:** Tanaka and Waldfogel (2007) [http://www.tandfonline.com/doi/abs/10.1080/13668800701575069#.UzLGE\\_khDUI](http://www.tandfonline.com/doi/abs/10.1080/13668800701575069#.UzLGE_khDUI)

**Sweden:** Haas and Hwang (2007) <http://www.tandfonline.com/doi/abs/10.1080/13668800701785346#.UzLHTPhDUI>

Duvander and Jans (2008) [http://www.stressforskning.su.se/polopoly\\_fs/1.18719.1320939636!/WP6.pdf](http://www.stressforskning.su.se/polopoly_fs/1.18719.1320939636!/WP6.pdf)

**Australia:** Hosking *et al.* (2010) <http://onlinelibrary.wiley.com/doi/10.1111/j.1741-3737.2010.00766.x/abstract>

**Several countries of E.U.:** Meil (2011) <http://www.questia.com/library/journal/1G1-350681378/european-men-s-use-of-parental-leave-and-their-involvement>

For the case of **Iceland**, there is strong empirical evidence that after the reform of the parental leave system in 2001 (introducing the 3+3+3 system), which extended the use of paternity leave among most fathers, these fathers now tend to participate more in child care.



Ásdís A. Arnalds; Guðný Björk Eydal; y Ingólfur V. Gíslason (2013):

“Equal rights to paid parental leave and caring fathers- the case of Iceland”,

*Icelandic Review of Politics and Administration*, 9(2), 323-344

<http://dx.doi.org/10.13177/irpa.a.2013.9.2.4>

**Hypothesis 1. Taking longer leave favours greater subsequent involvement of the father in childcare.**

**Hypothesis 2. Taking longer childbirth subsequently tends to reduce the working week of the father.** (Having a shorter working week facilitates the commitment to child care activities)

**Hypothesis 3. The father's gender attitudes are a key determinant of his involvement in childcare.** Fathers who have a more egalitarian gender attitude tend to be more involved in childcare

**Hypothesis 4. Working in a family friendly company (FFC) favours involvement of the father in childcare.**

## Data:

"**Survey on the use of parental leave and its labor consequences**", Spanish Institute of Women

<http://www.inmujer.gob.es/areasTematicas/estudios/estudioslinea2013/docs/EvaluacPermisoPaternidad.pdf>

- Survey of **fathers and mothers of children between 3 and 8 years old**. January-May **2012**.
- We distributed 2500 questionnaires to parents through a **random sample of primary schools and Kindergartens**.
- The questionnaire was divided into **three parts**: a first part devoted to the household (7 questions); a second part to the mother (39 questions); and a third part dedicated to the father (46 questions).
- Sampling Error: A **final sample of 1130 households** completed the questionnaires (response rate of 50.2%); sampling error of 2.91% at 95% confidence.

**Rate of use of different leaves and their average duration. Wage earning fathers with children aged 3-8 years.**

	The whole period			Child born before March 2007			Child born after March 2007		
	Took leave	Take-up rate	Average duration (days)	Took leave	Take-up rate	Average duration (days)	Took leave	Take-up rate	Average duration (days)
<b>Total duration of childleave</b>	<b>748</b>	<b>89.9%</b>	<b>16.3</b>	<b>352</b>	<b>88.0%</b>	<b>12.3</b>	<b>385</b>	<b>92.8%</b>	<b>19.9</b>
2-day childbirth leave	709	85.2%	2.0	334	83.5%	2.0	365	88.0%	2.0
Paternity leave	348	41.8%	13.3	6	1.5%	16.5	337	81.2%	13.2
Maternity leave (transferable part)	20	2.4%	43.4	11	2.8%	35.0	9	2.2%	53.7
Breastfeeding leave	11	1.3%	16.1	6	1.5%	20.8	5	1.2%	10.4
Parental leave (unpaid)	7	0.8%	159.0	3	0.8%	135.3	4	1.0%	176.8
Other leaves	184	22.1%	9.5	152	38.0%	10.2	26	6.3%	4.3
Vacation days	177	21.3%	12.8	98	24.5%	11.3	78	18.8%	14.7
Total wage earners	832			400			415		

In the case of **wage earning mothers**, the mean total duration of child leave was **158.9 days**.

We asked parents about who performed **19 childcare activities**. The response options were:

1	2	3	4	5
Mother mostly	Mother rather more	Same	Father rather more	Father mostly

If the average score is near to “**1**”, the participation of the fathers in this activity is very low; if the average score is near to **5**, the participation of the fathers in this activity is very high; “**3**” means equality.

## 19 childcare activities

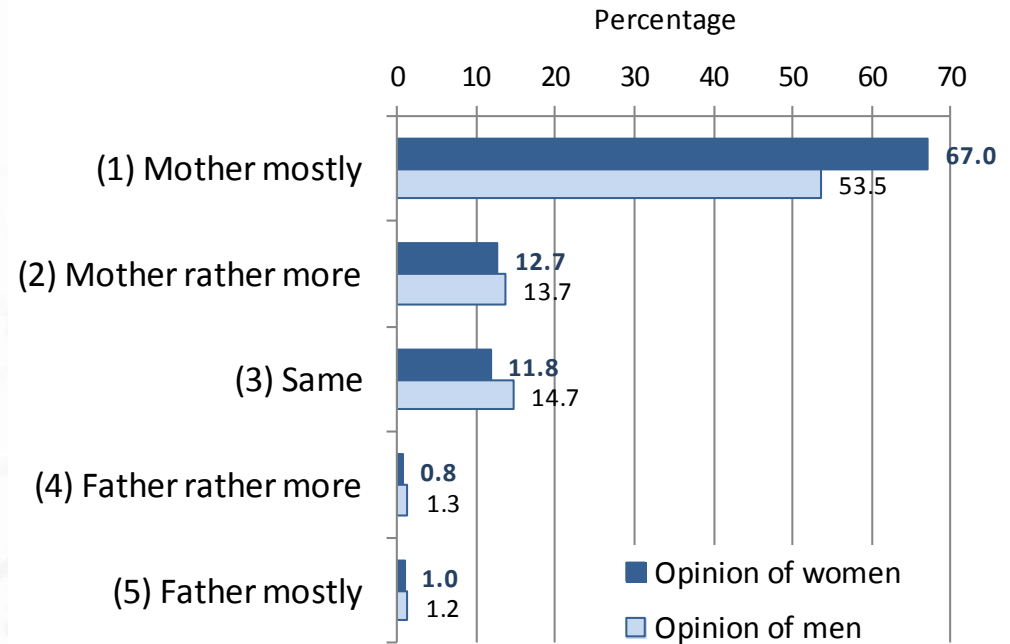
In the day-to-day, between zero and two years of the child, which of the members of the couple was in charge of the following activities?

	Fathers' opinion		Mothers' opinion	
	N	Mean	N	Mean
h) Washing child's clothes	944	1.622	998	1.476
b) Cooking child's food	952	1.706	1,004	1.583
g) Buying child's clothes	980	1.761	1,033	1.661
i) Organizing housework and childcare	980	1.906	1,028	1.725
c) Feeding the child	950	1.943	996	1.796
q) Taking care of the child when he/she becomes ill at school/nursery	873	2.031	888	1.898
s) Take responsibility for looking for a babysitter, etc.	787	2.119	843	2.014
o) Taking child to the doctor	979	2.132	1,034	1.966
a) Buying child's food	983	2.170	1,033	2.032
n) Comforting child when tired or ill	980	2.255	1,036	2.109
d) Changing diapers	967	2.292	1,016	2.122
r) Dropping/ picking up child at school	901	2.329	923	2.228
p) Getting up at night	975	2.372	1,042	2.145
f) Putting child to bed	980	2.389	1,037	2.148
l) Reading books to child	971	2.529	1,029	2.401
e) Bathing child	981	2.555	1,033	2.393
k) Taking child to the park	969	2.663	1,003	2.527
m) Teaching child something new	967	2.729	1,027	2.633
j) Playing with child at home	979	2.816	1,036	2.785

Data obtained using the entire sample of fathers and mothers that were married/couple when the child was born

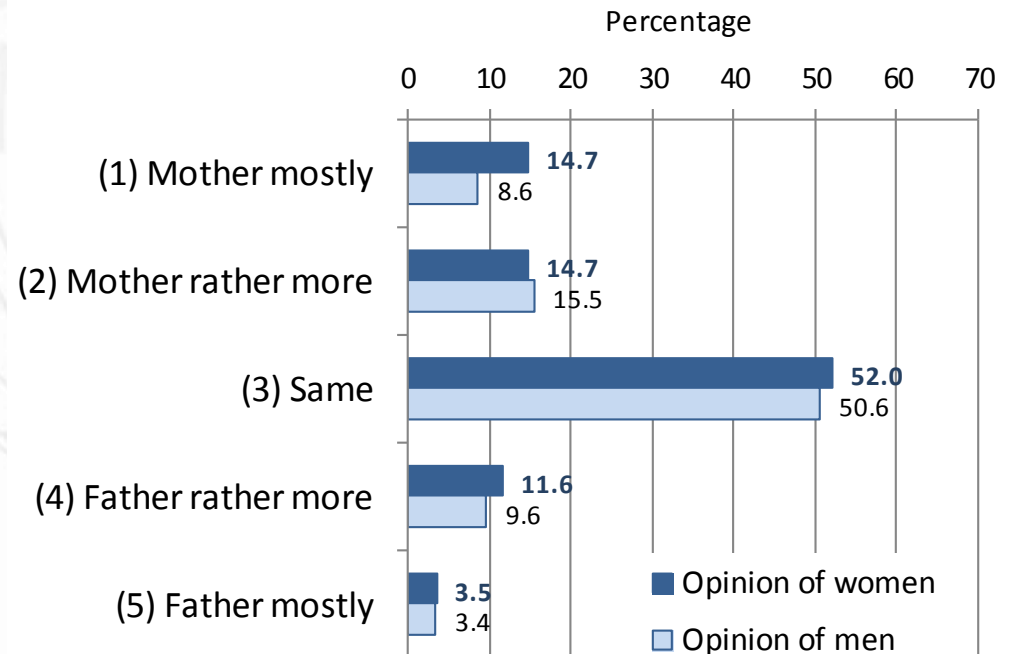
## “Washing child's clothes”

(The most feminized activity)



## “Playing with child at home”

(The least feminized activity)



## Dependent variables:

- **“19 activities global involvement indicator”**, obtained by a factor analysis with questions about the relative involvement of fathers in childcare in the 19 activities listed in the survey. Values range from -1.997 to 3.752 (a higher value would mean a greater involvement of the father in relation to the mother in childcare).
- **“Indicator of involvement in the 5 most feminized activities”**, obtained by a factor analysis with the 5 most feminized (and routine) childcare activities. Values range from -1.146 to 4.663 (a higher value would mean a greater involvement of the father).
- **“Weekly working hours (now)”**, which is the average number of weekly hours worked by the father at the time of completing the survey. We consider that a lower number of weekly hours of work (at the time of the survey) means more time available for the father to be involved in the care of their child.



## Independent variables:

- **“Total duration of childbirth leave”**, which is the total duration in days of childbirth leave, including all types of leaves, as outlined in the table above.
- **“Egalitarian gender attitudes”**, which is an indicator of attitudes constructed from a factor analysis with 8 questions posed to the father, to know if his gender attitudes were traditional or egalitarian. The range of values obtained was from -2.815 to 1.995, where a higher value would mean that the father has more egalitarian gender attitudes.
- **“Working in FFC”**, which is a synthetic indicator constructed from four questions where the father was asked whether in his company a number of conditions related to reconciliation policies were met. The range of values obtained was -1.012 to 2.481, where a higher value would mean that the father carries out his work in a family friendly company (FFC).

## Other independent variables (control variables):

- **“Age (at the moment the baby was born)”**, age of the father when the child was born or was adopted.
- **“Older siblings”**, dichotomous variable (1=yes; 0=no);
- **“Low level of education”**, dichotomous variable (1=yes; 0=no); “low level” means having an education level lower than **high school**.
- **“Economic immigrant”**, dichotomous variable (1=yes; 0=no); fathers with nationalities other than Spanish, Portuguese, and other advanced countries (France, Italy, and United Kingdom) were considered economic immigrants.
- **“Public sector employee”**, dichotomous variable (1=yes; 0=no).
- **“Temporary contract”**, dichotomous variable (1=yes; 0=no).
- **“Director/manager”**, dichotomous variable (1=yes; 0=no).
- **“Net income > €2,500”**, dichotomous variable (1=yes; 0=no); it refers to net income.
- **“Mother’s net income > €2,000”**, variable dicotómica (1=sí; 0=no).
- **“Weekly working hours (before)”**, the number of hours worked per week at the time when the baby was born.
- **“Mother worked 40 hours or more”**, dichotomous variable (1=yes; 0=no).
- **“Happy couple relationship”**, dichotomous variable (1=yes; 0=no).

## Results: correlations

Data obtained using the sample of **wage earning men** and their partners

Pearson Correlation:  
(\*\*) Statistically significant at 0.01 (bilateral);  
(\*) statistically significant at 0.05 (bilateral).

	In the day-to-day, between zero and two years of the child, which of the members of the couple was in charge of the following activities?													
	Fathers' opinion					Mothers' opinion								
	N		Mean		Coefficients of correlation			N		Mean		Coefficients of correlation		
					Total duration of childbirth	Egalitarian gender attitudes	Working in FFC					Total duration of childbirth	Egalitarian gender attitudes	Working in FFC
h) Washing child's clothes	780	1.642	0.119 **	0.158 **	0.018	786	1.514	0.084 *	0.181 **	0.059				
b) Cooking child's food	794	1.708	0.110 **	0.165 **	0.075	789	1.597	0.105 **	0.159 **	0.045				
g) Buying child's clothes	809	1.734	0.084 *	0.064	0.025	813	1.651	0.035	0.009	0.071				
i) Organizing housework and childcare	808	1.905	0.084 *	0.143 **	0.029	814	1.740	0.037	0.175 **	0.066				
c) Feeding the child	788	1.953	0.106 **	0.182 **	0.070	780	1.815	0.055	0.169 **	0.076				
q) Taking care of the child when he/she becomes ill at school/nursery	723	2.026	0.102 **	0.205 **	0.080	697	1.924	0.033	0.132 **	0.049				
s) Take responsibility for looking for a babysitter, etc.	656	2.123	0.034	0.116 **	0.068	670	2.060	0.071	0.126 **	0.090 *				
o) Taking child to the doctor	807	2.141	0.051	0.087 *	0.101 *	813	1.985	0.025	0.091 *	0.091 *				
a) Buying child's food	813	2.166	0.022	0.148 **	0.068	812	2.057	0.013	0.155 **	0.051				
n) Comforting child when tired or ill	808	2.257	0.070 *	0.154 **	0.032	816	2.126	0.067	0.090 *	0.101 **				
d) Changing diapers	802	2.296	0.120 **	0.219 **	0.082 *	797	2.178	0.117 **	0.186 **	0.080 *				
r) Dropping/ picking up child at school	749	2.327	0.058	0.144 **	0.113 **	731	2.242	0.026	0.066	0.119 **				
p) Getting up at night	807	2.400	0.084 *	0.145 **	0.110 **	821	2.197	0.068	0.126 **	0.071				
f) Putting child to bed	808	2.403	0.065	0.185 **	0.119 **	817	2.187	0.089 **	0.134 **	0.180 **				
l) Reading books to child	803	2.547	0.059	0.115 **	0.073	811	2.436	0.063	0.091 *	0.112 **				
e) Bathing child	812	2.589	0.091 **	0.179 **	0.080 *	814	2.466	0.095 **	0.174 **	0.111 **				
k) Taking child to the park	801	2.695	0.045	0.075 *	-0.009	793	2.581	0.004	0.058	0.038				
m) Teaching child something new	799	2.738	0.062	0.112 **	0.032	810	2.680	0.042	0.115 **	0.116 **				
j) Playing with child at home	809	2.824	0.077 *	0.081 *	0.040	817	2.832	0.064	0.059	0.050				
Indicator of global involvement in 19 activities	525	0.000	0.126 **	0.257 **	0.083	497	0.000	0.092 *	0.184 **	0.125 *				
Indicator of involvement in 5 most feminized activities	744	0.000	0.146 **	0.188 **	0.068	727	0.000	0.102 **	0.198 **	0.095 *				

## Results: Multiple linear regressions

### Wage earning men and their partners

	Explained variables:				
	Indicator global involvement 19 activities		Indicator involvement in 5 most feminized activities		Weekly working hours
	Fathers' opinion (1)	Mothers' opinion (2)	Fathers' opinion (3)	Mothers' opinion (4)	(now) (5)
(Constant)	1.686 *** <i>0.474</i>	0.901 <i>0.489</i>	0.676 <i>0.430</i>	0.437 <i>0.436</i>	18.017 *** <i>2.214</i>
<b>Total duration of childbirth leave</b>	<b>0.001</b> <i>0.002</i>	<b>0.000</b> <i>0.002</i>	<b>0.003 **</b> <i>0.001</i>	<b>0.002</b> <i>0.002</i>	<b>-0.022 ***</b> <i>0.006</i>
<b>Egalitarian gender attitudes</b>	<b>0.233 ***</b> <i>0.046</i>	<b>0.162 ***</b> <i>0.047</i>	<b>0.197 ***</b> <i>0.043</i>	<b>0.213 ***</b> <i>0.044</i>	<b>-0.099</b> <i>0.207</i>
<b>Working in a family-friendly company</b>	<b>0.071</b> <i>0.046</i>	<b>0.118 **</b> <i>0.050</i>	<b>0.064</b> <i>0.043</i>	<b>0.071</b> <i>0.044</i>	<b>-0.484 **</b> <i>0.202</i>
Age (when the child was born)	-0.018 <i>0.009</i>	-0.014 <i>0.010</i>	-0.008 <i>0.009</i>	-0.010 <i>0.009</i>	-0.010 <i>0.047</i>
Older siblings	-0.210 ** <i>0.091</i>	-0.116 <i>0.097</i>	-0.191 * <i>0.086</i>	-0.061 <i>0.088</i>	0.141 <i>0.423</i>
Low level of education	-0.116 <i>0.106</i>	-0.152 <i>0.111</i>	0.020 <i>0.096</i>	-0.022 <i>0.098</i>	0.383 <i>0.478</i>
Economic immigrant	-0.263 <i>0.184</i>	0.109 <i>0.190</i>	0.049 <i>0.162</i>	0.232 <i>0.166</i>	0.987 <i>0.927</i>
Public sector employee	0.353 *** <i>0.112</i>	0.447 *** <i>0.120</i>	0.319 *** <i>0.105</i>	0.318 *** <i>0.109</i>	-0.293 <i>0.508</i>
Temporary contract	0.237 <i>0.140</i>	0.175 <i>0.145</i>	0.212 <i>0.133</i>	0.232 <i>0.133</i>	0.221 <i>0.730</i>
Director/manager	-0.031 <i>0.177</i>	0.109 <i>0.216</i>	-0.219 <i>0.177</i>	-0.223 <i>0.184</i>	0.590 <i>0.803</i>
Net income>2500 Euros	-0.360 ** <i>0.141</i>	-0.479 *** <i>0.166</i>	-0.269 <i>0.143</i>	-0.336 ** <i>0.148</i>	1.171 <i>0.649</i>
Mother's net income>2000 euros	0.238 <i>0.149</i>	0.164 <i>0.166</i>	0.182 <i>0.143</i>	0.273 <i>0.148</i>	-0.981 <i>0.642</i>
Weekly working hours (before)	-0.028 *** <i>0.007</i>	-0.016 * <i>0.007</i>	-0.015 ** <i>0.006</i>	-0.010 <i>0.006</i>	0.569 *** <i>0.032</i>
Mother worked 40 hours or more	0.158 <i>0.089</i>	0.411 *** <i>0.095</i>	0.183 * <i>0.083</i>	0.273 *** <i>0.085</i>	0.555 <i>0.401</i>
Happy couple relationship	0.293 *** <i>0.094</i>	0.228 ** <i>0.101</i>	0.307 *** <i>0.086</i>	0.231 *** <i>0.088</i>	-0.228 <i>0.419</i>
Number of observations	401	370	547	519	518
Adjusted R-2	0.217	0.177	0.140	0.129	0.453
S. E. of the regression	0.865	0.880	0.948	0.942	4.454
F-test	8.428	6.305	6.932	6.143	29.656
Prob (F-test)	0.000	0.000	0.000	0.000	0.000

The columns show the estimated coefficient for each variable, and below it (in italics) the standard error of each.

\*p<0.05; \*\*p<0.025;

\*\*\*p<0.01.

## Conclusions **part I:**

- In short, this study provides some empirical evidence that a longer period of childbirth leave could encourage greater father involvement in child care activities, especially in those more routine activities in which they are still quite a minority.
- Moreover, and as suggested by the literature, having egalitarian gender attitudes is an important determinant of father involvement.
- And finally, working for a company that facilitates reconciliation can also have an effect on father involvement, especially in childcare activities that are more subject to restrictions on working hours, such as dropping/picking up child at school.

## Policy implications:

- Need to progressively equalize paternity leave with maternity leave: Equal, non-transferable and well-paid parental leaves (PLENT, <http://www.equalandnontransferable.org/en/>)
- Advance in reconciliation policies applied by companies and public sector.
- Reconciliation policies must be effectively open to male workers

# Second part



- Starting point: **Increasing shared responsibility between men and women for childcare** is very necessary to make progress on gender equality in the labor market
- Emerging figure of the “**new father**”, with egalitarian gender attitudes and high willingness to be fully involved in childcare.
- **When de father is more oriented to child care** → the mother has less constraints to participate fully in the labor market → positive influence in **professional advance in careers of mothers?**

## Again causality in both directions:

- “When the mother works more hours outside the home → more pressure on the father to do family work (including childcare) → father more involved in childcare”
- “When the father is more oriented to child care → the mother has less constraints to participate fully in the labor market → she can work more hours outside the home”

### • There is an important literature on the first point (based on **time-use data**):

**Norway:** Kitterød and Pettersen (2006) <http://www.policy.hu/takacs/courses/matters/Norway06.pdf>

**France:** Rizavi and Sofer (2010) <http://halshs.archives-ouvertes.fr/docs/00/46/14/94/PDF/10009.pdf>

**U.S.:** Bonney and Kelley (1999) <http://psycnet.apa.org/psycinfo/1999-11039-007>

**Raley *et al.* (2012)**

<http://www.jstor.org/discover/10.1086/663354?uid=19571&uid=3738288&uid=2134&uid=2&uid=70&uid=3&uid=67&uid=19569&uid=62&sid=21103858647903>

### Two kinds of conclusions:

- Women do most of the housework, even when they work more hours outside the home and supply the majority of the income.
- But there is some influence of maternal participation in the labor market in paternal participation in housework and child care: in particular, when the mother spends more time in the labor market the father tends to participate more in routine care and in childcare associated with responsibility (Raley *et al.* 2012)



- **The literature on the motherhood labor penalty considers the second point**

According to this literature, there are many determinants of the motherhood labor penalty. But several articles consider the father's involvement in child care as a determinant that reduces the motherhood labor penalty; for instance:

**(U.S.) Budig and Hodges(2010)** <http://asr.sagepub.com/content/75/5/705.short>

**(Spain) Herrarte *et al.* (2012)** <http://link.springer.com/article/10.1007%2Fs11150-012-9151-z>



**Hypothesis 5. The involvement of fathers in child care is POSITIVELY ASSOCIATED with professional advance in careers of mothers**

**Hypothesis 6. A part of the positive association stated in Hypothesis 5 follows this DIRECTION OF CAUSALITY: fathers with advanced attitudes towards childcare (“new fathers”) tend to be more involved in childcare, and this influences positively the professional career of their female couples**

**Hypothesis 7. Other forms of assistance with child care (by grandparents or domestic service) influence positively the professional career of the mothers**

Sub-sample used: cohabiting/married mothers that had employment when the child was born

## 5 indicators of mother labor performance (dependent variables):

- **“The mother did not return to work after the childbirth leave”**, dichotomous variable: "1"="she didn't return to her job (she became unemployed or inactive)"; "0"="she returned to her job".
- **“Weekly working hours of the mother, at present”**,  
Number of hours of working week by the mother at the time of completing the survey.
- **“The mother has improved her level of earnings”**,  
(at the time of the survey, in January-May 2012, the mother says she has improved her level of earnings compared to when the child was born).  
Dichotomous variable: "1"="she improved her level of earnings"; "0"="other cases".
- **“Being a mother negatively affected her career”**,  
Likert scale response: “1”=“at all”; “2”=“to a small extent”; “3”=“a little”; and “4”=“to a large degree”
- **“The mother has sacrificed more opportunities than the father”**,  
dichotomous variable: "1"="she has sacrificed more opportunities"; "0"="other cases"

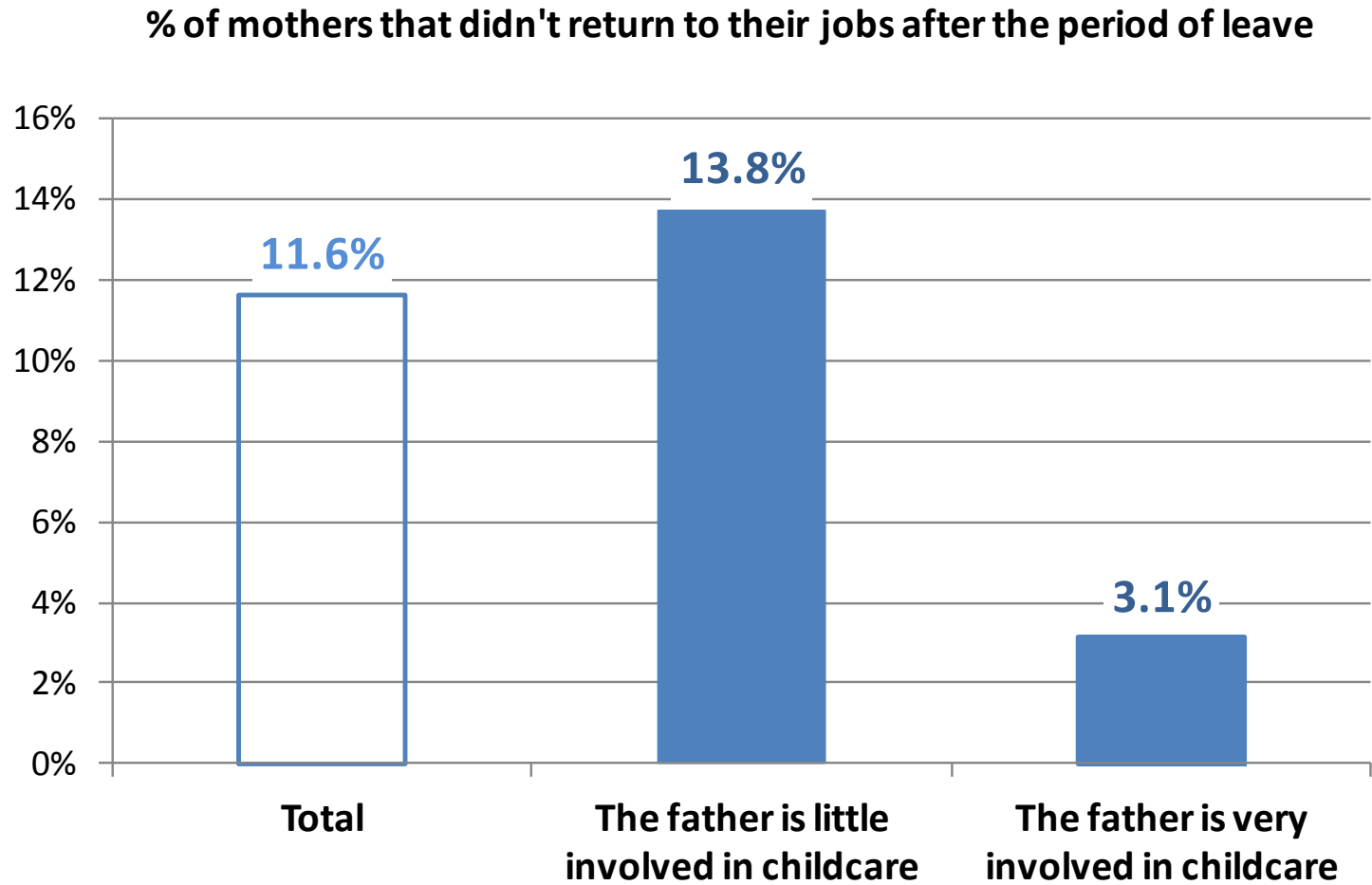
## Independent variables:

- **“V1. Indicator of father involvement in 5 most feminized activities”**, obtained by a factor analysis with the 5 most feminized (and routine) childcare activities. Opinion of the mother. A higher value would mean a greater involvement of the father.
- **“V2. Help from grandparents”**, dichotomous variable: "1"="yes"; "0"="no"
- **“V3. Help from domestic service”**, dichotomous variable: "1"="yes"; "0"="no"

## Other independent variables (control variables):

- **The child has older sibling**, dichotomous variable (1=yes; 0=no).
  - **Traditional attitudes childcare (mother)**, indicator obtained by a factor analysis from these two questions:
    - “A working mother can establish just as warm and secure a relationship with her baby as a mother who does not work”
    - “A man may be as qualified as a woman to take care of his baby and connect emotionally with him”
- Likert scale response: “1”=“strongly agree”; ... ; “5”=“strongly disagree”
- **Age at time of birth (mother)**, age in years
  - **University (mother)**, dichotomous variable (1=yes; 0=no).
  - **High School (mother)**, dichotomous variable (1=yes; 0=no).
  - **Public sector employee (mother)**, dichotomous variable (1=yes; 0=no).
  - **Self employed (mother)**, dichotomous variable (1=yes; 0=no).
  - **Worked in an FFC (mother)**, dichotomous variable (1=yes; 0=no).
  - **Had a temporary contract (mother)**, dichotomous variable (1=yes; 0=no).
  - **Earnings level (mother)**, “1”=“to €600”; “2”=“€600-€1000”; “3”=“€1001-€1500”; “4”=“€1501-€2000”; “5”= “€2001-€2500”; “6”=“€2501-€3000”; “7”=“€3001-€4000”; “8”=“above €4000”
  - **Earnings level (father)**, idem
  - **Happy couple relationship (mother's opinion)**, dichotomous variable (1=yes; 0=no).
  - **Child born in 2008 or later**, dichotomous variable (1=yes; 0=no)

**1º - Relation between “The mother did not return to work after the childbirth leave” and father involvement in childcare**



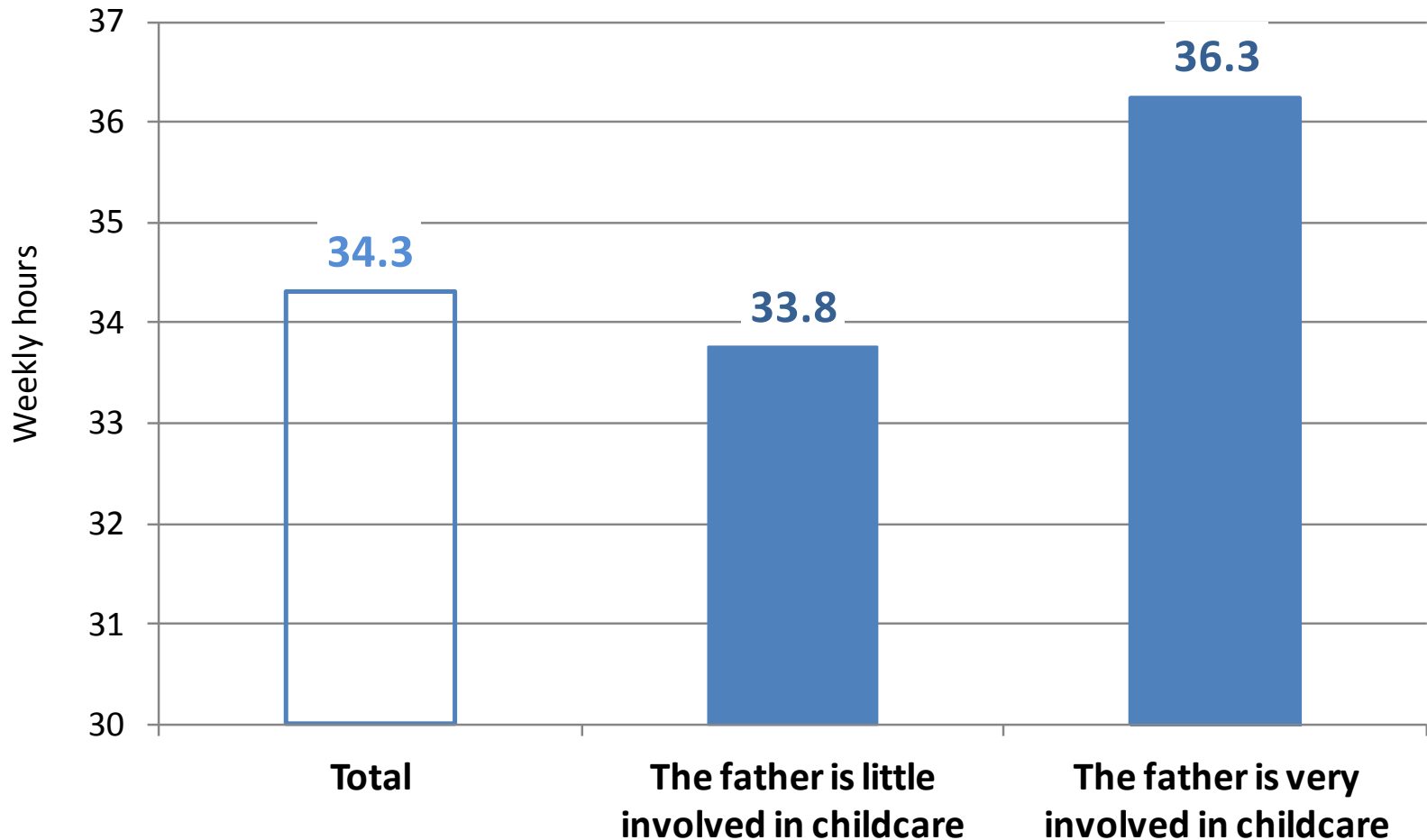
Relation between “**The mother did not return to work after the childbirth leave**” and father’s involvement, after controlling for the effects of other determinants of mother’s performance in labor market (logistic regression model)

<u>Independent variables:</u>	<u>Dependent variable:</u>				
	<b>The mother did not return to work after the childbirth leave</b>				
	<b>B</b>	S.E.	Wald	Sig.	Odds Ratio
V1-Indicator father involvement 5 most feminized activities	<b>-0.491 ***</b>	0.158	9.635	0.002	0.612
V2-Help from grandparents	<b>-0.566 *</b>	0.298	3.612	0.057	0.568
V3-Help from domestic service	<b>-1.359 *</b>	0.765	3.153	0.076	0.257
The child has older sibling	<b>-0.550 *</b>	0.294	3.509	0.061	0.577
Traditional attitudes childcare (mother)	<b>0.211</b>	0.132	2.564	0.109	1.235
Age at time of birth (mother)	<b>-0.021</b>	0.034	0.383	0.536	0.979
University (mother)	<b>-0.492</b>	0.368	1.786	0.181	0.612
High School (mother)	<b>-0.162</b>	0.332	0.240	0.624	0.850
Public sector employee (mother)	<b>-0.796 *</b>	0.432	3.391	0.066	0.451
Self employed (mother)	<b>0.364</b>	0.393	0.859	0.354	1.439
Worked in a FFC (mother)	<b>-0.828 *</b>	0.436	3.602	0.058	0.437
Had a temporary contract (mother)	<b>1.261 ***</b>	0.330	14.566	0.000	3.530
Earnings level (mother)	<b>-0.195</b>	0.146	1.786	0.181	0.823
Earnings level (father)	<b>0.080</b>	0.111	0.522	0.470	1.083
Happy couple relationship (mother's opinion)	<b>0.506 *</b>	0.279	3.301	0.069	1.659
Child born in 2008 or later	<b>-0.607 *</b>	0.313	3.770	0.052	0.545
Constant	<b>-0.549</b>	1.108	0.245	0.620	0.578
		N=761	-2 log likelihood 398,086	Cox & Snell R Square 0.116	Nagelkerke R square 0.230

\* Sig. P-values<0.1; \*\* Sig. P-values<0,05; \*\*\* Sig. P-values<0,01

**2º - Relation between “Weekly working hours of the mother, at present” and father involvement in childcare**

**Weekly working hours of the mother, at present**

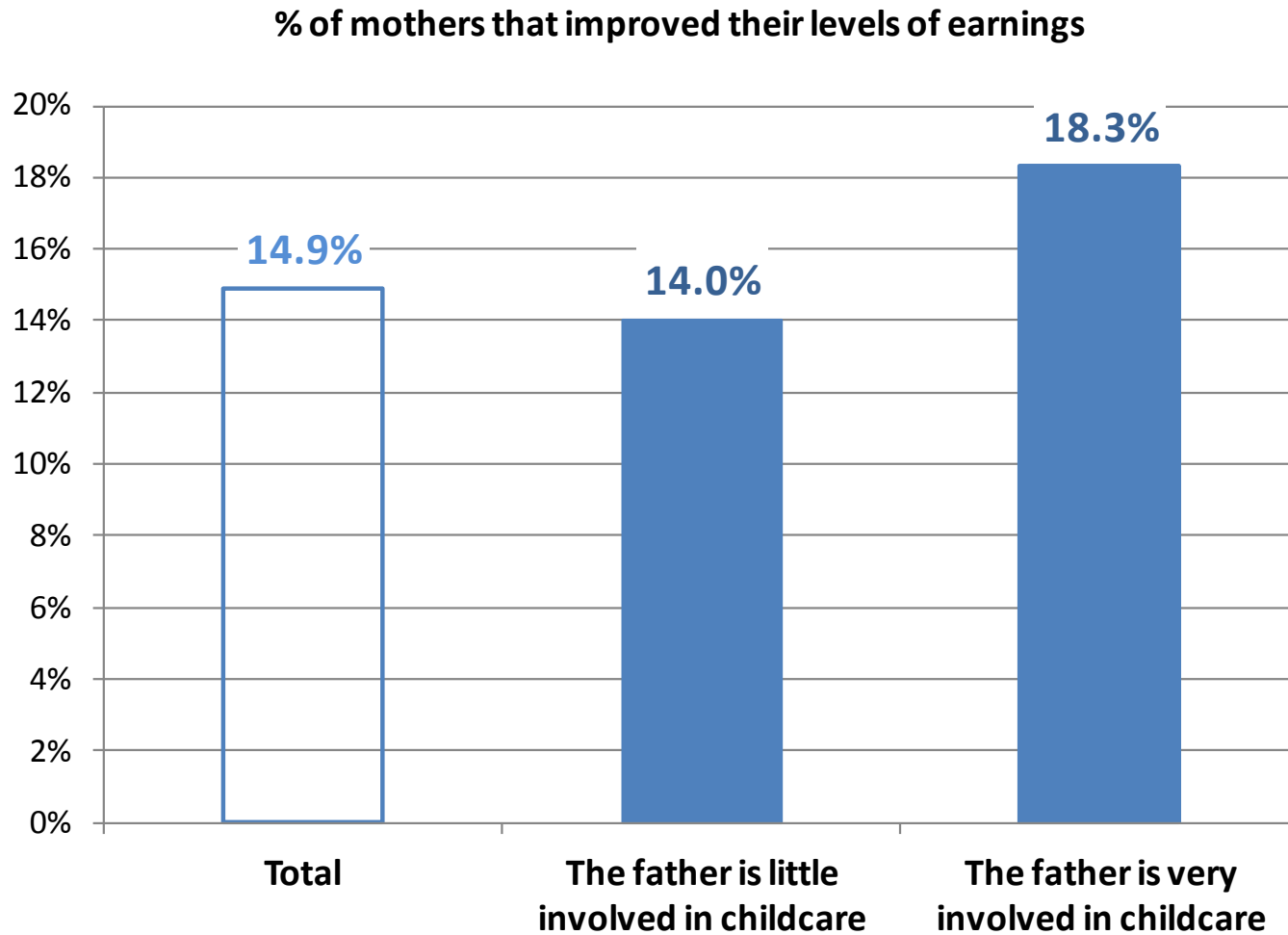




Relation between “**Weekly hours of the mother, at present**” and father’s involvement, after controlling for the effects of other determinants of mother’s performance in labor market (linear regression model)

Independent variables:	Dependent variable:			
	Weekly working hours of the mother, at present			
	B	S.E.	t	Sig.
V1-Indicator father involvement 5 most feminized activities	<b>0.980 ***</b>	0.351	2.795	0.005
V2-Help from grandparents	<b>1.313 *</b>	0.711	1.847	0.065
V3-Help from domestic service	<b>2.472 **</b>	1.045	2.366	0.018
The child has older sibling	<b>0.152</b>	0.743	0.204	0.838
Traditional attitudes childcare (mother)	<b>-0.355</b>	0.393	-0.904	0.366
Age at time of birth (mother)	<b>-0.106</b>	0.097	-1.098	0.273
University (mother)	<b>1.980 *</b>	1.054	1.878	0.061
High School (mother)	<b>1.706</b>	1.042	1.637	0.102
Public sector employee (mother)	<b>-0.981</b>	0.878	-1.117	0.264
Self employed (mother)	<b>-0.900</b>	1.182	-0.761	0.447
Worked in a FFC (mother)	<b>0.119</b>	0.799	0.149	0.881
Had a temporary contract (mother)	<b>-1.650</b>	1.079	-1.529	0.127
Earnings level (mother)	<b>1.227 ***</b>	0.346	3.544	0.000
Earnings level (father)	<b>-0.673 **</b>	0.301	-2.232	0.026
Happy couple relationship (mother's opinion)	<b>-0.420</b>	0.768	-0.547	0.584
Child born in 2008 or later	<b>-0.262</b>	0.727	-0.360	0.719
Constant	<b>34.644 ***</b>	3.149	11.003	0.000
N	542			
Adjusted R Square	0.078			
Std. Error of the Estimate	7.95910			
F	3.860			
Prob (F)	0.000			

### 3º - Relation between “The mother improved her level of earnings” and father involvement in childcare



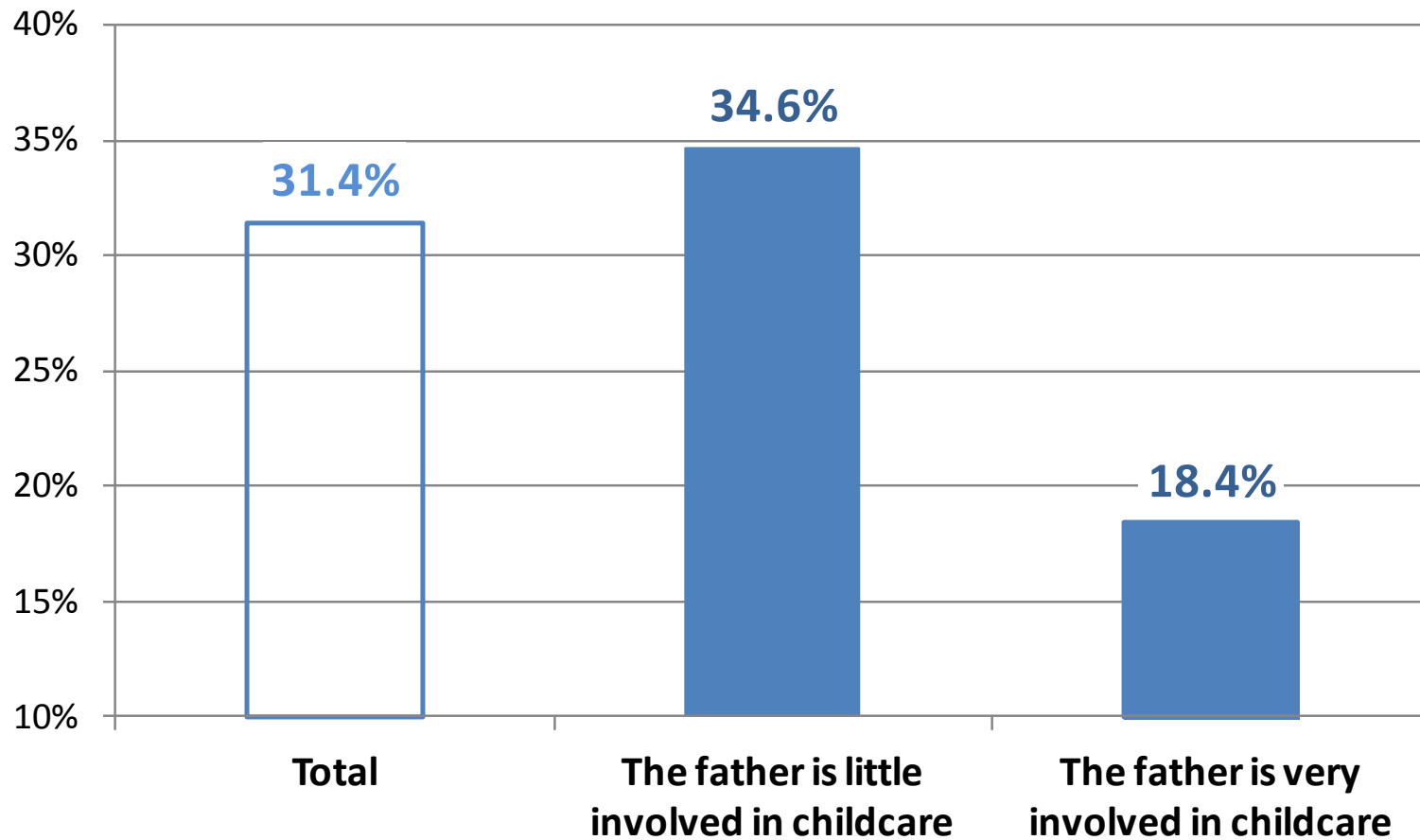
Relation between “**The mother improved her level of earnings**” and father involvement in childcare, after controlling for the effects of other determinants of mother’s performance in labor market (logistic regression model)

Independent variables:	Dependent variable: The mother has improve her level of earnings				
	B	S.E.	Wald	Sig.	Odds Ratio
V1-Indicator father involvement 5 most feminized activities	<b>0.306 ***</b>	0.114	7.241	0.007	1.357
V2-Help from grandparents	<b>0.829 ***</b>	0.228	13.253	0.000	2.291
V3-Help from domestic service	<b>0.523</b>	0.319	2.686	0.101	1.688
The child has older sibling	<b>0.192</b>	0.244	0.623	0.430	1.212
Traditional attitudes childcare (mother)	<b>-0.390 ***</b>	0.143	7.459	0.006	0.677
Age at time of birth (mother)	<b>-0.021</b>	0.032	0.428	0.513	0.980
University (mother)	<b>0.559</b>	0.356	2.466	0.116	1.749
High School (mother)	<b>0.606 *</b>	0.354	2.932	0.087	1.833
Public sector employee (mother)	<b>-0.250</b>	0.297	0.711	0.399	0.778
Self employed (mother)	<b>-1.861 ***</b>	0.622	8.946	0.003	0.156
Worked in a FFC (mother)	<b>0.200</b>	0.254	0.616	0.432	1.221
Had a temporary contract (mother)	<b>-0.040</b>	0.353	0.013	0.909	0.960
Earnings level (mother)	<b>0.002</b>	0.110	0.000	0.985	1.002
Earnings level (father)	<b>-0.012</b>	0.097	0.016	0.900	0.988
Happy couple relationship (mother's opinion)	<b>-0.248</b>	0.253	0.961	0.327	0.781
Child born in 2008 or later	<b>-0.908 ***</b>	0.273	11.071	0.001	0.403
Constant	<b>-1.655</b>	1.035	2.555	0.110	0.191
		N=692	-2 log likelihood 531,406	Cox & Snell R Square 0.085	Nagelkerke R square 0.147

\* Sig. P-values<0.1; \*\* Sig. P-values<0,05; \*\*\* Sig. P-values<0,01

**4º - Relation between “Motherhood negatively affected her career” (“to a large degree”) and father involvement in childcare**

**% Mothers for whom motherhood “to a large degree” negatively affected their careers**

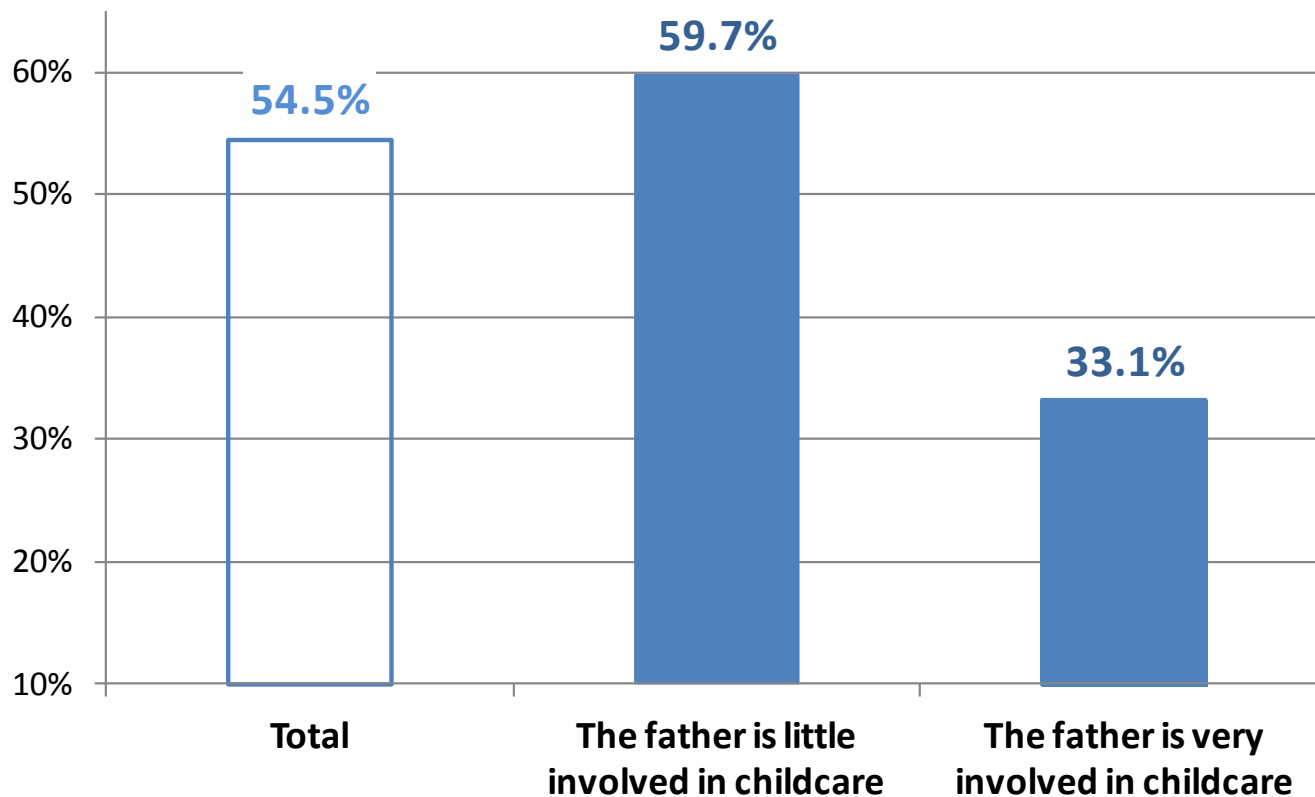


Relation between “**Motherhood negatively affect her career**” and father involvement in childcare, after controlling for the effects of other determinants of mother’s performance in labor market (linear regression model)

Independent variables:	Dependent variable: Being mother negatively affected her career			
	B	S.E.	t	Sig.
V1-Indicator father involvement 5 most feminized activities	<b>-0.160 ***</b>	0.045	-3.552	0.000
V2-Help from grandparents	<b>-0.133</b>	0.091	-1.453	0.147
V3-Help from domestic service	<b>0.038</b>	0.140	0.270	0.787
The child has older sibling	<b>-0.067</b>	0.094	-0.716	0.474
Traditional attitudes childcare (mother)	<b>0.181 ***</b>	0.048	3.750	0.000
Age at time of birth (mother)	<b>-0.003</b>	0.012	-0.267	0.790
University (mother)	<b>0.132</b>	0.129	1.023	0.307
High School (mother)	<b>0.048</b>	0.126	0.382	0.703
Public sector employee (mother)	<b>-0.435 ***</b>	0.114	-3.799	0.000
Self employed (mother)	<b>-0.087</b>	0.150	-0.580	0.562
Worked in a FFC (mother)	<b>-0.151</b>	0.106	-1.420	0.156
Had a temporary contract (mother)	<b>-0.022</b>	0.131	-0.170	0.865
Earnings level (mother)	<b>0.069</b>	0.043	1.592	0.112
Earnings level (father)	<b>0.105 ***</b>	0.037	2.853	0.004
Happy couple relationship (mother's opinion)	<b>-0.140</b>	0.096	-1.455	0.146
Child born in 2008 or later	<b>-0.032</b>	0.093	-0.341	0.733
Constant	<b>2.368 ***</b>	0.386	6.136	0.000
N	689			
Adjusted R Square	0.095			
Std. Error of the Estimate	1.134			
F-statistic	5.533			
P (F-statistic)	0.000			

## 5º - Relation between “% Mothers who say they have sacrificed more career opportunities than the father” and father involvement in childcare

**% Mothers who say they have sacrificed more career opportunities than the father (as a result of motherhood)**



**5º - Relation between “% Mothers who say they have sacrificed more career opportunities than the father” and father involvement in childcare, after controlling for the effects of other determinants of mother’s performance in labor market (logistic regression model)**

Independent variables:	Dependent variable: The mother has sacrificed more opportunities than the father				
	B	S.E.	Wald	Sig.	Odds Ratio
V1-Indicator father involvement 5 most feminized activities	<b>-0.444 ***</b>	0.088	25.620	0.000	0.642
V2-Help from grandparents	<b>-0.098</b>	0.172	0.324	0.569	0.907
V3-Help from domestic service	<b>0.186</b>	0.270	0.472	0.492	1.204
The child has older sibling	<b>0.204</b>	0.178	1.319	0.251	1.226
Traditional attitudes childcare (mother)	<b>0.336 ***</b>	0.093	13.145	0.000	1.399
Age at time of birth (mother)	<b>-0.032</b>	0.023	2.004	0.157	0.968
University (mother)	<b>-0.313</b>	0.245	1.640	0.200	0.731
High School (mother)	<b>-0.214</b>	0.238	0.808	0.369	0.808
Public sector employee (mother)	<b>-0.881 ***</b>	0.217	16.486	0.000	0.415
Self employed (mother)	<b>-0.126</b>	0.279	0.205	0.650	0.881
Worked in a FFC (mother)	<b>-0.075</b>	0.202	0.137	0.711	0.928
Had a temporary contract (mother)	<b>0.254</b>	0.246	1.066	0.302	1.289
Earnings level (mother)	<b>0.095</b>	0.083	1.285	0.257	1.099
Earnings level (father)	<b>0.230 ***</b>	0.073	9.995	0.002	1.258
Happy couple relationship (mother's opinion)	<b>-0.306 *</b>	0.180	2.895	0.089	0.736
Child born in 2008 or later	<b>0.109</b>	0.177	0.380	0.538	1.115
Constant	<b>0.531</b>	0.735	0.522	0.470	1.701
		N=692	-2 log likelihood 858,110	Cox & Snell R Square 0.127	Nagelkerke R square 0.170

\* Sig. P-values<0.1; \*\* Sig. P-values<0,05; \*\*\* Sig. P-values<0,01

## Conclusions **part II**:

- In short, we provide some empirical evidence which suggests that **the involvement of fathers in child care is positively associated with professional advance in careers of mothers** (Hypothesis 5)

- **Work in progress**: With respect to the previous result, we interpret that part of this follows this direction of causality: fathers with advanced attitudes towards childcare (“new fathers”) tend to be more involved in childcare, and this influences positively the professional career of their female couples.

We are now trying to use the **method of instrumental variables** in order to estimate this causal relationship. Our instrument (that does not itself belong to the explanatory variables and is correlated with the indicator of father involvement variable) is “Traditional attitudes of the father regarding father childcare”...

- The variables “**Help from grandparents**” and “**Help from domestic service**” have also a significant positive impact on the performance of mothers in labor market (**Hypothesis 7**)

## Policy implications:

- It is necessary to encourage the involvement of fathers in childcare. These recommendations to encourage father involvement were already discussed above.



**Thanks for your  
attention!**

