Good for Some Mothers, Bad for Many Women: Unintended Effects of Parents' Right to Work Part-Time A Natural Experiment with Administrative Data

Núria Rodríguez-Planas, City University of New York, Queens College, and IZA
(with Daniel Fernández Kranz, IE Business School)

Mandated parental benefits

- Aim at protecting and granting rights to working mothers (fathers)

- However, these policies **may backfire** because they increase the cost of hiring women as employers need to adapt to workers' parental leave or work-week reduction entitlements

- They may lead to substitution away from female employment (or substitution away from good jobs) or lower relative wages

Most evidence focuses on maternal leave (and maternal employment)

- Results depend on the type of maternal leave (paid, length, wage replacement, flexibility)--Fagan and Hebson 2006; Ray *et al* 2008 and the country's institutional set up (childcare supply, availability of part-time work, cultural factors)--Jaumotte 2003; OECD 2007.

- The evidence suggests that there are no or very small negative effects on maternal employment or wages at least in the long-run (Klerman and Leibowitz, 1997, 1999; Albrecht *et al.*, 1998; Waldfogel, 1998, 1999; Baum, 2003; Lalive and Zweimüller, 2009).

- Some exceptions emerge. For instance, Schönberg and Ludsteck, 2012, find that a reform which extended the maternity benefit period beyond the job protection period discouraged mothers to return to work and lowered their labor market income.

Fewer studies focus on childbearing-aged women (at-risk population)

- Gruber (1994) finds no negative effects of mandated maternity benefits on women's employment in the U.S. However, he does find evidence that employers are able to shift at least part of these costs to women by lowering their wages.

- Ruhm (1998) finds detrimental effects of maternity leave coverage on women's wages relative to men in Europe-- although he finds that more generous policies improve women's employment.

- Zveglich and Meulen Rodgers (2003) find that maternity benefits increase women's actual hours worked and employment in Taiwan.

Possible reasons for lack of negative effect on employment:

- Research has mainly focused on one particular statutory right, parental leave, which is typically short-lived (around 12 weeks in the US, up to 3 years in Germany)

- Focuses on countries with flexible labor markets

- **Today's talk: part-time work entitlement for parents of small children**

The right to work part-time for parents with small children

- First offered in Sweden in 1978 when parents of children under 8 years of age received the right to reduce their individual daily working hours by 25% (and return to full-time work afterwards)

- Increasingly popular in the 1990s: UK, New Zealand, Australia, Germany, Spain have implemented it

- As it implies <u>long benefits</u>, the unintended employment effects of such protective measures for working mothers (and women in general) may be large

- Especially when such benefits are implemented <u>in countries with rigid labor institutions</u>, where women in general, and mothers in particular, have already large difficulties to enter the primary segment of the labor market

<u>Main objective of this paper:</u> Analyzing the effects of such type of benefit on female employment and wages using rich and long Administrative dataset

Main results / Contribution

- **Was it effective to increase part-time work among mothers of small children?**

  Yes, conditional on mothers having a permanent contract.

- **Were there unintended effects of the Spanish law on childbearing-aged women?**

  Yes, employers substituted childbearing-aged women away from employment and from good jobs, and lowered their wages relative to men.

- **Causal relationship: DiD methodology**

Outline

- Institutional background and the family-friendly law

- Empirical Strategy and Data

- Was the law effective to get mommies into PT work?

- Are there any unintended effects of the Law on the <u>at-risk</u> population (childbearing aged women)?

- Conclusion

Economic and institutional background

Spain in the late 1990s

- *It is a traditional country.* Child care is still a woman's main responsibility.

- *It is not a family-friendly country*. Short maternity leave. Expensive child care for children below 3 years old. Low female employment rates (female employment rate: 65%; maternal employment rate: 35%). Low fertility rates.

- *With a segmented labor market*. Permanent contracts (good jobs) versus fixed-term contracts (bad jobs)

- *Wages fall with motherhood.* Lacuesta, Fernández-Kranz and Rodríguez-Planas (2012) find a 9% unconditional individual fixed-effects motherhood earnings reduction.

- *Low incidence of part-time work*. Part-time work is mainly concentrated among women.

A highly segmented labor market and low use of PT work

	Incidence of female PT employment	Incidence of female temporary employment
Australia	37.7%	5.9%
Belgium	33.8%	9.7%
Germany	38.6%	14.9%
The Netherlands	59.9%	20%
Norway	30.8%	11.1%
Spain	**21.1%**	**31.2%**
The United Kingdom	37.7%	6%
The United States	17.8%	4.2%

Law 39/1999 (November 5th)

- **<u>Workers with children under 7 years</u>** have the right to ask for a reduction of 1/3 to 1/2 of the usual full-time schedule, with an equivalent reduction in their salary.

- The law declared a layoff invalid if the worker had previously asked for a work-week reduction due to family responsibilities.

- *De facto*, it protected workers with permanent contracts to a larger extent than those under fixed-term contracts .

- If employers do not want to offer reduced work hours to workers with fixed-term contracts, they only have to wait for their contract to expire to terminate the employment relationship.

Unintended effects on childbearing aged women

- Employers ought to be more cautious when hiring women (under permanent contract—however, there is already very little hiring under permanent contract anyways)

- Among those working at (t-1), employers may be less likely to convert women into permanent contract, or they may make it easier for women to "let go" a permanent contract

- Employers ought to prefer fixed-term contracts for women (but not for men)

- Employers may lower women's relative wages

- **<u>Populations of interest:</u>**
  - Childbearing-aged women (regardless of family status)

- **<u>Three different employment states at (t-1):</u>**
  - Those who were not working at (t-1) ➡ effect on hiring (although labor supply may also be at works here)

  - Those who were working under PERMANENT contract at (t-1)

  - Those who were working under FIXED-TERM contract at (t-1)

Identification Strategy

MCVL 1996-2010 Social Security Records

- Unbalanced panel data--4 years before and 11 after the reform

- Sample restrictions:
  - Private sector wage and salary workers
  - Men and women to be between 23 and 45 years old (prime childbearing-aged individuals)

Individual Fixed-Effects

- As we have a long panel (4 years before and 11 years afterwards with quarterly data),

- Individual FE will be superior to DiD (OLS) model

$$Y_{it} = \alpha_0 + \alpha_1 Post\_1999_{it} + \alpha_2 \left(Women_i * Post\_1999_{it} \right)$$
$$+ \beta_1 X_{it} + \alpha_2 Trend + \alpha_3 (Trend * Women_i) + \gamma_i + u_{it}$$

- <u>Vector X includes</u>: Age squared, and children dummies (by age of the child). All of these dummies interacted by treatment group

- CCAA fixed-effects, a trend and trend interacted by treatment group

- Identification is driven by those women (and men) who are observed both before and after the reform

Identifying assumption

- Aside from the 1999 law, there are no other shocks in or after the implementation of the law that may affect the differential employment outcomes between prime childbearing-aged men and women 18 to 44 years old (net of any underlying trends).

- <u>Because the intervention may be endogenous or to control for gender specific trends:</u>

    - We include a time trend specific to the treated individuals

- <u>Several robustness checks (including alternative control group: older women)</u>

2010 MCVL

Quarterly data from 1996-2010

Outcome variables

- <u>Sub-populations defined by:</u>

    - Working under permanent contract at *(t-1)*
    - Working under fixed-term contract at *(t-1)*
    - Not working at *(t-1)*

- <u>Using a linear probability model:</u>

    - Not employed at survey date (=0 if employment)

    - Permanent employment at survey date (=0 if fixed-term contract).

Sample sizes for identification

- **When we condition on having a permanent contract at *(t-1)*:**

    - 4,028 women
    - 4,486 men

- **When we condition on having a fixed-term contract at (t-1):**

    - 4,953 women
    - 3,170 men

- **When we condition on not working at (t-1):**

    - 3,538 women
    - 1,925 men

Pre-2000 sample characteristics

	PERMANENT at t-1		FIXED-TERM at t-1		NON-WORK at t-1	
	Males	Females	Males	Females	Males	Females
Probability of PERMANENT at t	.96	.95	.05	.06	.02	.02
Probability of NON-WORK at t	.02	.02	.13	.15	.74	.76
Ln hourly wage at t	2.26	2.13	2.06	1.95	2.00	1.97
With less than secondary education	0.487	0.341	0.347	0.359	0.324	0.449
With secondary education	0.314	0.409	0.283	0.306	0.284	0.253
With college degree	0.197	0.248	0.368	0.331	0.391	0.296
Without children	0.769	0.770	0.945	0.862	0.943	0.746
Age	29.19	28.52	24.95	25.42	24.40	25.88
Unemployment rate	18.90	19.08	17.84	17.76	17.41	17.37

Result 1:

Was the reform effective at facilitating work-week reduction for workers with small children?

Incidence PT work conditional on permanent employment, WOMEN

Incidence of Part-Time
Female workers with a permanent contract

Child0-6
Child8-12
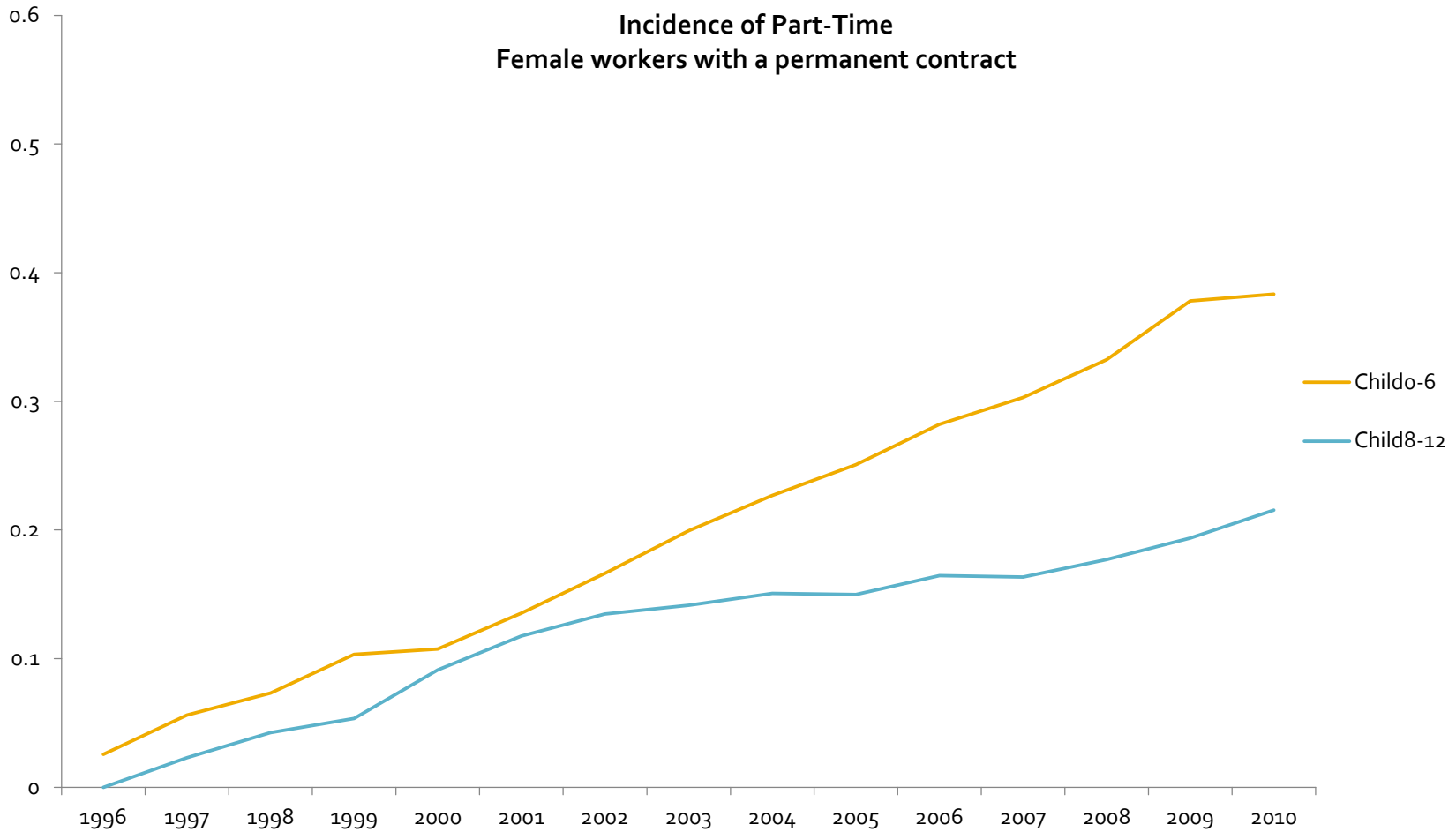
Incidence PT work conditional on fixed-term employment, WOMEN

Incidence of part-time
Female workers with temporary contract

Incidence PT work conditional on permanent employment, MEN

Incidence of Part-Time
Male workers with a permanent contract

Incidence PT work conditional on fixed-term employment, MEN

**Incidence of Part-Time
Male workers with temporary contract**

Legend: Child0-6, Child8-12
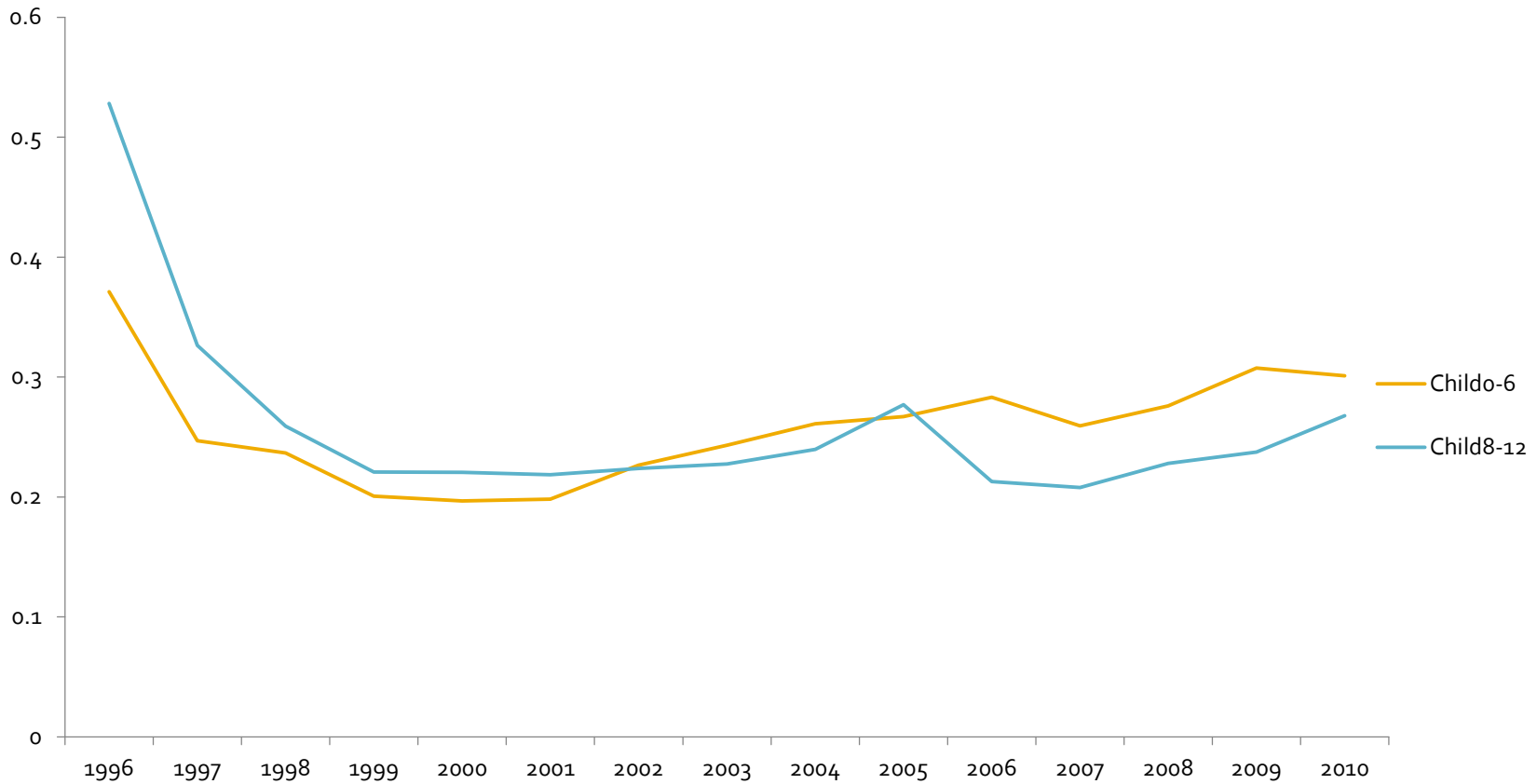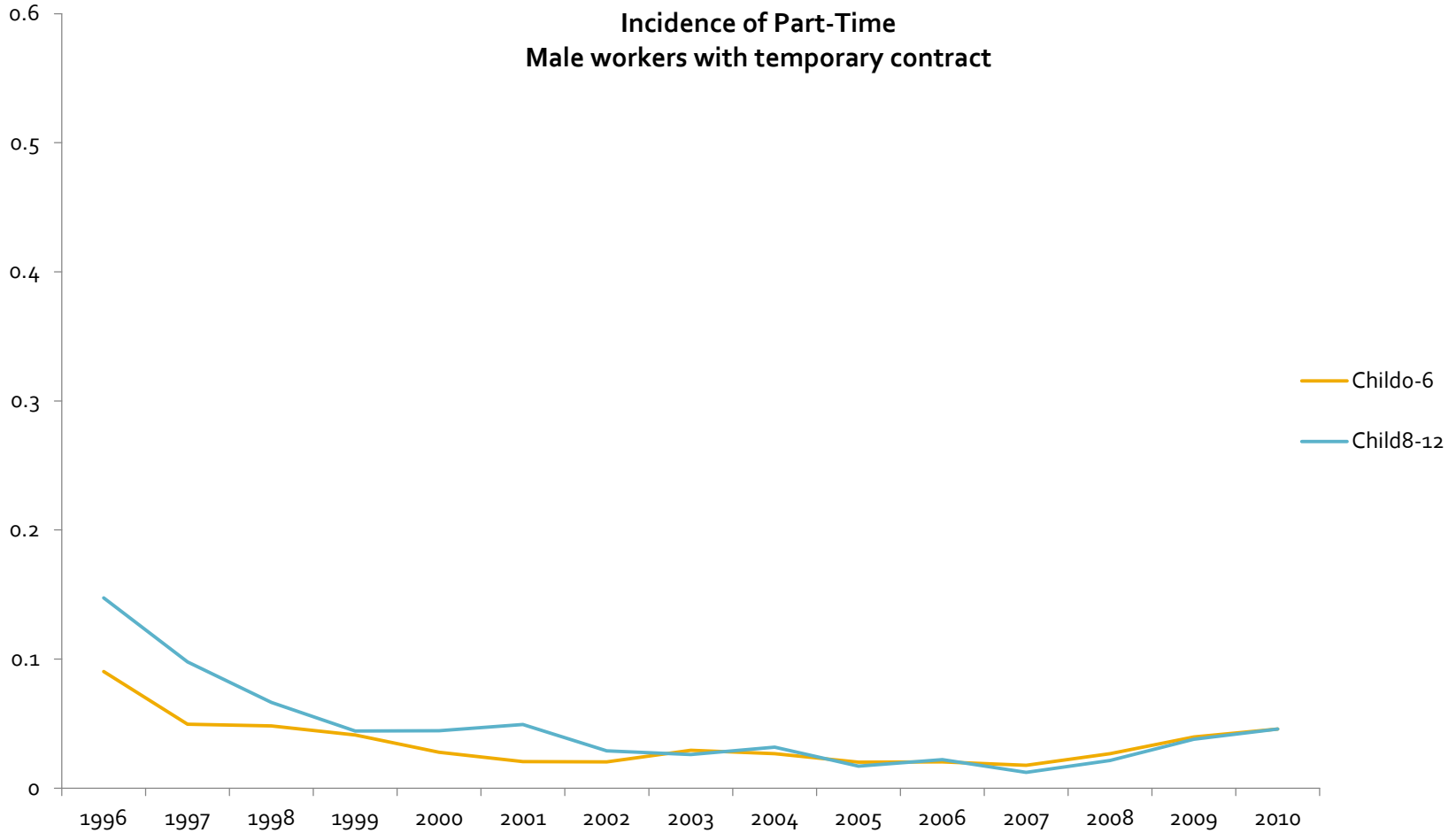
Was the law effective?
Stock Probabilities by Type of Contrac at *(t-1)*

	Women		
	Permanent empl. at t-1	*Fixed-term a t-1*	
PART-TIME at t	**.100***** **(.016)**	.041 (.026)	
Pre-99 mean	**.09**	.22	

Was the law effective? Transition probabilities

Women		
	Permanent empl. at t-1	*Fixed-term a t-1*
PART-TIME at t **(being Full-time at t-1)**	**.059***** **(.015)**	.015 (.023)
Pre-99 mean	**.062**	.100
Men		
PART-TIME at t **(being Full-time at t-1)**	.002 (.007)	-.006 (.008)
Pre-99 mean	.016	.020
PLACEBO: Women Pre-1999		
PART-TIME at t **(being Full-time at t-1)**	.015 (.018)	.008 (.021)
Pre-treatment avg	.017	.061

Result 2:

Did the reform lead to a substitution away from (good) jobs for women?

Raw transitions from into employment

Panel a. Not Working at T-1
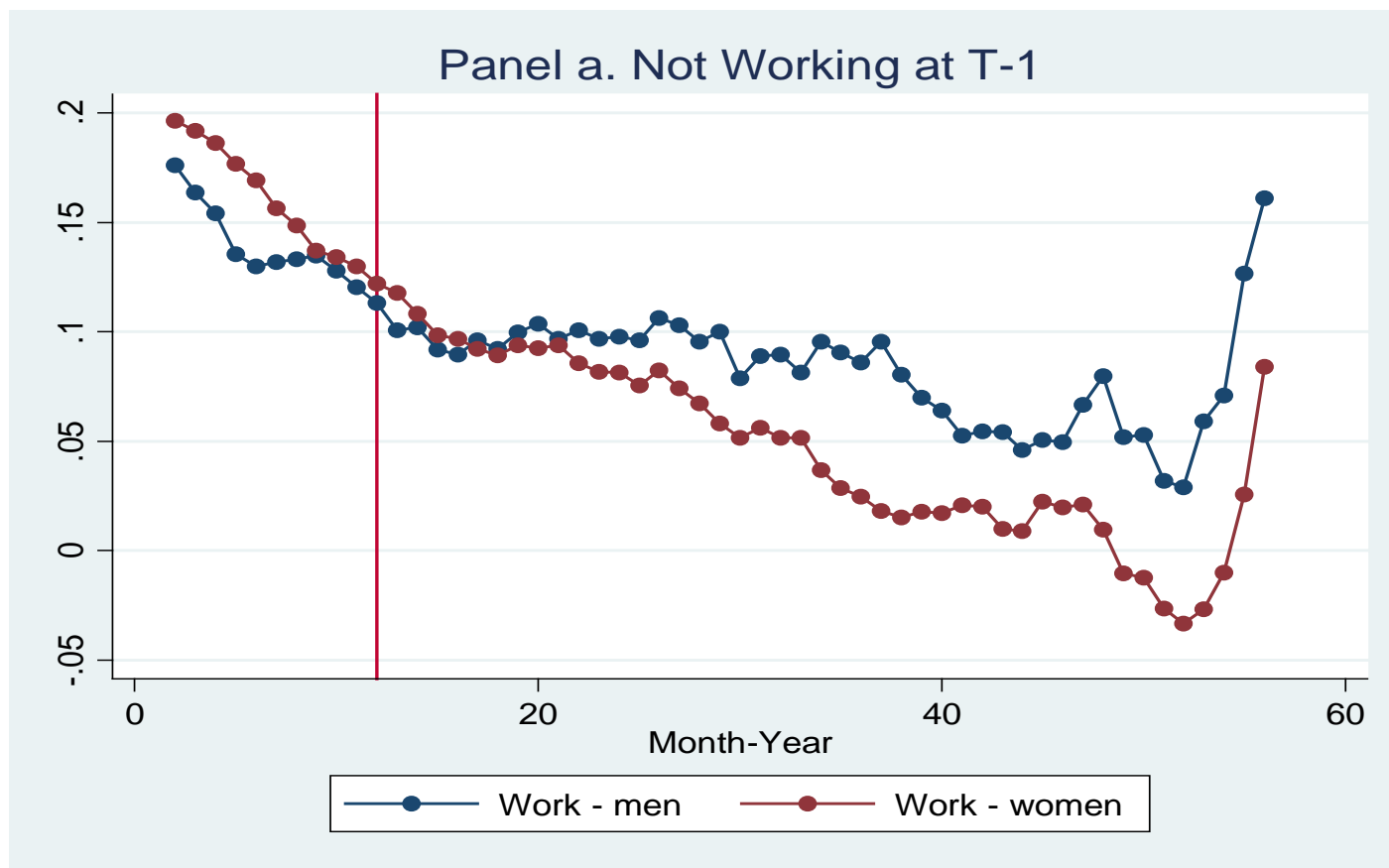
Raw transitions from a fixed-term to a permanent contract
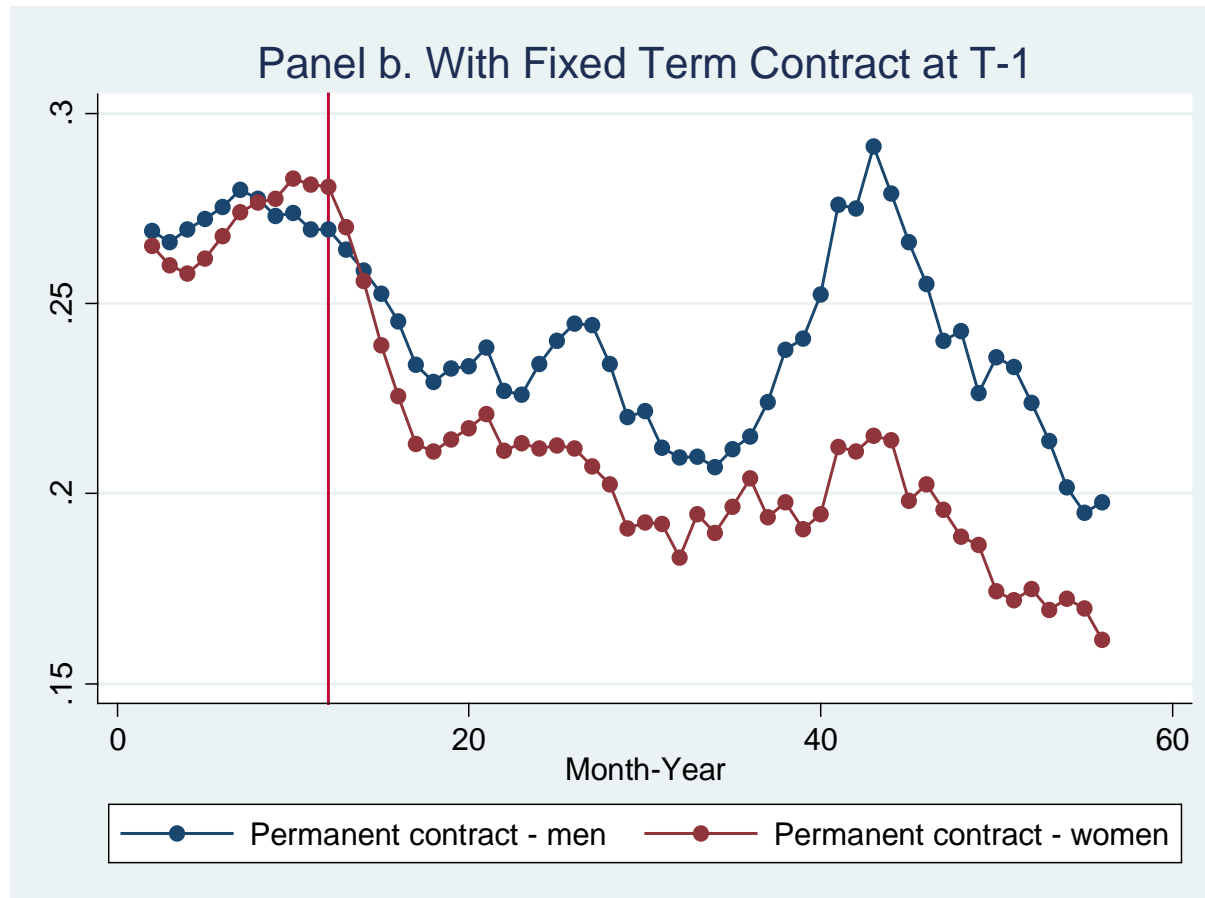
Raw transitions from fixed-term employment to non-work

Panel c. With Fixed Term Contract at T-1
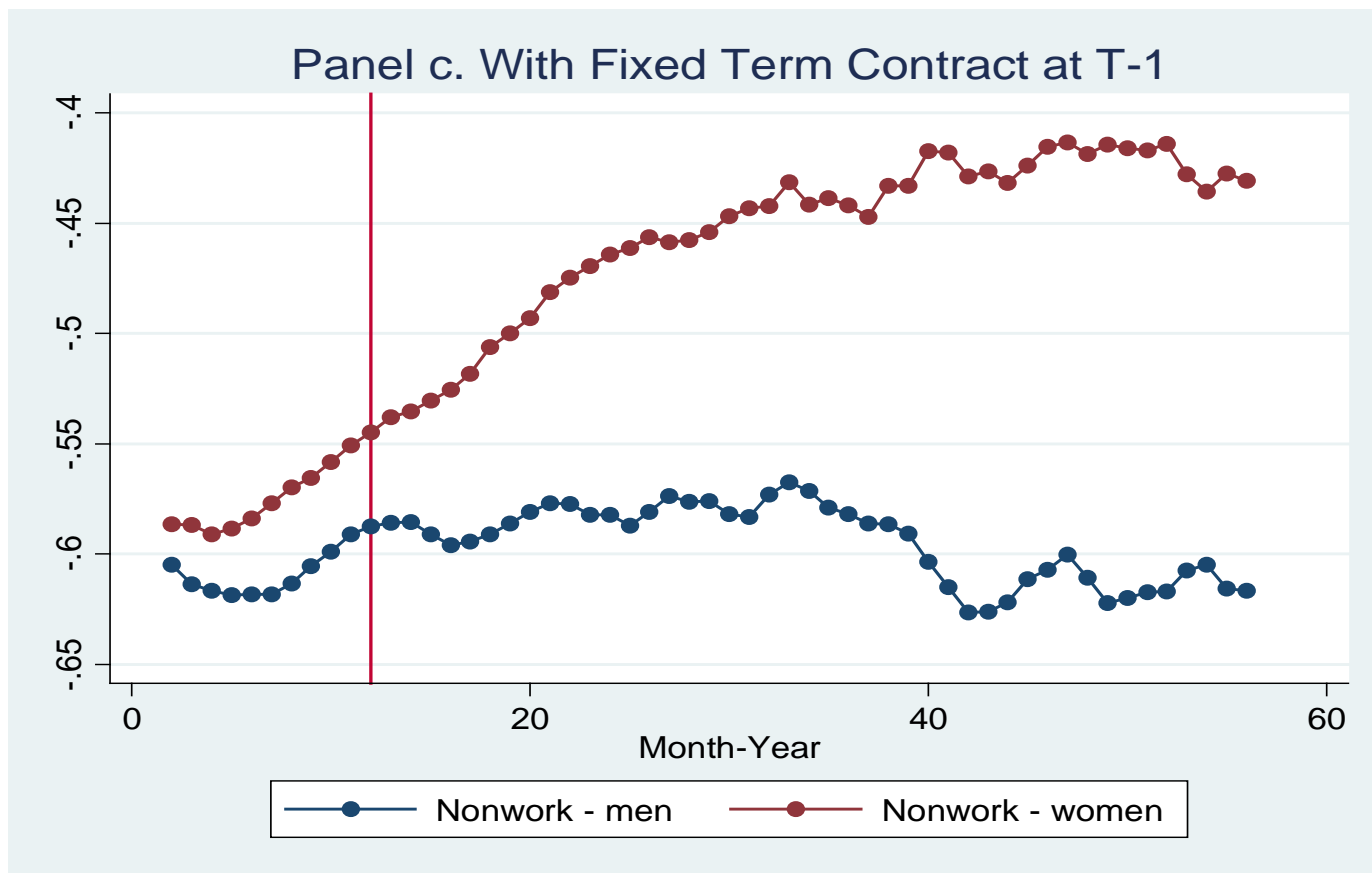
Did it hurt women?
Stock probabilities of work

	Permanent empl. at t	Fixed-term empl. at t	Not working at t
FE estimate	**.007** **(.005)**	**-.043***** **(.005)**	**.036***** **(.004)**
Pre-treatment avg	0.41	0.31	0.38
% change	**0%**	**-13.8%**	**9.5%**

Conditional on working under permanent contract at (*t-1*)

Transition probabilities into:			
	Permanent empl. at t		*Not working at t*
FE estimate	**-.000** **(.001)**		**.005***** **(.001)**
Pre-treatment avg	0.95		0.020
% change	**0%**		**25%**
Wages			
FE estimate	**-.025***** **(.004)**		n.a.
Pre-treatment avg	2.164		n.a.
% change	**-1.16%**		n.a.
Observations	616,865		616,865

Conditional on working under fixed-term contract at (*t-1*)

Transition probabilities into:			
	Permanent empl. at t		*Not working at t*
FE estimate	-.017***		.046***
	(.004)		(.005)
Pre-treatment avg	0.06		0.15
% change	**-28.3%**		**30.7%**
Wages			
FE estimate	-.066***		n.a.
	(.010)		
Pre-treatment avg	2.011		n.a.
% change	**-3.3%**		n.a.
Observations	497,407		497,407

Conditional on not working at (*t-1*)

Transition probabilities into:			
	Permanent empl. at t		*Not working at t*
FE estimate	-.025 (.020)		.042*** (.006)
Pre-treatment avg	0.016		0.76
% change	**-156%**		**5.5%**
Wages			
FE estimate	-.107*** (.023)		n.a.
Pre-treatment avg	2.039		n.a.
% change	**-5.25%**		n.a.
Observations	311,807		311,807

Robustness Checks: Short-run effects (1998-1999) vs. (2001-2002)

	Transition probabilities into:		
	Perm at t-1	**Fixed-term at t-1**	**Not working at t**
Perm at T	**.002*****	**-.012*****	-.012
	(.001)	**(.004)**	(.022)
Non-work at T	**.005*****	.000	**.012*****
	(.001)	(.005)	**(.005**
	Gender wage gap		
	Perm at T-1	**Fixed-term at T-1**	**Not working at t**
Change in the gender wage gap	**-.026*****	**-.085*****	**-.078*****
	(.004)	**(.011)**	**(.034)**

Robustness Checks: Control group is older women (aged 45 to 55)

	Transition probabilities into:		
	Perm at t-1	**Fixed-term at t-1**	**Not working at t-1**
Perm at T	**-.006***** (.0001)	**-.020***** (.004)	**-.093***** (.035)
Non-work at T	**.003***** (.0008)	**.051***** (.005)	.003 (.007)
	Gender wage gap		
	Perm at t-1	**Fixed-term at t-1**	**Not working at t-1**
Change in the gender wage gap	**-.047***** (.003)	**-.076***** (.012)	-.026 (.047)

Results hold if:

- (1998-1999) *versus* (2001-2002)

- Control group is older women

- Control group is childbearing-aged men who are not and have not been eligible

- DiDiD. Older men and women included as additional control group and <u>no time trends</u>, just year fixed effects

- Year fixed effects (and time trend interacted with treatment)

- Quadratic in addition to linear time trend

- Individuals who at t-1 were working in occupations in which women are NOT under-represented

- Individuals without children

- No children controls

- Eliminating construction workers

- Splitting sample into coastal and non-coastal provinces (real estate boom more intense in coastal)

- Placebo test

Heterogeneity Analysis: By Occupation Level (Employment transitions)

	PERMANENT at t-1	FIXED-TERM at t-1	NON-WORK at t-1
PERMANENT at t			
All workers	-.000	-.017***	-.025
	(.001)	(.004)	(.020)
White collar	.002	-.009	.016
	(.001)	(.012)	(.070)
Blue collar	-.000	**-.016***	-.020
	(.001)	**(.004)**	(.021)
NON-WORK at t			
All workers	.005***	.046***	.042***
	(.001)	(.005)	(.006)
White collar	-.000	-.002	-.016
	(.001)	(.009)	(.027)
Blue collar	**.006***	**.051***	**.045***
	(.001)	**(.006)**	**(.006)**

By Occupation Level (wages)

	PERMANENT at t-1	FIXED-TERM at t-1	NON-WORK at t-1
All workers	-.025***	-.066***	-.107***
	(.004)	(.010)	(.023)
White collar	**-.032***	**-.068***	-.133
	(.013)	**(.025)**	(.116)
Blue collar	**-.025***	**-.041***	**-.078***
	(.005)	**(.013)**	**(.029)**

Interpretation: full cost of the Law was passed to white collar workers in the form of lower wages. Not the case for blue collar workers and that's why employment decreased for this group.

Heterogeneity Analysis: By Firm Size (Employment transitions)

	PERMANENT at t-1	FIXED-TERM at t-1	NON-WORK at t-1
PERMANENT at t			
All workers	-.000 (.001)	-.017*** (.004)	-.025 (.020)
10 or fewer employees	**-.002*** **(.001)**	**-.032*** (.011)**	**-.145*** **(.090)**
More than 100 employees	.000 (.001)	**-.024*** **(.014)**	-.093 (.097)
NON-WORK at t			
All workers	.005*** (.001)	.046*** (.005)	.042*** (.006)
10 or fewer employees	**.004**** **(.002)**	**.024**** **(.011)**	.017 (.014)
More than 100 employees	.000 (.001)	.007 (.014)	.008 (.016)

Interpretation: cost of adapting to change is larger for small companies.

By Firm Size (wages)

	PERMANENT at t-1	FIXED-TERM at t-1	NON-WORK at t-1
All workers	-.025***	-.066***	-.107***
	(.004)	(.010)	(.023)
10 or fewer employees	**-.022***	**-.053**	.031
	(.011)	**(.025)**	(.108)
More than 100 employees	**-.031***	**-.071***	-.027
	(.010)	**(.030)**	(.153)

Is there learning (transitions)? YES

	PERMANENT at t-1	FIXED-TERM at t-1	NON-WORK at t-1
PERMANENT at t			
All workers	-.000	-.017***	-.025
	(.001)	(.004)	(.020)
2000-2004	-.000	**-.015***	-.023
	(.000)	**(.004)**	(.020)
Post 2004 (marginal effect)	.000	**.005**	.004
	(.001)	**(.002)**	(.005)
NON-WORK at t			
All workers	.005***	.046***	.042***
	(.001)	(.005)	(.006)
2000-2004	**.006***	**.053***	**.050***
	(.001)	**(.005)**	**(.006)**
Post 2004 (marginal effect)	**.002***	**.018***	**.019***
	(.001)	**(.002)**	**(.004)**

Is there learning (wages)?

	PERMANENT at t-1	FIXED-TERM at t-1	NON-WORK at t-1
All workers	-.025*** (.004)	-.066*** (.010)	-.107*** (.023)
2000-2004	**-.027*** (.005)**	**-.060*** (.011)**	**-.088*** (.027)**
Post 2004 (marginal effect)	.001 (.002)	**-.016*** (.004)**	-.009 (.009)

Did the reform lead to a substitution away from jobs for women? Yes!

➢ **Employers are:**

- 46% less likely to hire women

- 40% to 50% more likely to let employed women "go"

- 33% less likely to promote women from a fixed-term to a permanent contract

- are also able to pass at least part of the cost to childbearing-aged women through lower wages and that the amount passed to workers increased with the precariousness of the job

➢ **Positive self-selection into fixed-term contracts:** After the reform "better" childbearing aged women enter the labor market (fixed-term contracts)

➢ **Negative self-selection into permanent contracts:** After the reform "worse" childbearing-aged women remain in permanent employment

Conclusion

Parental benefit laws can be detrimental to women in general and to mothers

➢ The law was effective in allowing mothers of small children to reconcile family and work through part-time jobs <u>if they worked under a permanent contract.</u>

BUT...

➢ Employers substituted women away from (good) jobs after the reform and paid women relatively lower wages.

➢ The employment effect worsened over time as employers learnt.

Conclusion

- After the law, the pool of child-bearing aged women in the market has improved (positive self-selection in OLS estimates that get reduced when we control for it)

- Evidence that employers cannot fully pass along the costs of such benefits through lower wages

THANK YOU

nrodriguezplanas@gmail.com

Related literature

- Extensive literature on **the effects of part-time work on women's employment careers** (see Gornick and Hegewisch, 2010; and Fernández-Kranz and Rodríguez-Planas, 2010). **But not causal** as a good instrument to control for selection into employment is hard to fine (Manning and Petrongolo, 2008)

- **Fouarge and Baaijens (2007)—The Netherlands— and Munz 2007 and Bundesregierung Deutschland 2005) BUT benefit for ALL workers.** Not much of an effect on hours adjustment.

- **Fitzenberger *et al. (*2012)** estimate the effect of 2 simultaneous laws that took place in 2001. A policy reform in 2001 providing financial incentives for an earlier return-to-job after childbirth and to foster part-time work when the child is young. And a legal claim for part-time work and regulated fixed-term contracts for all workers. They find that the joint effect of the law was to increase maternal employment.

Difference-in-differences estimator

- ***Treatment group:*** women between 23 and 45 years old
- ***Control group:*** men between 23 and 45 years old

- To put this in a regression model we can write it as:

DiD identifying assumption

- Cross-sectional DiD makes the assumption that:

- If this does not hold, DiD (OLS) estimator has a compositional bias

- Also individual unobserved heterogeneity…