

WHAT WORKS FOR WORKING COUPLES?

WORK ARRANGEMENTS, MATERNAL LABOR SUPPLY & HOME PRODUCTION

LUDOVICA CIASULLO (NYU)

MARTINA UCCIOLI (IZA)

CHILD PENALTIES EXPLAIN MOST OF GENDER GAPS

Today

- We still observe large earnings gap between men and women
- These gaps are mostly explained by parenthood (Goldin, 2014; Kleven et al., 2021)
 - ▶ Similar earnings growth before children
 - ▶ Women face a child penalty, men don't

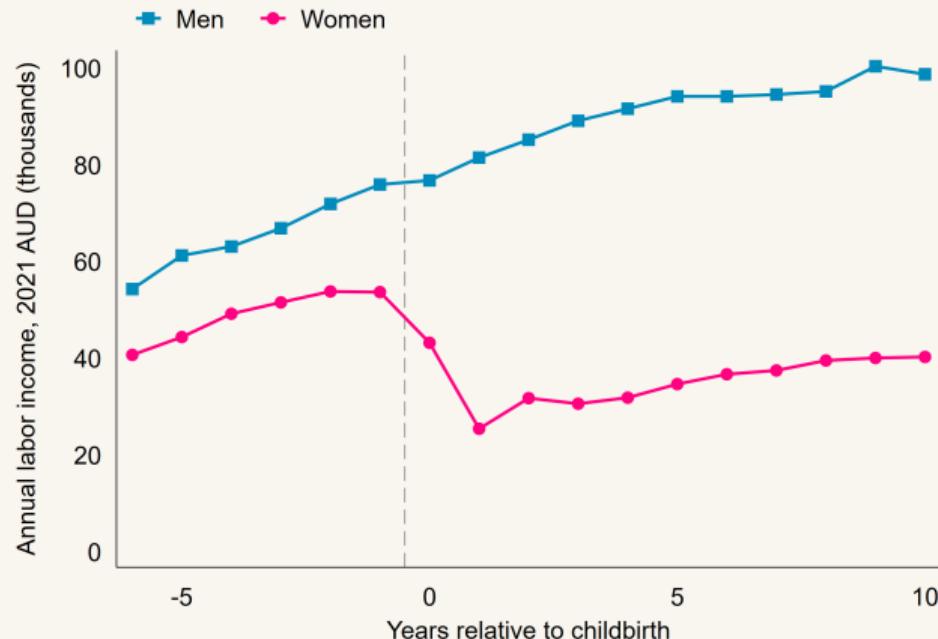


Figure: Annual labor earnings (2021 AUD, 'ooo). Source: HILDA

CHILDREN REQUIRE TIME AND IT FALLS ON MOTHERS

Why?

- Children require time
- This time demand falls on women

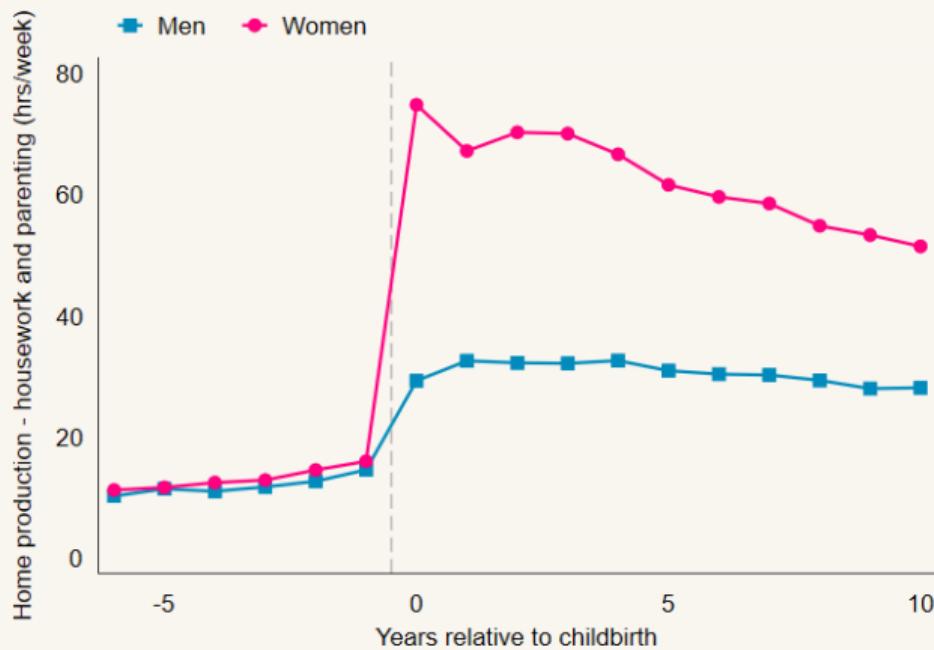


Figure: Weekly hours spent on home production (housework and caring for children). Source: HILDA

CHILD PENALTY IN EARNINGS IS A MATTER OF TIME

What determines the child penalty?

1. ***Within-person time allocation:*** how well can a mother balance work and family
 - ▶ Ability to be in control of time is key (Goldin, 2014)
 - ▶ Work Arrangements determine ability to control time
2. ***Across people time allocation:*** how the time burden a child brings is split between members of the couple
 - ▶ How do couples make choices over task splits?

RESEARCH QUESTIONS

1. Do Work Arrangements Matter for the Child Penalty?

- ▶ Which work arrangements do mothers choose?
- ▶ What do they imply for the child penalty?

2. Does Intrahousehold Bargaining Matter for the Child Penalty?

- ▶ What happens to a mother's and her partner's home production when she increases her labor supply?
- ▶ What can we infer about comparative advantage, preferences, gender norms?

Setting: Australia, 2001-2019 vs other countries

Main variation: Fair Work Act (2009)

- ▶ Parents of kids under school age are entitled to request a "change in working arrangements" and employer can refuse only "on reasonable business grounds"
- ▶ Examples of protected requests:
 - changes in patterns of work (like split shifts)
 - changes in hours of work (like start/finish times)
 - changes in location of work (like work from home)

RESEARCH QUESTIONS & ANSWERS

1. Do Work Arrangements Matter for the Child Penalty? Yes

- ▶ Which work arrangements do mothers choose? Regular schedule, reduced hours
 - (Heterogeneous) diff-in-diff of mothers vs non-mothers, before/after the reform
 - ⇒ After the reform, for new mothers regular schedule ↑ 40%, reduced hours ↑ 60%,
flexibility =, WFH ?
- ▶ What do they imply for the child penalty? 17% smaller child penalty
 - Interrupted Time Series; Exposure Design
 - ⇒ 17% smaller child penalty in labor supply in post-Fair Work Act cohorts
 - ⇒ Fully concentrated among mothers in exposed jobs

2. Does Intrahousehold Bargaining Matter for the Child Penalty? Yes

- ▶ What happens to a mother's and her partner's home production when she increases her labor supply? She ↓ housework, he picks up half of the slack
 - Exposure Design
 - ⇒ Most exposed mothers ↑ labor supply by 80% and ↓ housework by 13% (no change in parenting); their partners ↑ housework by 50% of female drop
- ▶ What can we infer about comparative advantage, preferences, gender norms? In progress
 - Model Estimation
 - ⇒ Still work in progress

OVERVIEW

- 1 The 2009 Fair Work Act Shifted (Some) Work Arrangements
- 2 Sketch of the Model
- 3 Reduced Form Results: The 2009 Fair Work Act Reduced the Female Child Penalty in Labor Supply and Home Production
- 4 Model Estimation

Household, Income and Labour Dynamics in Australia

- Representative sample of Australian population (sample size $\sim 20,000$)
- Ongoing longitudinal annual panel that started in 2001
- Variables of interest
 - ▶ Family structure
 - ▶ Job characteristics
 - ▶ Labor market vars (earnings, work hours, occupation)
 - ▶ Time use (housework split)
- ~ 1200 women have their first child in our sample years

THE 2009 FAIR WORK ACT SHIFTED (SOME) WORK ARRANGEMENTS

THE 2009 FAIR WORK ACT SHIFTED (SOME) WORK ARRANGEMENTS

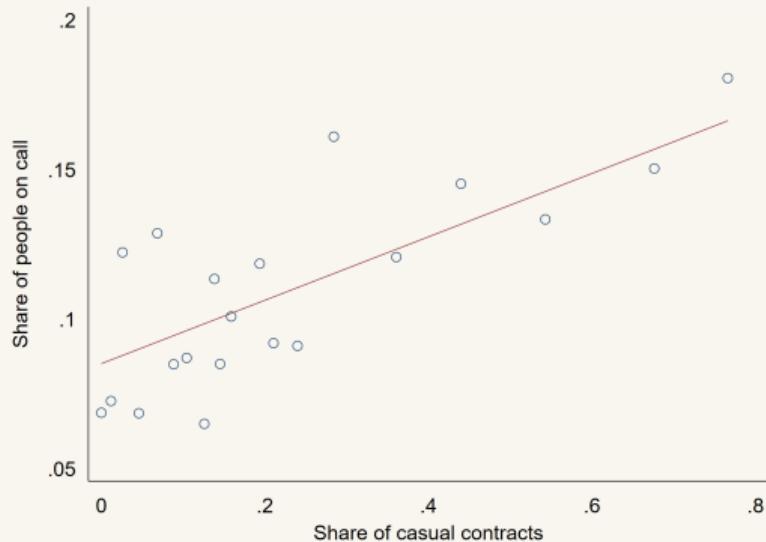
PRELIMINARY AND QUALITATIVE EVIDENCE

INSTITUTIONAL BACKGROUND I

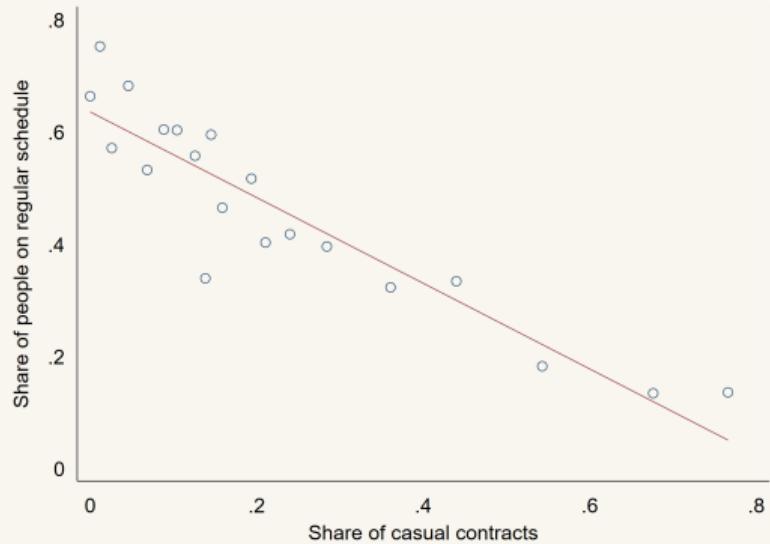
In Australia, employment contracts can be:

- Permanent (68% in 2019)
- Fixed-term (11%)
- Casual (21%)
 - ▶ “zero-hours” contracts, no commitment on either side
 - ▶ “arrangements characterized by ‘informality, uncertainty and irregularity’”
(Creighton and Stewart, 2010)

CASUAL JOBS ARE ALSO “IRREGULAR”



(a) Jobs with higher shares of casual contracts also have a higher share of people on call



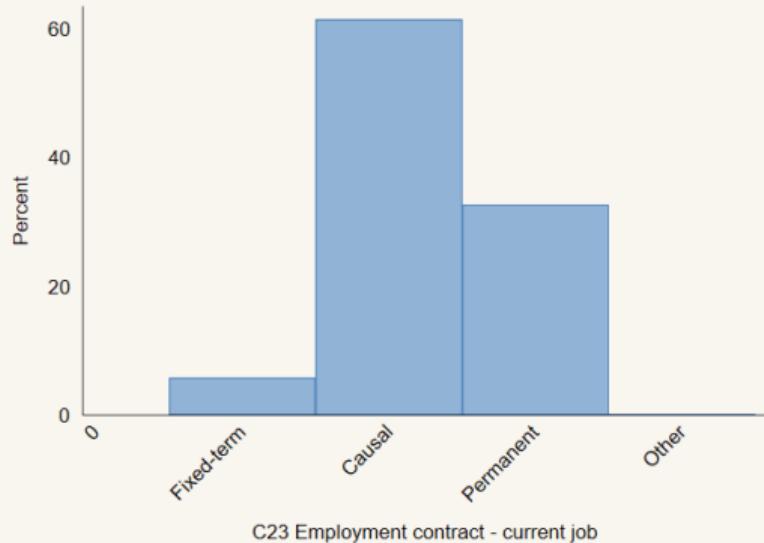
(b) Jobs with higher shares of casual contracts also have a lower share of people on regular schedules

INSTITUTIONAL BACKGROUND II

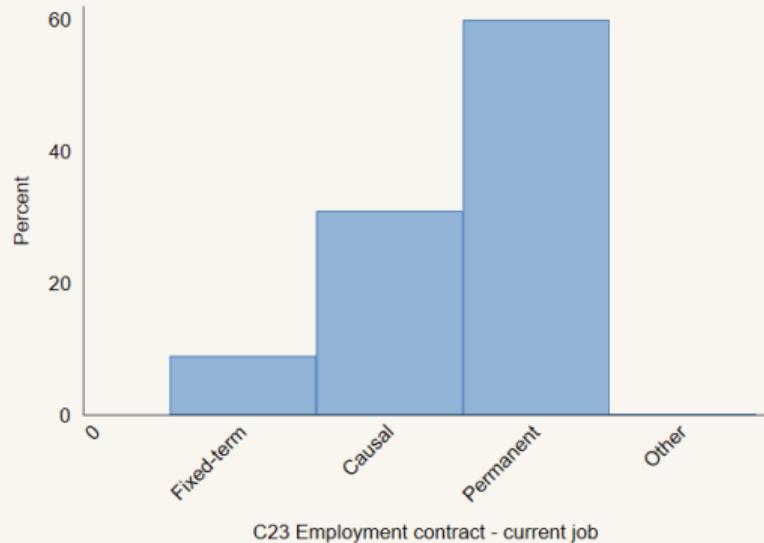
- It used to be very hard to reduce hours while maintaining a permanent contract
 - ▶ Option generally not even mentioned in collective agreements (“awards”)
 - ▶ (Collective agreements have recognized casual work since the 1970s)
- This was seen as a hindrance to female employment
 - ▶ Call for “Permanent Part-Time”
 - ▶ This is what the Fair Work Act was meant to address

[...] until recently many awards did not provide for *part-time workers* to be engaged on *anything but a casual basis*. But with changing attitudes in the union movement, and legislative reforms, the concept of *permanent part-time employment has become well accepted*. [...] Although permanent part-time employment is now an option, however, there is *no general obligation on an employer* [...]. The NES provide a right to *request* a move to part-time employment, in order to accommodate a responsibility *for the care of children*.

SUGGESTIVE EVIDENCE I: POST-FAIR WORK ACT, LESS-THAN-FULL-TIME JOBS ARE MORE PERMANENT

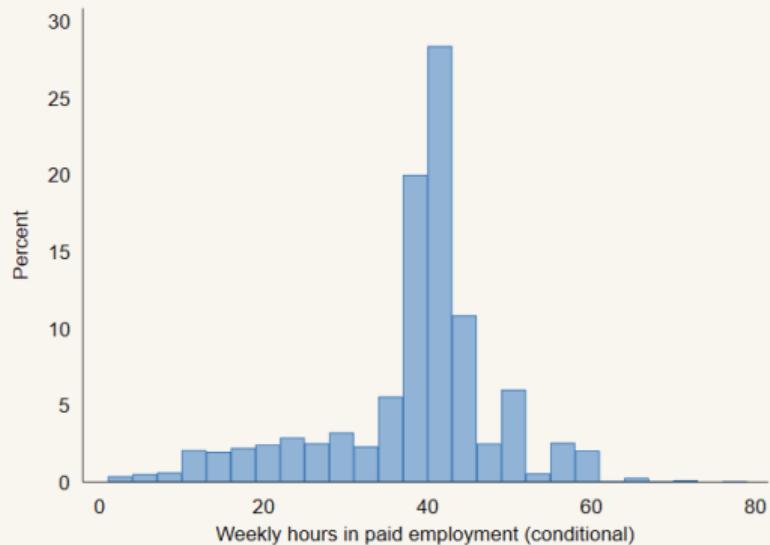


(a) Type of contract if < 35 hours/week,
pre-2009, mothers only

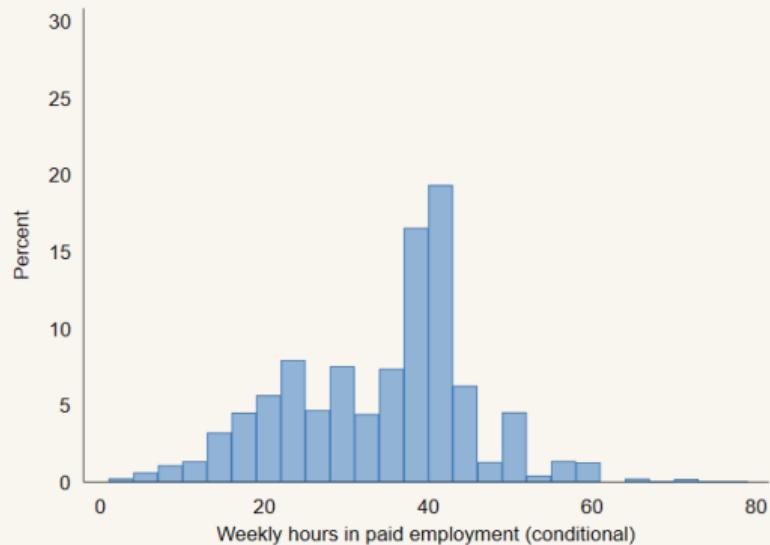


(b) Type of contract if < 35 hours/week,
post-2009, mothers only

SUGGESTIVE EVIDENCE II: POST-FAIR WORK ACT, THERE ARE PERMANENT JOBS WITH LESS-THAN-FULL-TIME HOURS



(a) Hours if permanent contract, pre-2009,
mothers only



(b) Hours if permanent contract, post-2009,
mothers only

THE 2009 FAIR WORK ACT SHIFTED (SOME) WORK ARRANGEMENTS

DEFINITIONS AND EMPIRICAL STRATEGY

WORK ARRANGEMENTS

- **Reduced hours:** Work 25-34 hours per week (*think: 80% of full time*)
 - 17% of all women and 6% of all men
- **Regular schedule:** Work M-F on a regular daytime schedule [Definition](#)
 - 42% of all women and 53% of all men
- **Flexibility:** agreement with “My working times can be flexible” (yes/no) [More](#)
 - 49% of all women and 52% of all men
- **Work from Home:** Hours worked from home in a typical week [More](#)
 - 2.31 on avg for all women and 2.48 for all men

NATURAL SPECIFICATION

$$Y_{it} = \beta_C \times \underbrace{\mathbb{1}\{C(i,t) < 6\}}_{i\text{'s child is below 6}} + \beta_{C,post} \times \mathbb{1}\{C(i,t) < 6\} \times \underbrace{\mathbb{1}\{t > 2009\}}_{\text{year } t \text{ is post-2009}} + \underbrace{\alpha_i + \delta_t + \gamma_{h(i)}}_{\text{ID, time, age FEs}} + \epsilon_{it}$$

- $C(i,t)$: age of i 's child in year t
- Treated: (Parent of < 6 year old)*(post-2009)
- Controls: Non-parents & parents of older children

A FLEXIBLE SPECIFICATION

$$Y_{it} = \sum_{a \in A} \left(\beta_{C_a} \times \underbrace{\mathbb{1}\{C(i, t) \in a\}}_{i\text{'s first child is in age range } a} + \sum_{j \neq 2009} \beta_{C_{a,j}} \times \mathbb{1}\{C(i, t) \in a\} \times \mathbb{1}\{t = j\} \right) + FEs + \epsilon_{it}$$

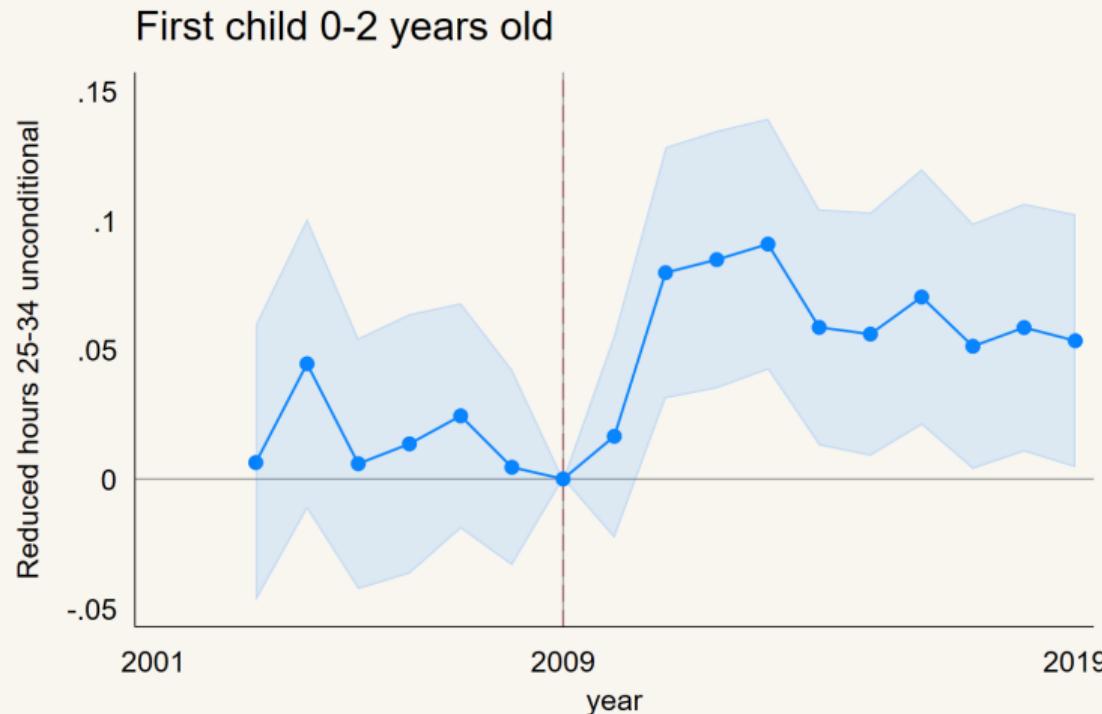
- Age ranges $a \in A$: 0-2, 3-5, 6-8, 9-10, 10+
- Run separately by gender
- Coefficients of interest are $\beta_{C_{a,j}}$: difference in year j between parents of first children in age range a and analogous parents in 2009
- Fixed effects: individual, time and age of the parent

THE 2009 FAIR WORK ACT SHIFTED (SOME) WORK ARRANGEMENTS

EMPIRICAL RESULTS

REDUCED HOURS ↑ FOR MOTHERS

OTHER



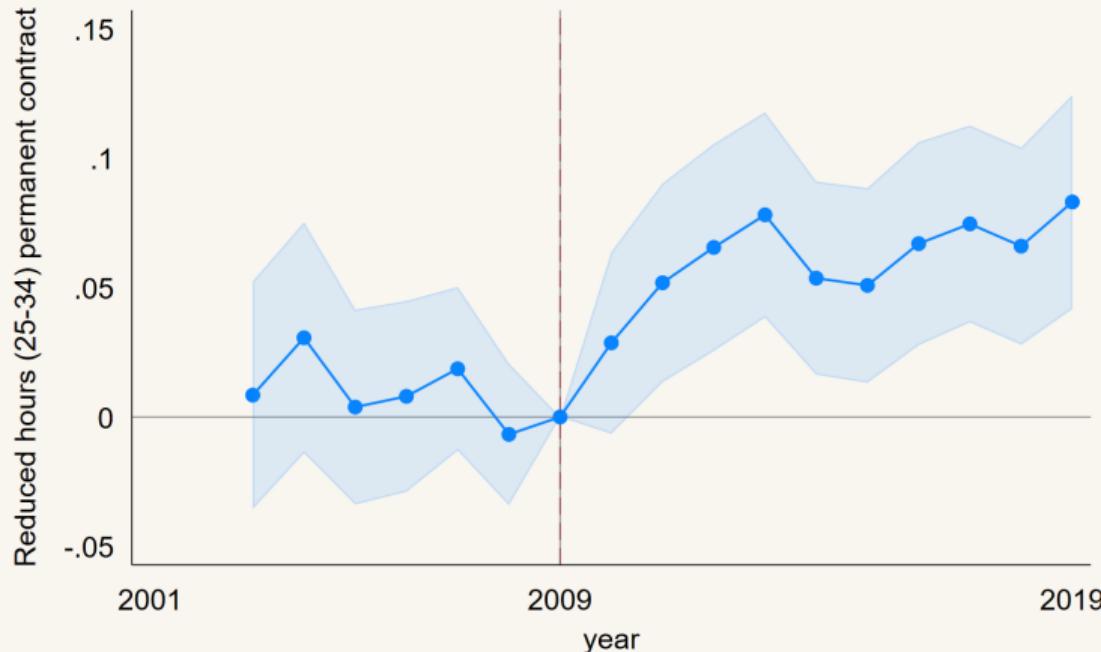
Mean reference group: 0.05.

Vertical red dashed line is last year with no children of cohort born after passage of law.

PERMANENT REDUCED HOURS ↑ FOR MOTHERS

OTHER

First child 0-2 years old



Mean reference group: 0.03.

Vertical red dashed line is last year with no children of cohort born after passage of law.

EFFECTS OF THE FAIR WORK ACT ON WORK ARRANGEMENTS

■ For mothers, after the Fair Work Act: [Table](#)

- ▶ Possibility of **reducing hours** while keeping a **permanent contract**
- ▶ Work becomes **more regular** [Graph](#)
- ▶ **No increase in flexibility** [Graph](#)
- ▶ Unclear effect on WFH (noisy and inconclusive) [Graph](#)

■ For fathers, nothing changes after the Fair Work Act [Regular schedule](#) [Table](#)

Note: The Fair Work Act did not observably affect selection into childbearing [Fertility](#)

[Balance tab](#)

SKETCH OF THE MODEL

SKETCH OF THE MODEL

BASELINE MODEL: CORTÉS AND PAN (2023)

SET-UP

- Time endowment = 1, allocated between market work h_i and home production
- Utility of spouse i is

$$U_i(w_i, w_j) = \max_{h_i \in [0,1]} \{ \delta_i w_i h_i + w_j h_j + \beta_i f(1 - h_i, 1 - h_j) \cdot n \}$$

- Home production functional form is

$$f(\cdot) = \log(\alpha_i(1 - h_i) + \alpha_j(1 - h_j))$$

- If $n = 0$, $h_i = h_j = 1$

WITH CHILDREN

- If $\alpha_i = \alpha_j$ and $\frac{\beta_m}{\delta_m w_m} < \frac{\beta_f}{\delta_f w_f}$, then $h_m = 1$ and

$$h_f = \begin{cases} 0 & \text{if } w_f < \frac{\beta_f}{\delta_f} \\ 1 - \frac{\beta_f}{\delta_f} & \text{otherwise} \end{cases}$$

- If $\alpha_f > \alpha_m$, h_f could drop even if he is the one placing higher value to the public good relatively to the private good

SKETCH OF THE MODEL

AN AUGMENTED MODEL

TWO TYPES OF JOBS

- Jobs are a bundle of hours and an amenity
 - ▶ The amenity is regular schedule, not being on call (features of a permanent contract)
- Jobs with the amenity are available only for $h \geq \bar{h}$
- Empirical analog: for shorter hours we only see casual contracts (irregular hours, on call)
- Before 2009 \bar{h} is high
 - ▶ Motivated by patterns we see in data
- Utility of spouse i is
$$U_i(w_i, w_j) = \max_{h_i \in [0,1]} \{\delta_i w_i h_i - ch_i \mathbb{1}_{h_i < \bar{h}} + w_j h_j + \beta_i f(1 - h_i, 1 - h_j) \cdot n\}$$
- c is a utility cost paid when working a job without the amenity

HAVING A CHILD BEFORE 2009

- Under some parametric conditions on $\frac{\beta_f}{\delta_f w_f}$, some women who would have chosen $h_i < \bar{h}$ decide not to work once they have a child, or decide to work less
- Why?
 - ▶ The presence of a child makes the time spent not working valuable
 - ▶ Hence, working \bar{h} or more is dominated
 - ▶ Simultaneously, the consumption value of working less than \bar{h} is damped by c

- Utility of spouse i is

$$U_i(w_i, w_j) = \max_{h_i \in [0,1]} \{ \delta_i w_i h_i - ch_i \mathbb{1}_{h_i < \bar{h}'} + w_j h_j + \beta_i f(1 - h_i, 1 - h_j) \cdot n \}$$

for $\bar{h}' < \bar{h}$

- Intuitively, there are some values of $\frac{\beta_f}{\delta_f w_f}$ for which new mothers pre-2009 decide to stop working (the “good jobs” available require long hours) but instead stay in the labor force if they can work fewer hours in jobs with the amenity (i.e. post 2009)

- Working $\bar{h}' < h^* < \bar{h}$ before 2009 would have meant paying utility cost ch^*
- This isn't true after 2009
- New mothers can spend enough time in home production while still working, without paying the cost c

COMPARATIVE STATICS

At baseline

- When the first child is born, one parent ↓ LS and ↑ home production while the other doesn't

After the law

- Some women who would have left the labor force upon childbirth no longer do
- Hours worked on average increase for mothers
- Home production decreases for mothers

REDUCED FORM RESULTS: THE 2009 FAIR WORK ACT REDUCED THE FEMALE CHILD PENALTY IN LA- BOR SUPPLY AND HOME PRODUCTION

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**COMPARATIVE STATICS AT BASELINE:
WHAT HAPPENS WHEN THE FIRST CHILD IS BORN**

COMPARATIVE STATICS AT BASELINE

Model prediction:

- When the first child is born, one parent \downarrow LS and \uparrow home production while the other doesn't

Empirical analog:

- Estimate the child penalty

DEFINITION OF CHILD PENALTY

$$Y_{it} = \alpha_i + \delta_t + \beta_{h(i)} + \sum_{\substack{k=-5, \\ k \neq -2}}^{10} \left\{ \gamma_k \times \mathbb{1}\{t - E(i) = k\} \right\} + \epsilon_{it}$$

$E(i)$ Year of birth of i 's first child

$\alpha_i, \delta_t, \beta_{h(i)}$ Individual, time, and age FEs

γ_k Effect k periods from childbirth → Child Penalty in year k (difference k periods from childbirth between mother and her pre-birth self)

- Controls: never-parents
- Estimated using Sun and Abraham (2020)

WOMEN ↓ LABOR SUPPLY WHILE MEN DO NOT

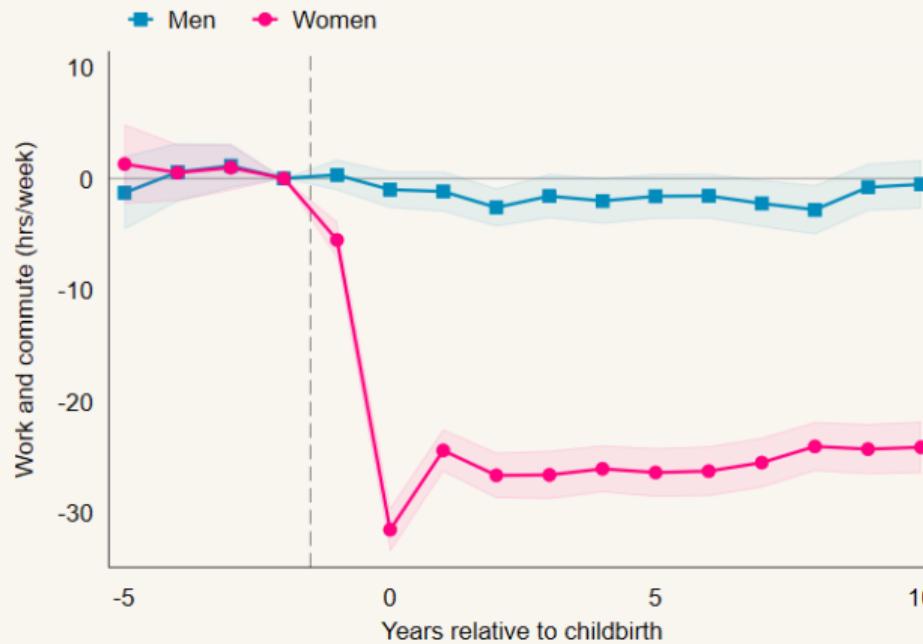


Figure: Weekly Hours of Paid Work (incl. Commute) Margins

WOMEN ↑ HOME PRODUCTION A LOT, WHILE MEN A LITTLE

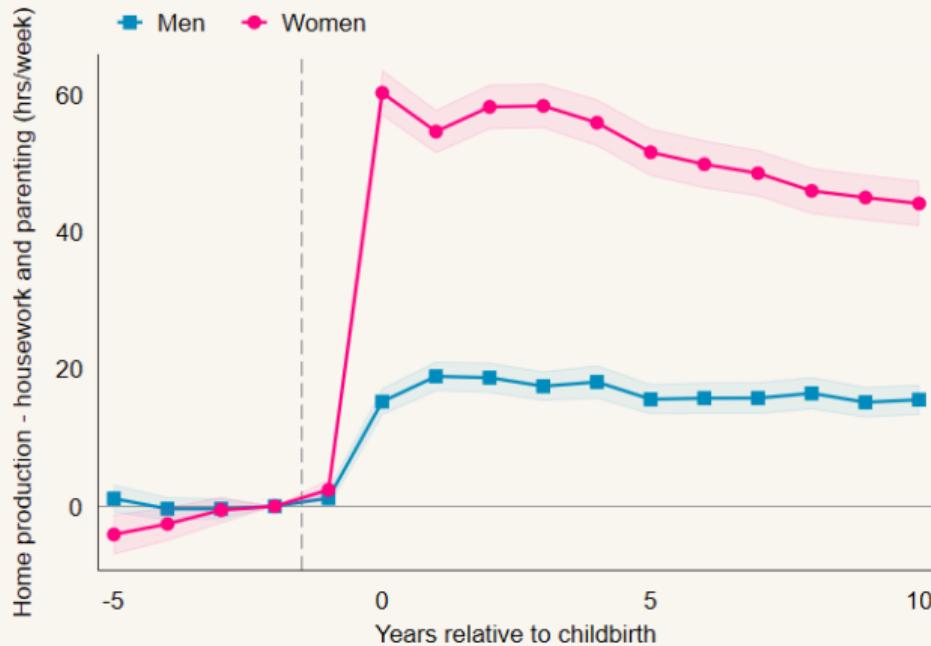


Figure: Weekly Hours of Home Production (Housework + Parenting) [Separate](#)

WOMEN MOVE FROM PERMANENT TO CASUAL JOBS

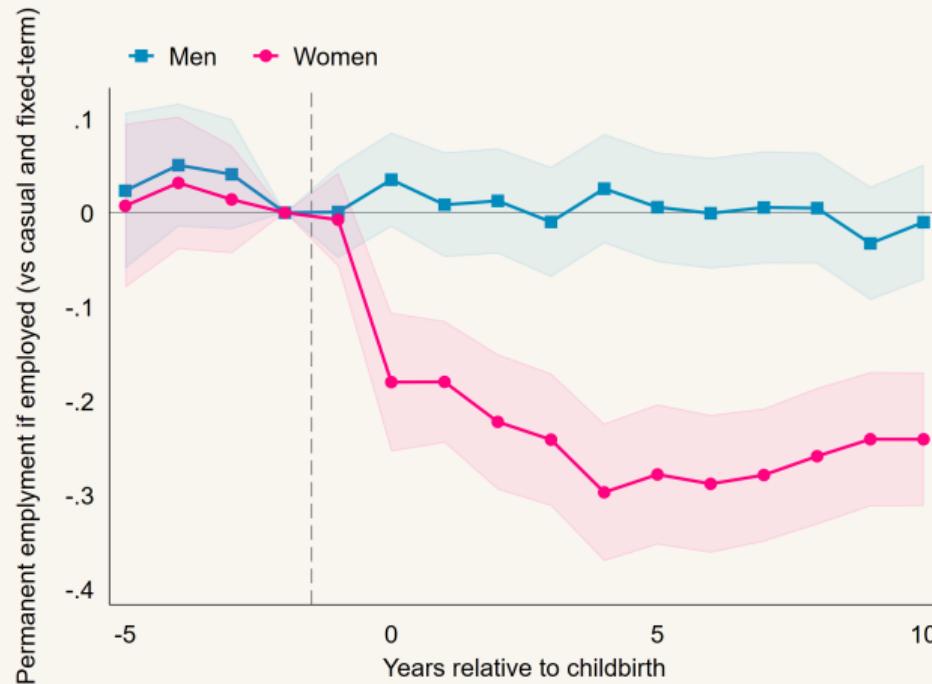


Figure: Permanent Employment if Employed (vs Casual and Fixed-term)

REDUCED FORM RESULTS: THE 2009 FAIR WORK ACT REDUCED THE FEMALE CHILD PENALTY IN LABOR SUPPLY AND HOME PRODUCTION

**COMPARATIVE STATICS RELATIVE TO THE LAW:
WHAT HAPPENS WHEN THE FIRST CHILD IS BORN, BEFORE VS AFTER
THE LAW**

COMPARATIVE STATICS RELATIVE TO THE LAW

Model Predictions: After the law

- Some women who would have left the labor force upon childbirth no longer do
- Hours worked on average increase for mothers
- Home production decreases for mothers
- { Mechanism: more mothers have jobs with the amenity (here proxied by permanent contracts) }

Empirical Analog:

- Compare the child penalty of mothers who gave birth before and after the law
 - ▶ Early versus late cohorts (first birth in 2005-08 vs 2010-13)
 - ▶ Time series of child penalties

MORE MOTHERS IN PERMANENT CONTRACTS, AFTER FAIR WORK ACT

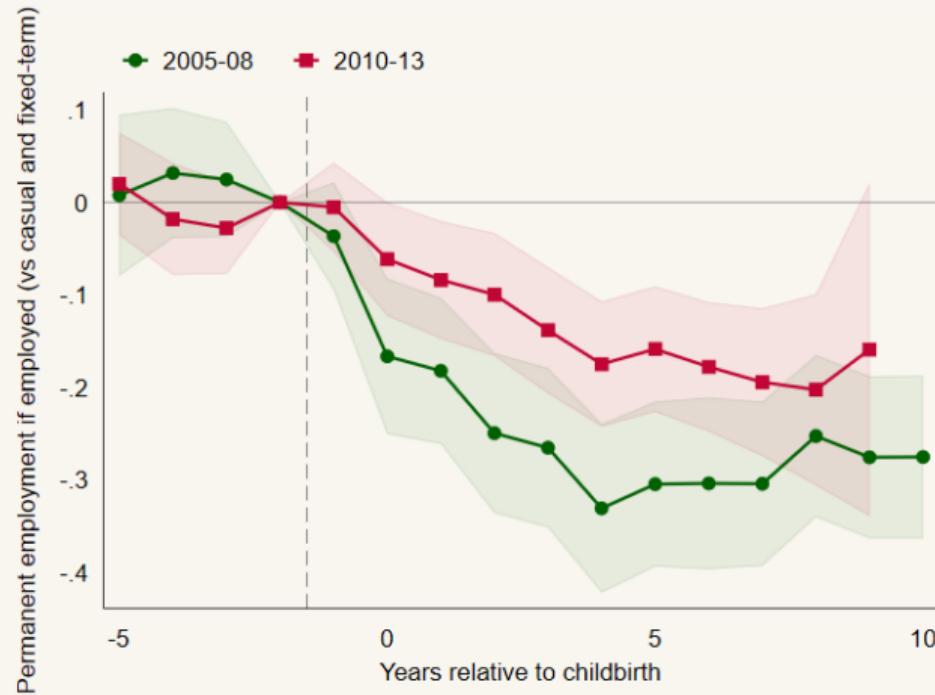
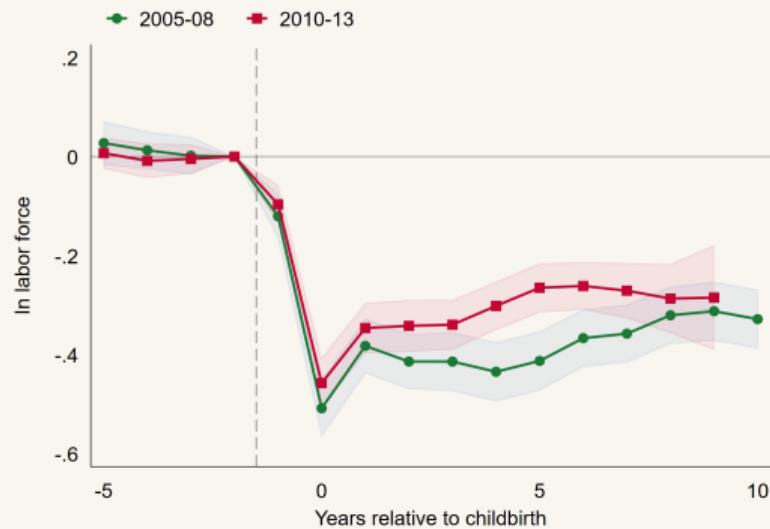


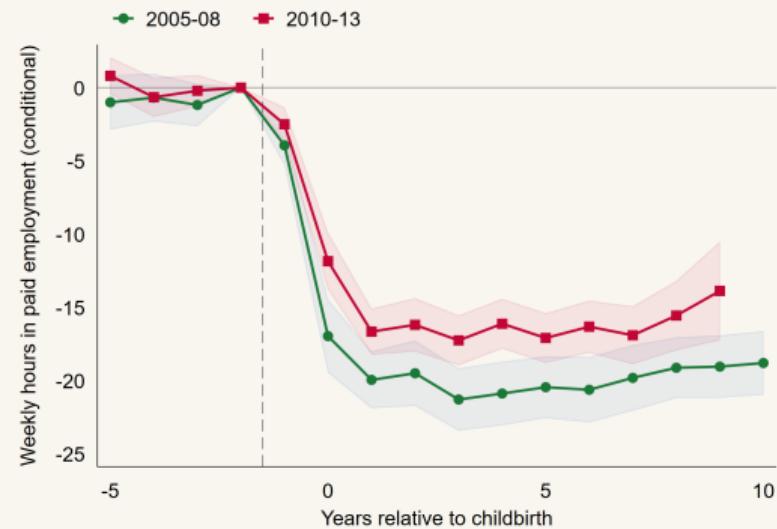
Figure: Permanent Employment if Employed (vs Casual and Fixed-term)

MOTHERS WORK MORE, AFTER FAIR WORK ACT

MEN



(a) Labor Force Participation, Women

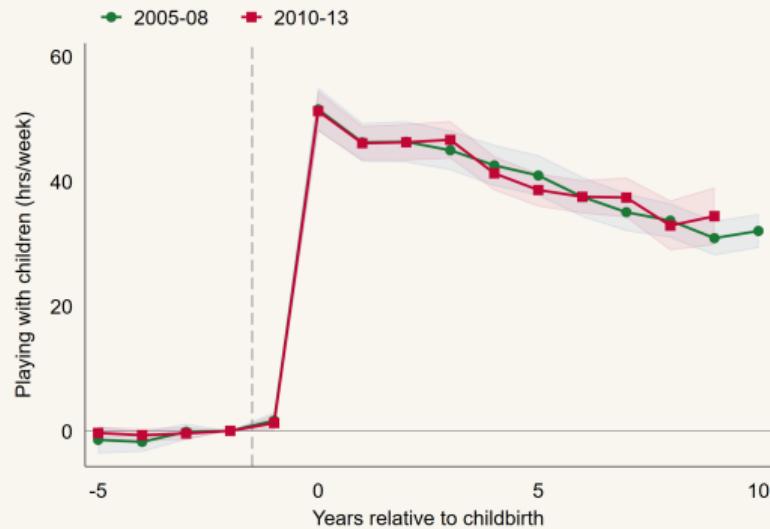


(b) Weekly Hours of Work Conditional on Working

HOUSEWORK ↓ FOR MUMS (NOT PARENTING), AFTER FAIR WORK ACT



(a) Housework [Hours/week], Women



(b) Parenting [Hours/week], Women

Men

REDUCED FORM RESULTS: THE 2009 FAIR WORK ACT REDUCED THE FEMALE CHILD PENALTY IN LABOR SUPPLY AND HOME PRODUCTION

**COMPARATIVE STATICS RELATIVE TO THE LAW:
WHAT HAPPENS WHEN THE FIRST CHILD IS BORN, BEFORE VS AFTER
THE LAW, FOR DIFFERENTLY EXPOSED INDIVIDUALS**

EXPOSURE DESIGN

- So far, I have shown you that
 - ▶ there are large changes in child penalty for early vs late cohorts
 - ▶ the changes happen sharply around the 2009 cohort

- What I want to show you now
 - ▶ changes are concentrated in the groups most exposed to the law
 - ▶ in these groups time allocation in the couple adjusts { & will leverage this heterogeneity to estimate model parameters}

EXPOSURE TO THE FAIR WORK ACT - INTUITION

- The Fair Work Act changed work arrangements – ↓ casual contract & ↑ regular schedule for mothers
- This could only change in jobs where there was room for improvement
 - ▶ If everyone on regular schedule & permanent contract (e.g. government job) → no room for improvement
 - ▶ If no one on regular schedule & everyone on a casual contract, likely technological reasons (e.g bartender) → employer can refuse on “reasonable business grounds”
 - ▶ If half on regular schedule & permanent contract, likely no technological reasons against, and room for improvement (e.g. nurses or teachers)
- Exposure non-monotonic in prevalence of casual contract
→ jobs with intermediate levels of “casual prevalence” most exposed

EXPOSURE TO THE FAIR WORK ACT - IN PRACTICE

Job = Occupation-by-industry (2 digits each, $\sim 1,000$ jobs)

Casual prevalence = Fraction of individuals with a **casual contract** pre-2009
► Robust to using only observations of men in the whole sample period

Graph

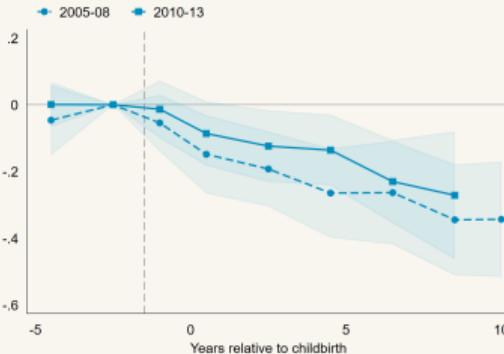
Distribution

Non-monotonicity

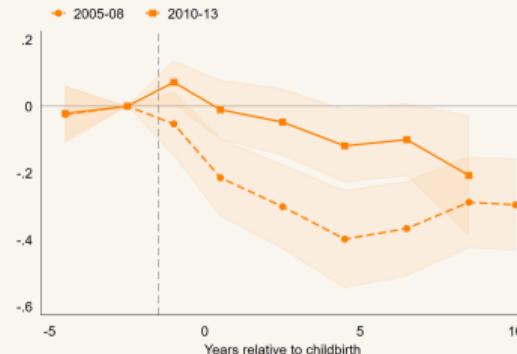
STRATEGY

- Assign mothers level of casual prevalence of job they have two years before childbirth
- Compare child penalty pre-post reform by different levels of exposure
- Sample sizes: ~ 125 mother per tercile in the early cohort (2005-2008) and ~ 215 per tercile in the late cohort (2010-2013)

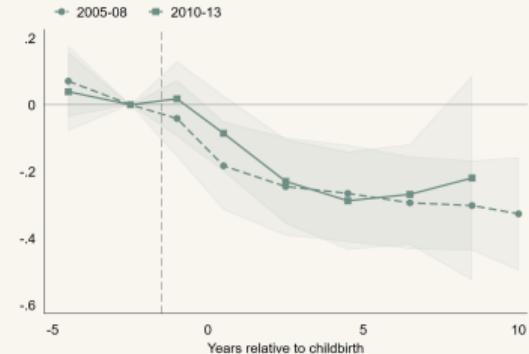
PERMANENT CONTRACTS ↑ MOST FOR MOTHERS IN MIDDLE TERCILE



Pre-birth job in bottom tercile



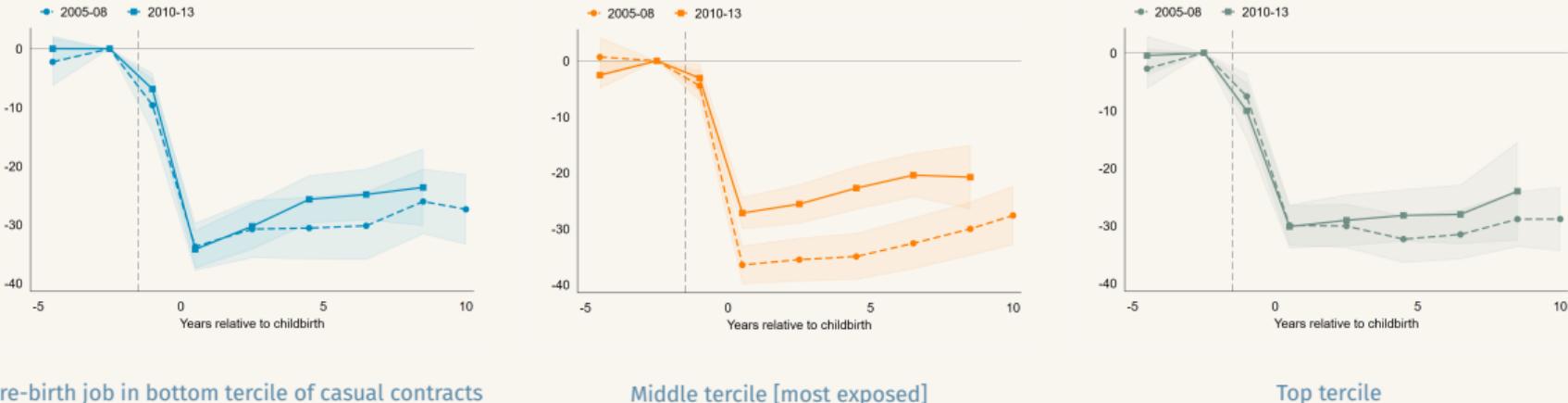
Middle tercile [most exposed]



Top tercile

Figure: Permanent Employment if Employed (vs Casual and Fixed-term), Women by terciles of prevalence of casual contracts in occupation-by-industry

HOURS WORKED ↑ MOST FOR MOTHERS IN MIDDLE TERCILE



Pre-birth job in bottom tercile of casual contracts

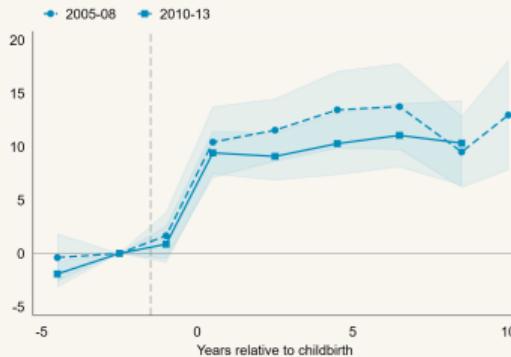
Middle tercile [most exposed]

Top tercile

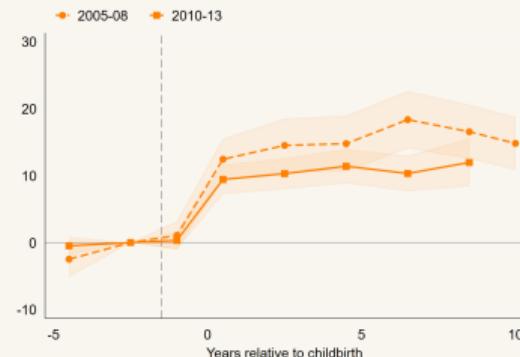
Figure: Weekly Hours of Paid Work (incl. Commute), Women
by terciles of prevalence of casual contracts in occupation-by-industry

Partners

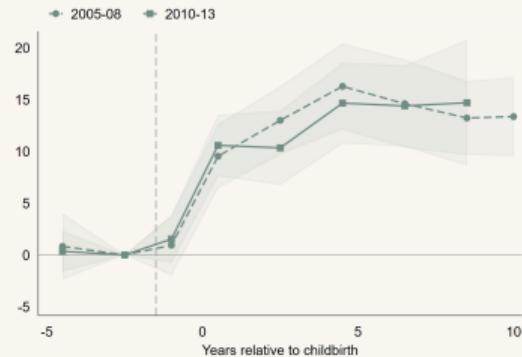
TREATED MOTHERS Do A Bit Less Housework ...



Pre-birth job in bottom tercile of casual contracts



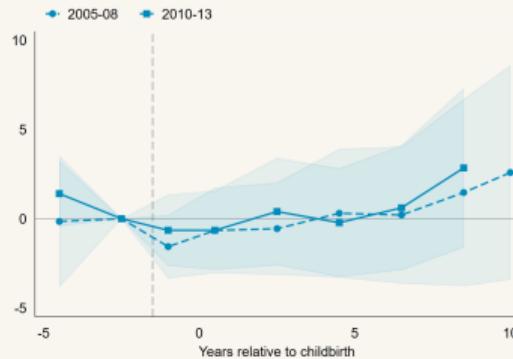
Middle tercile [most exposed]



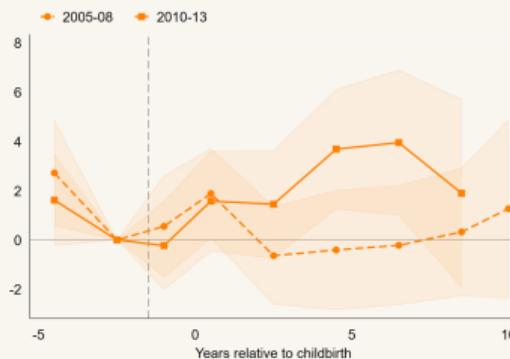
Top tercile

Figure: Weekly Hours of Housework, Women
by terciles of prevalence of casual contracts in occupation-by-industry

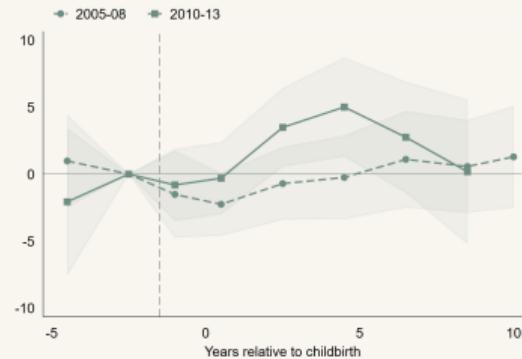
... PARTIALLY COMPENSATED BY THEIR PARTNERS



Pre-birth job in bottom tercile of casual contracts



Middle tercile [most exposed]



Top tercile

**Figure: Weekly Hours of Housework, Men
by terciles of prevalence of casual contracts in occupation-by-industry**
Note: for men, treatment status depends on female partner

TREATED MOTHERS Do NOT CUT ON PARENTING TIME ...

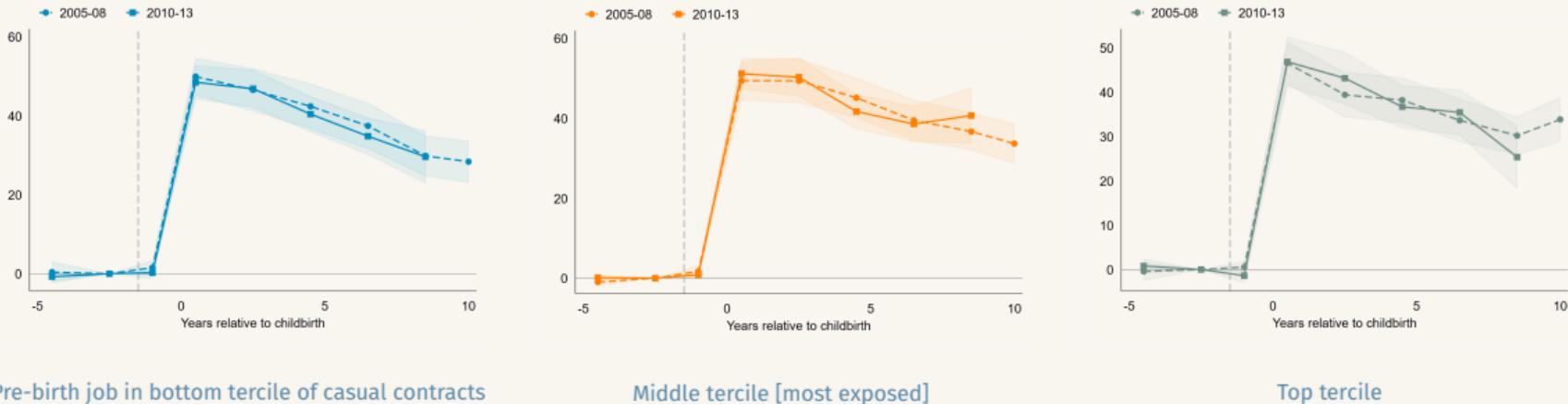


Figure: Weekly Hours Spent Playing With or Caring Of Own Children, Women by terciles of prevalence of casual contracts in occupation-by-industry

... BUT THEIR PARTNERS ↑ PARENTING TIME

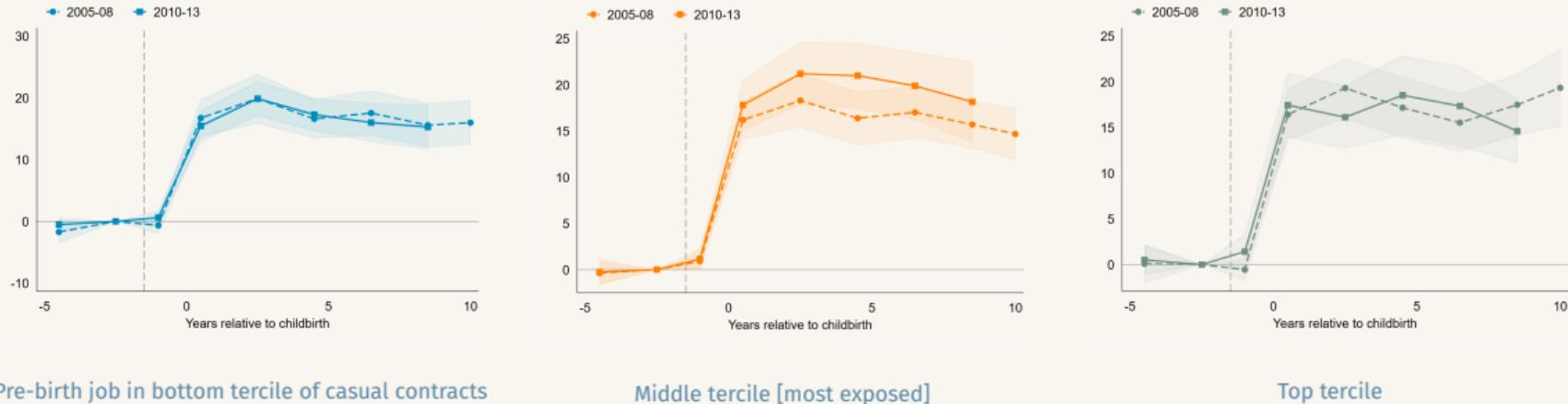


Figure: Weekly Hours Spent Playing With or Caring Of Own Children, Men by terciles of prevalence of casual contracts in occupation-by-industry

Note: for men, treatment status depends on female partner

SUMMING UP - EXPOSURE

Mothers in jobs most exposed to the law:

- ↑ hours of work (both intensive and extensive)
- Slightly ↓ housework and = parenting
- ⇒ ↑ personal and family income but ↓ leisure and sleep

Their partners:

- ↑ a bit housework (about 50% of female decrease) and ↑ increase parenting

MODEL ESTIMATION

- Fully solve the model in the two environment (before and after 2009)
- The reform, as a change in the institutional constraint, can allow us to estimate
 - ▶ the cost parameter c
 - ▶ how substitutable are the different parental inputs in the home production function f
 - ▶ what is the intrahousehold decision-making model
- Use these estimate to make a statement such as: “empirical estimates imply that if both men and women cared about each other career equally, women would have to be x times as productive in home production to justify the observed time allocation”

CONCLUSION

We study the 2009 Fair Work Act in Australia, and find that

- it ↑ the probability of being on a permanent contract and on a regular schedule for mothers
- it consequently ↑ maternal labor supply

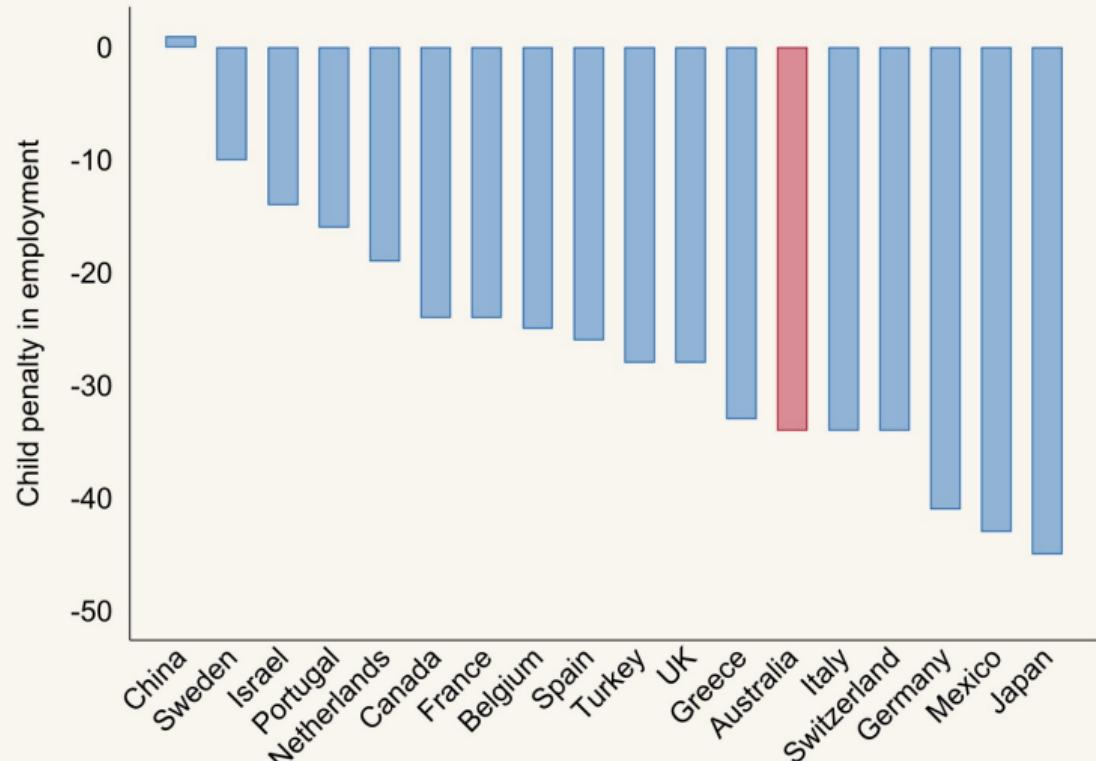
Using the law as a shock choice set, we find that

- easier labor market opportunities for women lead to some rearrangement of home production within the couple

THANK YOU!

CHILD PENALTY IN EMPLOYMENT, AUSTRALIA VS OTHER COUNTRIES

BACK



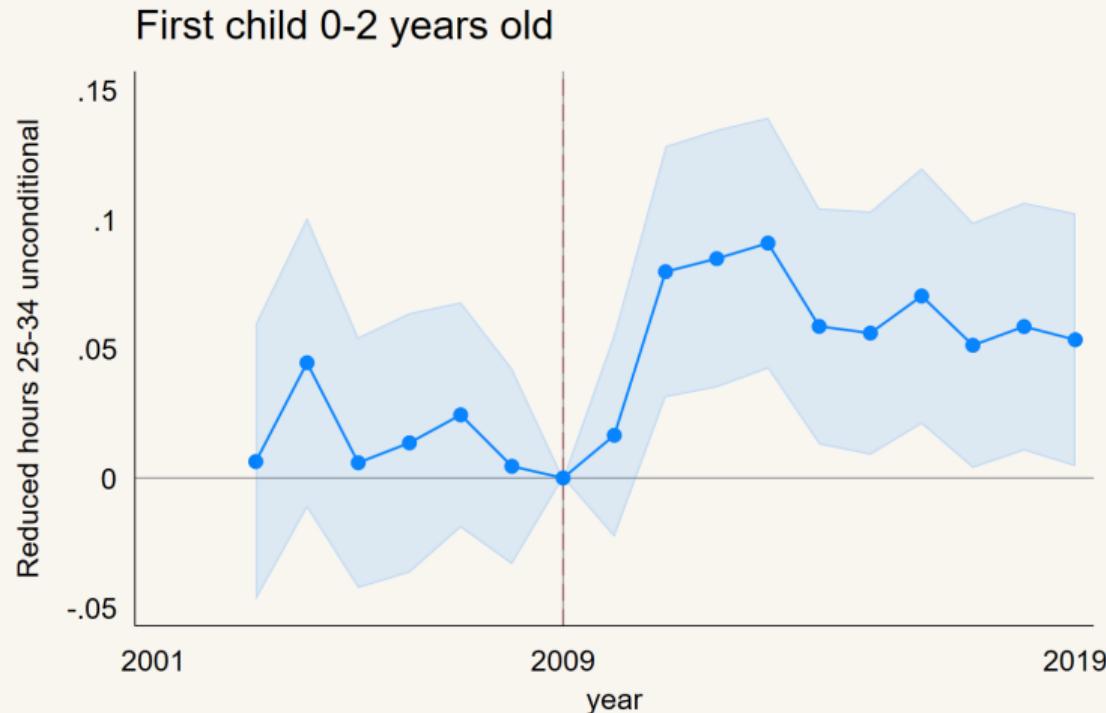
- ▶ On which days of the week do you usually work in your main job?
 - (1) Monday to Friday
 - (2) Nine day fortnight
 - (3) Days vary from week to week
 - (4) Days vary from month to month
 - (5) Other
- ▶ Which of these best describes your current work schedule in your main job?
 - (1) A regular daytime schedule
 - (2) A regular evening shift
 - (3) A regular night shift
 - (4) A rotating shift (changes from days to evenings to nights)
 - (5) Split shift (two distinct periods each day)
 - (6) On call
 - (7) Irregular schedule
 - (8) Other

■ Regular Schedule: (1) to both questions

- “My working times can be flexible” (yes/no)
- “I am entitled to flexible start/finish times”

- Hours worked from home
- Any hours worked from home
- Hours worked from home conditional on any
- Entitlement to work from home

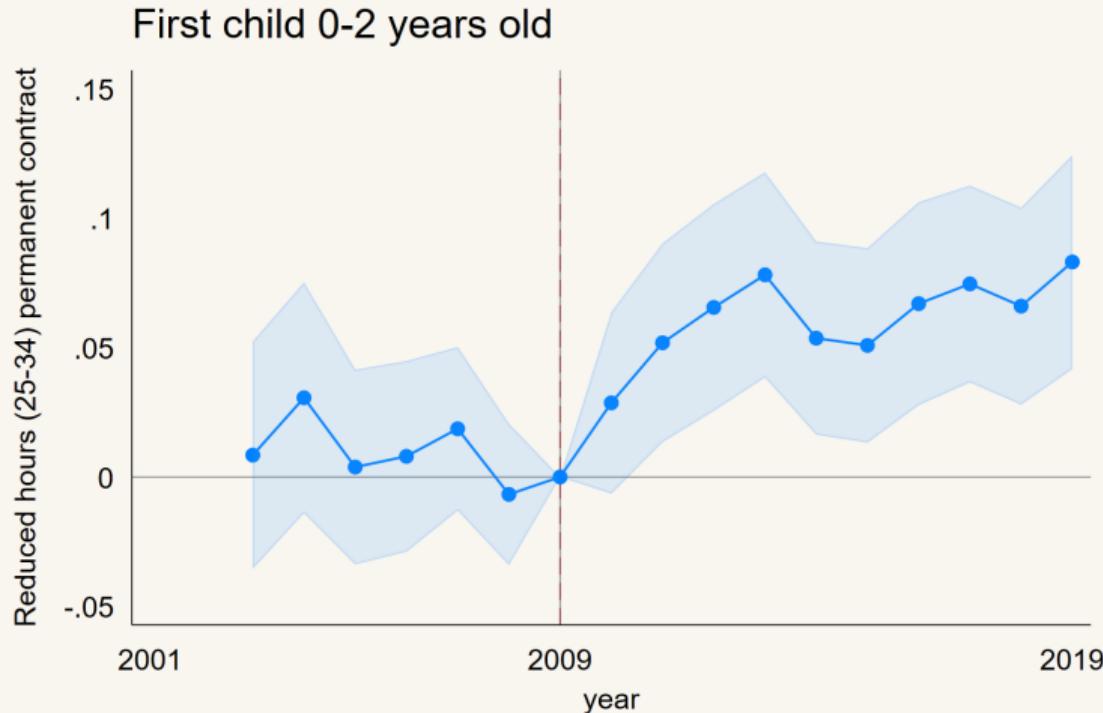
REDUCED HOURS ↑ FOR MOTHERS ONLY IF FIRST KID BORN AFTER LAW



Mean reference group: 0.05.

Vertical red dashed line is last year with no children of cohort born after passage of law.

PERMANENT REDUCED HOURS ↑ FOR MOTHERS



Mean reference group: 0.03.

Vertical red dashed line is last year with no children of cohort born after passage of law.

EFFECTS OF FAIR WORK ACT ON WORK ARRANGEMENTS FOR MUMS

[BACK](#)

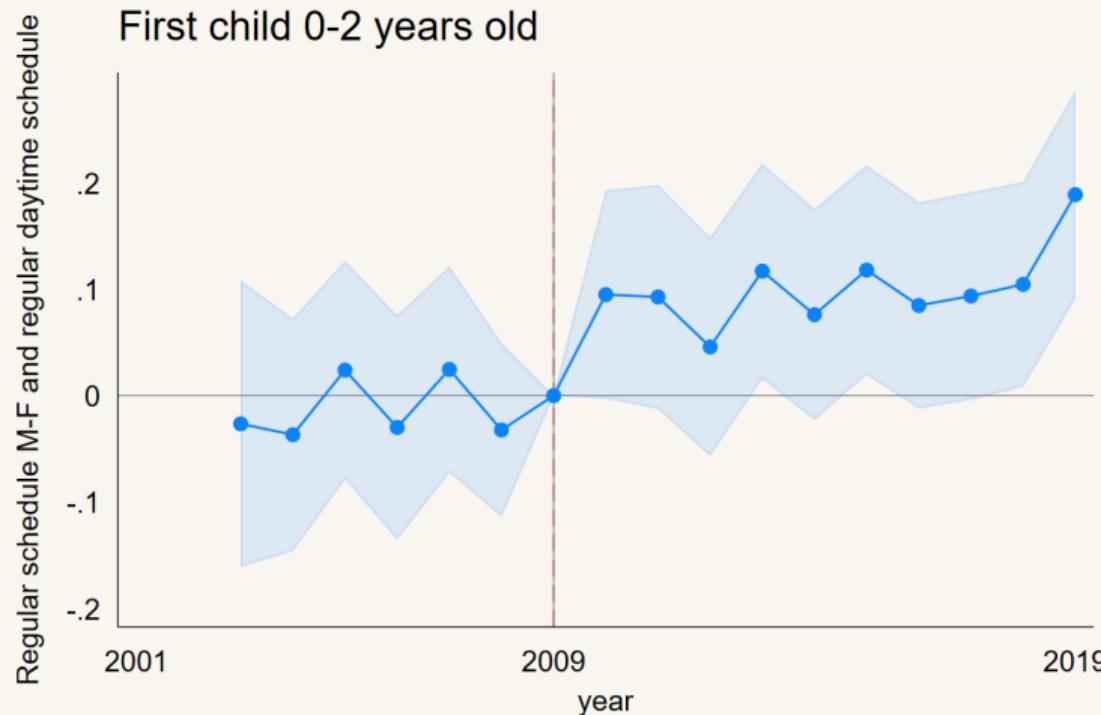
	(1) Reduced hours (25-34) unconditional	(2) Reduced hours (25-34) permanent contract	(3) Regular schedule (M-F and regular daytime schedule)	(4) My working times can be flexible (yes-no)	(5) Entitled to flexible start/finish times	(6) Hours work from home
First child 0-2 × 1st birth after 2010	0.0423 *** (0.0118)	0.0499 *** (0.00887)	0.104 *** (0.0235)	-0.0615 * (0.0303)	0.00500 (0.0236)	0.508 ⁺ (0.294)
First child 3-5 × 1st birth after 2013	0.0534 *** (0.0142)	0.0484 *** (0.0111)	0.0578 * (0.0266)	-0.0106 (0.0282)	0.0205 (0.0256)	0.880 * (0.387)
First child 6-8 × 1st birth after 2016	0.0422 * (0.0172)	0.0306 * (0.0139)	0.0906 ** (0.0310)	-0.0120 (0.0299)	0.0305 (0.0266)	1.248 ** (0.440)
Pre-period mean:						
First child aged 0-2	0.0692	0.0365	0.266	0.587	0.636	2.574
First child aged 3-5	0.0943	0.0526	0.282	0.579	0.638	2.823
First child aged 6-8	0.119	0.0759	0.299	0.556	0.617	3.140
Observations:						
N	123900	129179	83526	61095	64853	88671
N Individuals	12504	13174	9780	8257	8489	10530

Standard errors in parentheses

⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

REGULAR SCHEDULE ↑ FOR MOTHERS ... ONLY IF FIRST KID BORN AFTER FWA

BACK

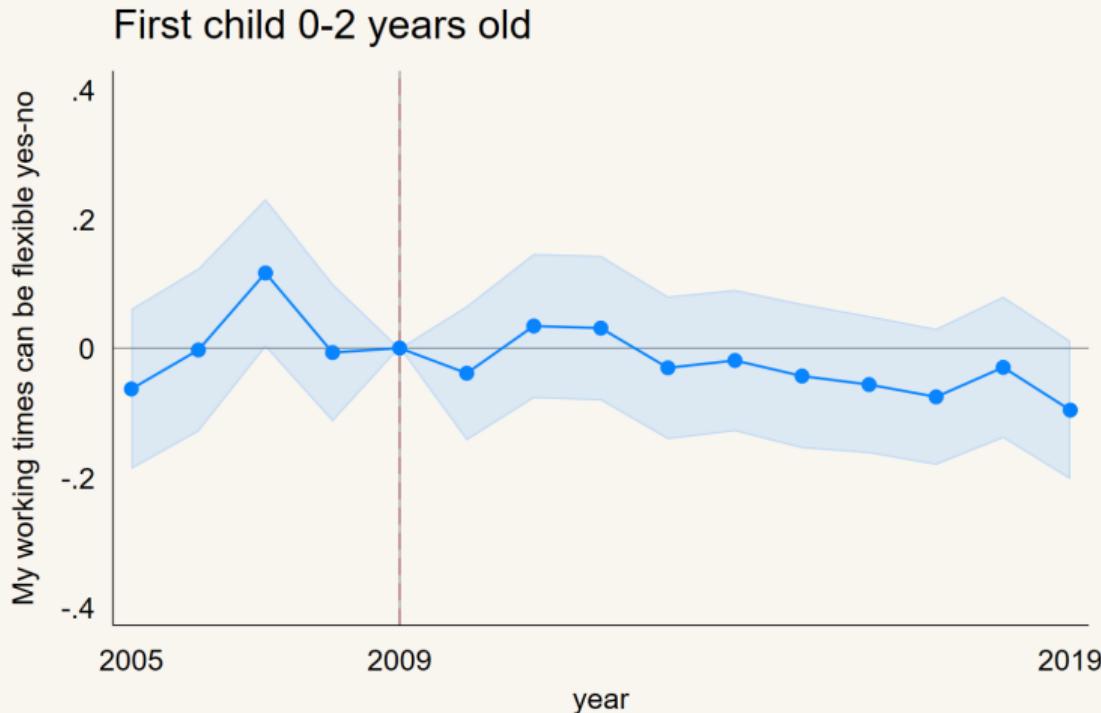


Mean reference group: 0.26.

Vertical red dashed line is last year with no children of cohort born after passage of law.

NO EFFECT ON FLEXIBILITY

BACK

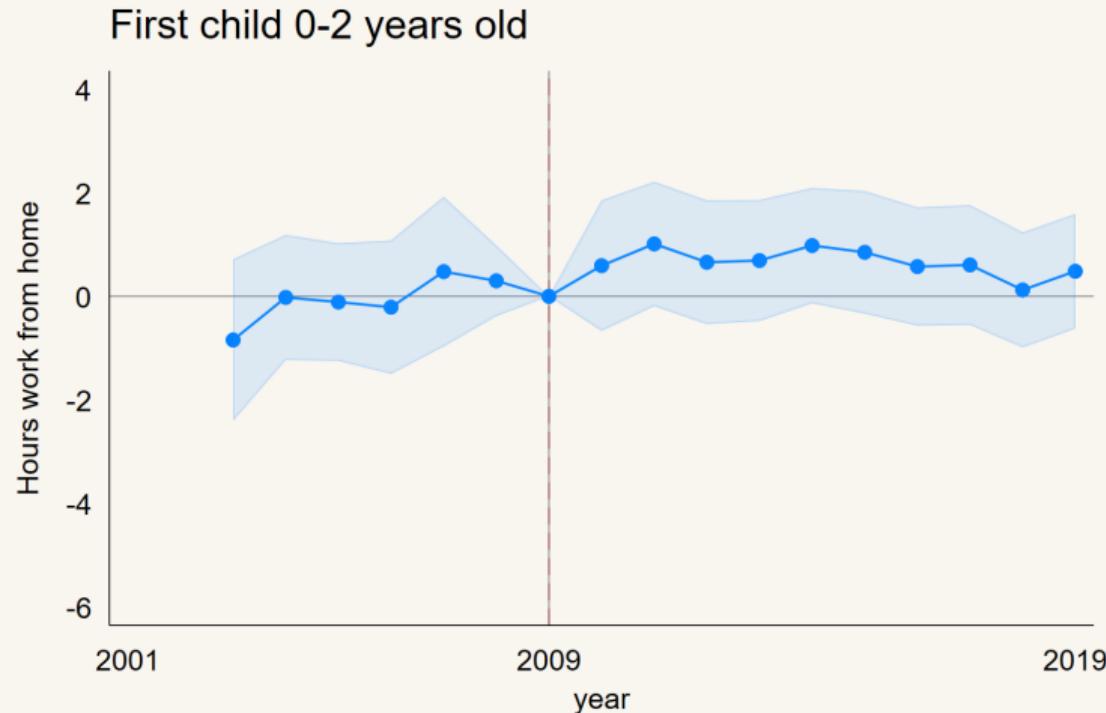


Mean reference group: 0.62.

Vertical red dashed line is last year with no children of cohort born after passage of law.

MIXED RESULTS ON WORK FROM HOME

BACK

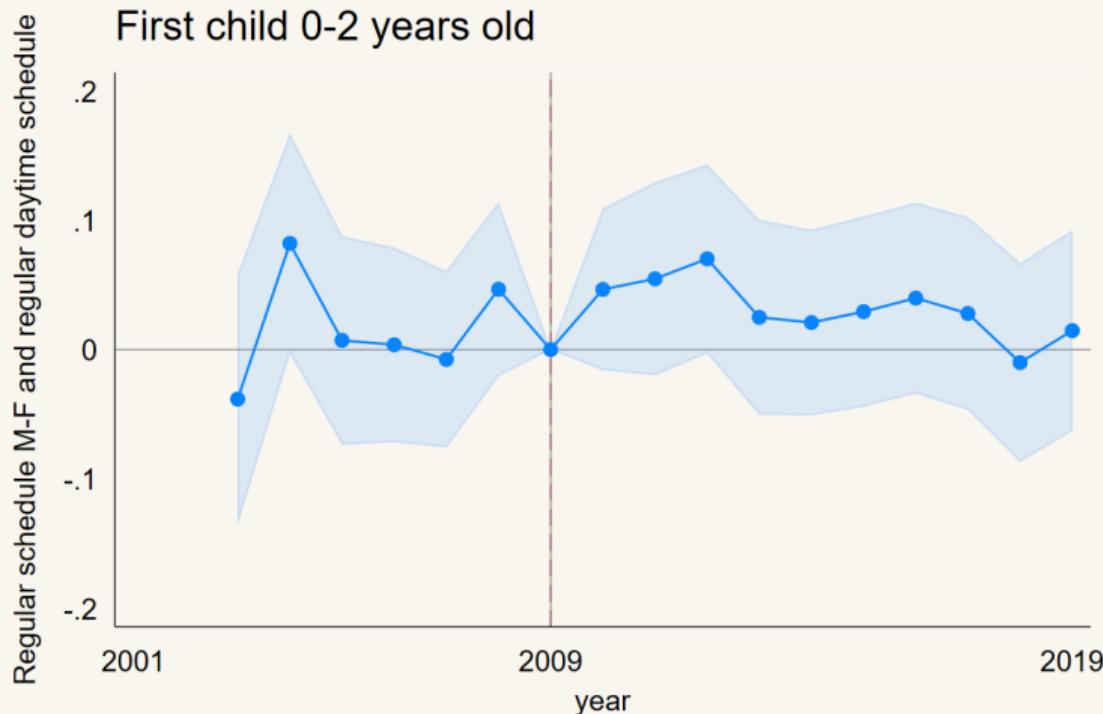


Mean reference group: 2.66.

Vertical red dashed line is last year with no children of cohort born after passage of law.

REGULAR SCHEDULE DOESN'T CHANGE FOR DADS

BACK



Mean reference group: .

Vertical red dashed line is last year with no children of cohort born after passage of law.

EFFECTS OF FAIR WORK ACT ON WORK ARRANGEMENTS FOR DADS

[BACK](#)

	(1) Reduced hours (25-34) unconditional	(2) Reduced hours (25-34) permanent contract	(3) Regular schedule (M-F and regular daytime schedule)	(4) My working times can be flexible (yes-no)	(5) Entitled to flexible start/finish times	(6) Hours work from home
First child 0-2 × 1st birth after 2010	-0.0120 (0.00812)	-0.00227 (0.00438)	0.0154 (0.0184)	0.0273 (0.0217)	0.0249 (0.0207)	0.0123 (0.257)
First child 3-5 × 1st birth after 2013	-0.00935 (0.00914)	0.000675 (0.00631)	0.0151 (0.0215)	0.0189 (0.0229)	-0.0444* (0.0219)	-0.191 (0.337)
First child 6-8 × 1st birth after 2016	0.0115 (0.00962)	0.00290 (0.00579)	-0.00850 (0.0259)	-0.00566 (0.0254)	0.000884 (0.0251)	0.0148 (0.442)
Pre-period mean:						
First child aged 0-2	0.0467	0.0148	0.555	0.510	0.587	2.446
First child aged 3-5	0.0455	0.0187	0.589	0.519	0.645	2.880
First child aged 6-8	0.0339	0.0159	0.618	0.581	0.665	3.475
Observations:						
N	113454	122455	89605	62311	66164	98520
N Individuals	11995	13011	10063	8200	8397	11182

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

FAIR WORK ACT DID NOT CHANGE TREND OF FIRST BIRTHS

BACK



Figure: Fraction of women having their first child by year

FAIR WORK ACT DID NOT AFFECT SELECTION INTO MOTHERHOOD

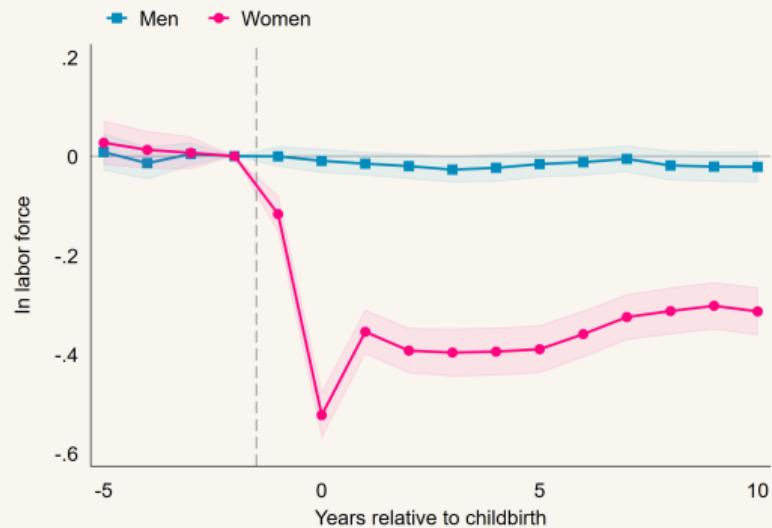
[BACK](#)

	Early cohort (2003-2008)			Late cohort (2010-2017)			Diff.
	N	Mean	SD	N	Mean	SD	
Age at first birth	434	28.74	(6.09)	800	29.04	(5.50)	0.30
In labor force	428	0.93	(0.26)	797	0.93	(0.25)	0.00
Weekly work hours (cond.)	375	39.19	(10.86)	700	38.17	(10.61)	-1.03
Log weekly work hours employment	375	3.61	(0.40)	700	3.58	(0.42)	-0.03
Log(1+weekly wage)	434	5.46	(2.41)	800	5.74	(2.52)	0.29
Part-time if employed	375	0.21	(0.40)	700	0.20	(0.40)	-0.00
Permanent employment	353	0.71	(0.45)	668	0.75	(0.43)	0.03
Overtime (> 38 hrs/week)	434	0.47	(0.50)	800	0.43	(0.50)	-0.04
Overtime (> 50 hrs/week)	434	0.12	(0.33)	800	0.09	(0.29)	-0.03
Regular schedule	375	0.59	(0.49)	700	0.63	(0.48)	0.04
M-F	375	0.62	(0.49)	700	0.65	(0.48)	0.02
Has bachelor degree	428	0.38	(0.49)	797	0.39	(0.49)	0.01

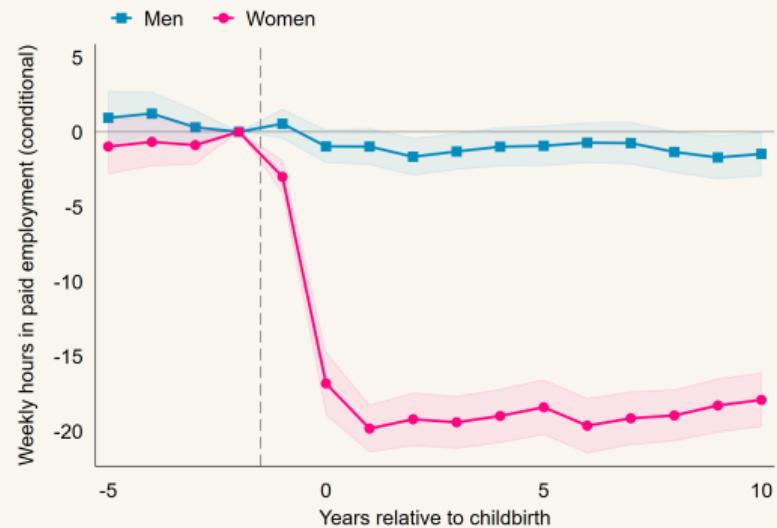
Stars indicate statistical significance (+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

GENDERED CHILD PENALTY: EMPLOYMENT

BACK



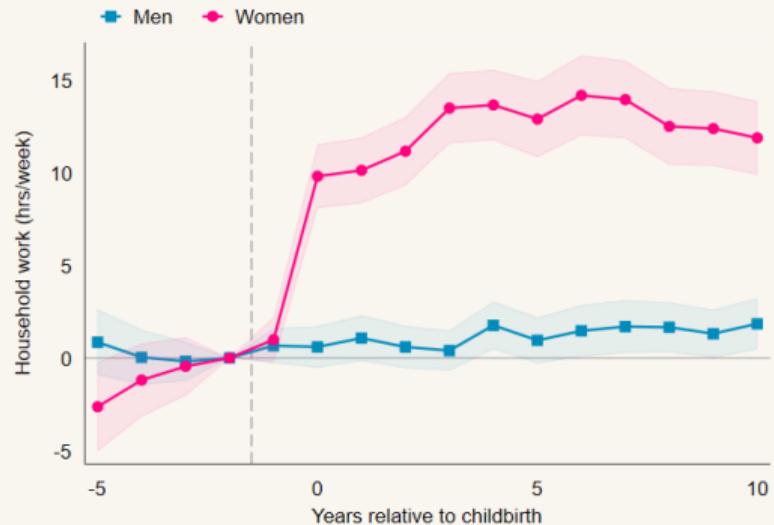
(a) Labor Force Participation



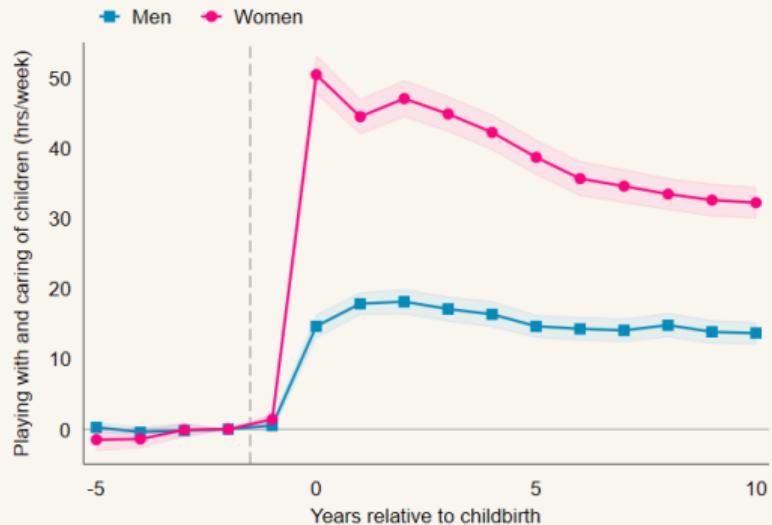
(b) Weekly Hours of Work Conditional on Working

GENDERED CHILD PENALTY: HOUSEWORK AND PARENTING

BACK



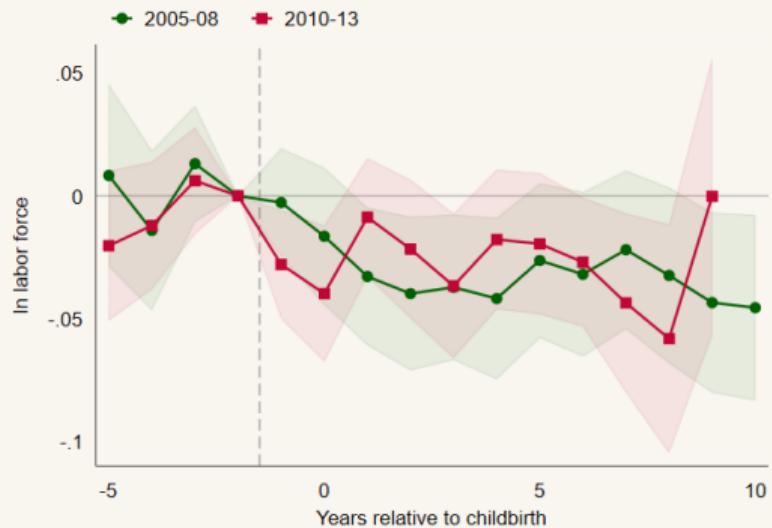
(a) Housework [Hours/week]



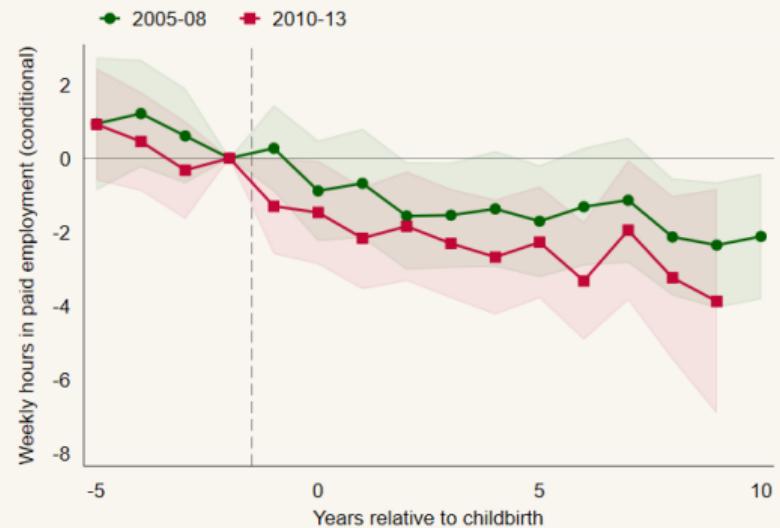
(b) Parenting [Hours/week]

DADS WORK THE SAME, AFTER FAIR WORK ACT

BACK



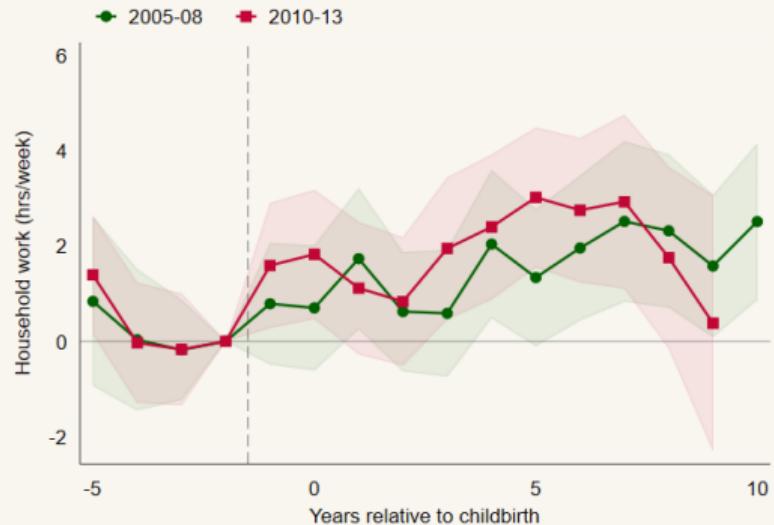
(a) Labor Force Participation, Men



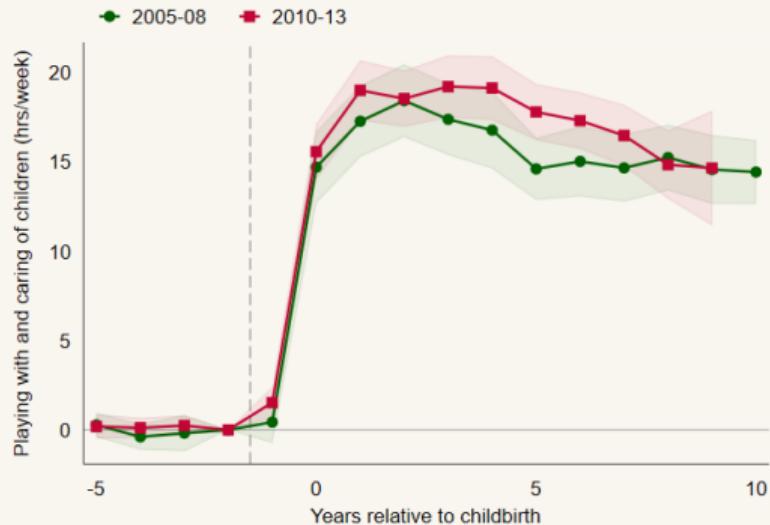
(b) Weekly Hours of Work Conditional on Working

HOUSEWORK & PARENTING = FOR DADS, AFTER FAIR WORK ACT

BACK

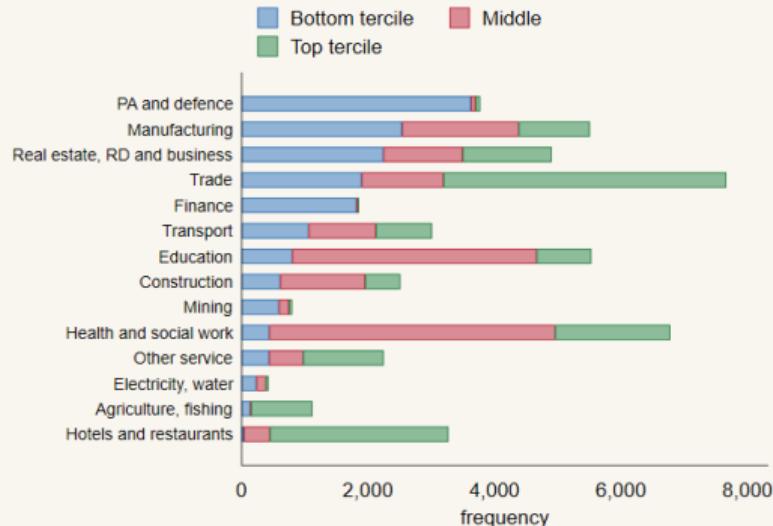


(a) Housework [Hours/week], Men

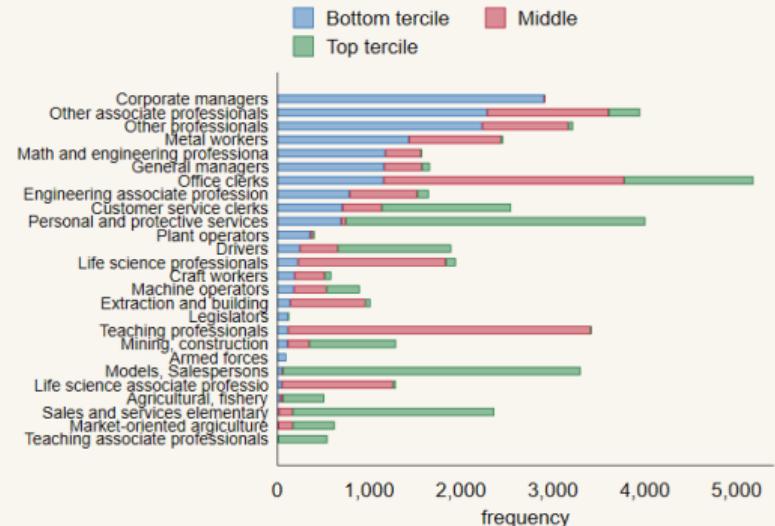


(b) Parenting [Hours/week], Men

INDUSTRIES AND OCCUPATIONS BY FRACTION ON CASUAL CONTRACTS



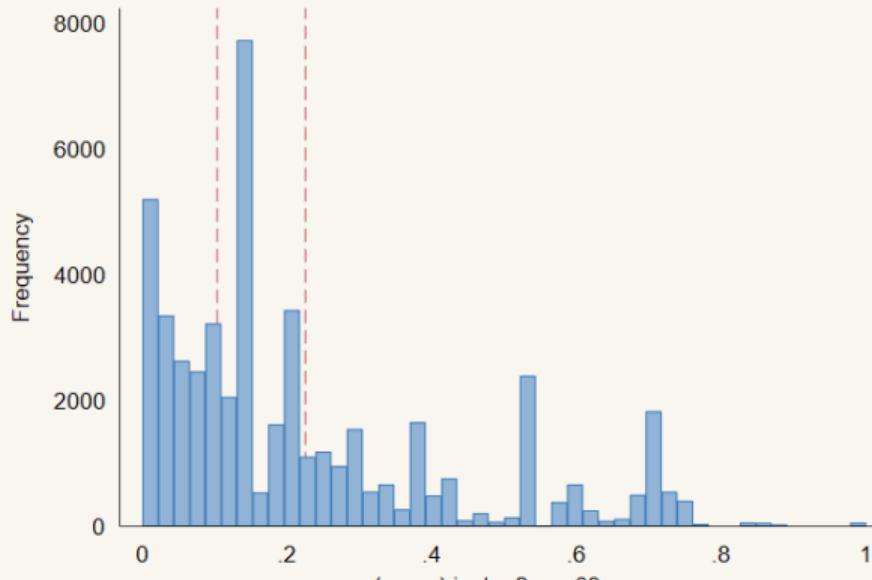
(a) Industries



(b) Occupations

DISTRIBUTION OF CASUAL PREVALENCE

BACK



The vertical dashed lines correspond to the 33rd and the 66th percentile

Figure: Distribution of “casual prevalence”: fraction of casual contracts in an occupation-by-industry

NON-MONOTONIC EFFECT

BACK

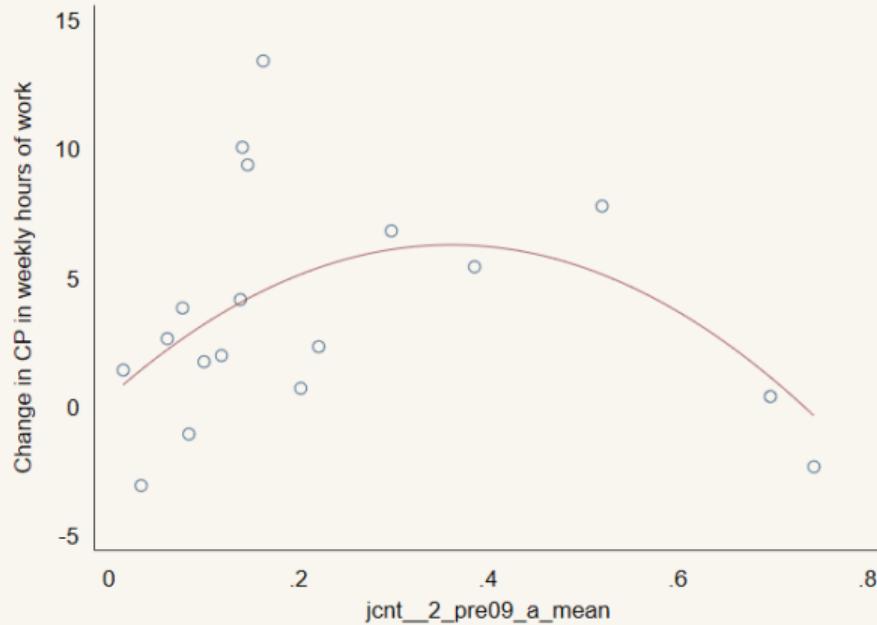
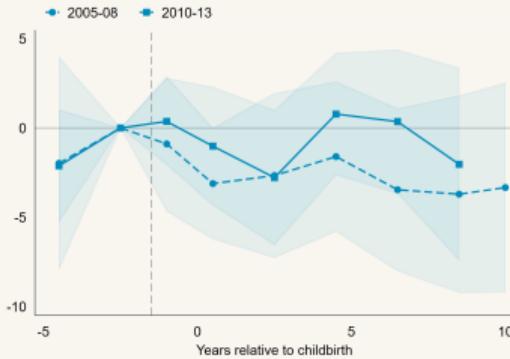


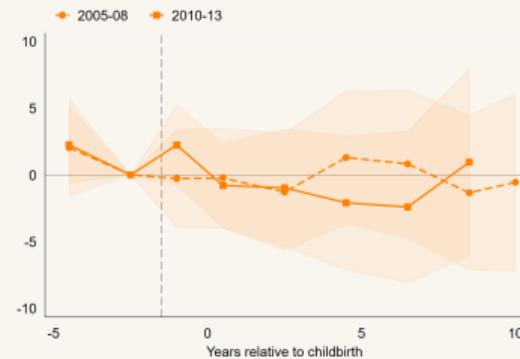
Figure: Child penalty in working hours (0-5 years post birth): change 2010-2013 births from 2005-2008 births as function of fraction of casual contracts in an occupation-by-industry

HOURS WORKED DON'T CHANGE FOR FATHERS

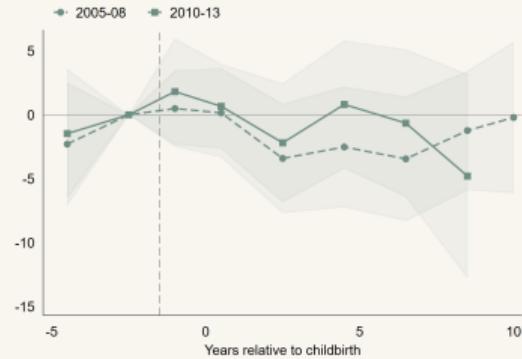
BACK



Pre-birth job in bottom tercile of casual contracts



Middle tercile [most exposed]



Top tercile

Figure: Weekly Hours of Paid Work (incl. Commute), Men by terciles of prevalence of casual contracts in occupation-by-industry
Note: for men, treatment status depends on female partner

REFERENCES I

- Patricia Cortés and Jessica Pan. Children and the Remaining Gender Gaps in the Labor Market. *Journal of Economic Literature*, 61(4):1359–1409, December 2023. ISSN 0022-0515. doi: 10.1257/jel.20221549.
- Breen Creighton and Andrew Stewart. *Labour Law. Fifth Edition*. The Federation Press, 2010.
- Claudia Goldin. A grand gender convergence: Its last chapter. *American Economic Review*, 104(4):1091–1119, 2014.
- Henrik Kleven, Camille Landais, Johanna Posch, Andreas Steinhauer, and Josef Zweimüller. Do Family Policies Reduce Gender Inequality? Evidence from 60 Years of Policy Experimentation. Technical Report w28082, National Bureau of Economic Research, 2021.
- Henrik Kleven, Camille Landais, and Gabriel Leite-Mariante. The Child Penalty Atlas, August 2023. URL <https://www.nber.org/papers/w31649>.
- Liyang Sun and Sarah Abraham. Estimating dynamic treatment effects in event studies with heterogeneous treatment effects. *Journal of Econometrics*, 2020.