

# WHAT WORKS FOR WORKING MOTHERS?

A REGULAR SCHEDULE LOWERS THE CHILD PENALTY

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- Here: Role of work arrangements in explaining the child penalty

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*By job flexibility I mean a multitude of temporal matters including the number of hours, **precise times, predictability and ability to schedule one's own hours.** (? , p. 1104)*

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*[The] right to request flexible working arrangements [...] will help people develop their careers and family life without having to sacrifice either.*

Source: EU commission press conference on the "Directive on work-life balance for parents and carers" (2019/1158)



- In the literature: Goldin's (2014) hypothesis:
    - ▶ **Flexibility** key in explaining gender wage gaps across occupations
  - Among policy makers: assumed causal link between work arrangements and parental labor supply
- ⇒ Here: we establish a **causal link** between work arrangements and child penalty

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- Which work arrangements do mothers want?

Setting: Australia, 2001-2019 vs other countries

Main variation: Entitlement to request a change in work arrangements for parents of young children [Fair Work Act, 2009]

CP at baseline

- 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 (e.g. split shifts)
  - ▶ changes in hours of work (e.g. start/finish times)
  - ▶ changes in location of work (e.g. work from home)

Reasonable business grounds

Awareness

- 1 Which work arrangements do mothers choose?**
- 2 Does changing work arrangements affect the child penalty?**

## 1 Which work arrangements do mothers choose?

- Compare work arrangements of mothers before/after the law, relative to non-mothers
- ⇒ **Regularity of schedule** ↑ by almost 40% post-2009 for new mothers, no effect on **Flexibility and Work from home**

## 2 Does changing work arrangements affect the child penalty?

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### i. Interrupted Time Series

- Compare CP of women who become mothers in different years
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### ii. Exposure Design

- Exposure of mothers to Fair Work Act through occupation and industry
- ⇒ **Only for mothers in exposed jobs**, Regularity of schedule ↑ by 32%; CP in hours ↓ by 32%

## 1 Data and Definitions

2 The 2009 Fair Work Act shifted (some) work arrangements

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5 Conclusion

## Household, Income and Labour Dynamics in Australia

- Representative sample of Australian population (sample size  $\sim 20,000$ )
- Ongoing longitudinal annual survey that started in 2001
- Variables of interest
  - ▶ Family structure
  - ▶ Detailed questions about job characteristics and entitlement
  - ▶ Labor market outcomes (earnings and work hours)
  - ▶ Time use (housework split)
  - ▶ Occupation, education and other demographic and socio-economic variables
- $\sim 1200$  women have their first child in our sample years

- **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

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

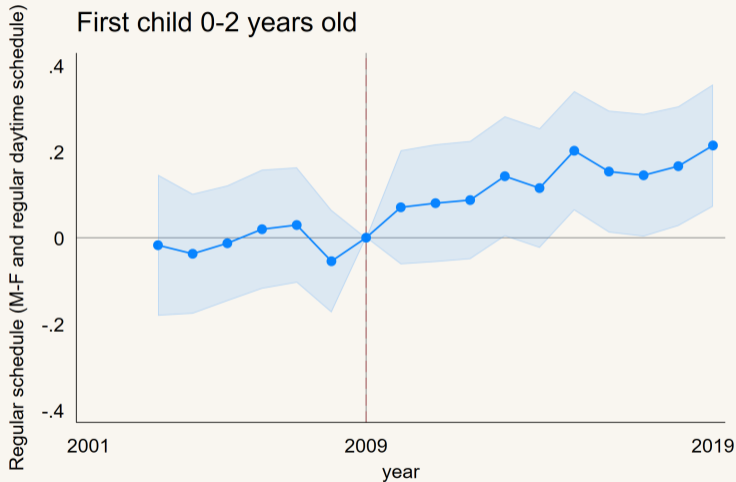
- $C(i, t)$ : age of  $i$ 's child in year  $t$
- Treated: (Parent of  $< 6$  year old)\*(post-2009)
- Controls: Non-parents & parents of older children

## A MORE FLEXIBLE SPECIFICATION

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

- Age ranges  $a \in A$ : 0-2, 3-5, 6-8, 9-10, 10+
- 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

# REGULAR SCHEDULE $\uparrow$ FOR MOTHERS



Mean reference group: 0.26.

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



## TIMING OF THE EFFECTS

- Mothers of kids aged 0-2 are more likely to be on regular schedule after 2009
  - Mothers of kids aged 3-5 are more likely to be on regular schedule after 2012
  - Mothers of kids aged 6-8 are more likely to be on regular schedule after 2015
- ⇒ Work arrangements only shift for women who had their first child after the reform
- ⇒ Effect is persistent

Graphs

- For mothers, after the Fair Work Act: [Table](#)
  - ▶ Work becomes **more regular**:

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- 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](#)

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

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

$\gamma_k$  coefficients of interest: difference  $k$  periods from childbirth between mother and her pre-birth self → **Child Penalty** in year  $k$



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■ **Have child penalties changed** before vs after 2009?

▶ Compare **Early** cohorts of mothers (first childbirth in 2005-08) to **Late** cohorts (2010-13)



**Figure:** Paid employment conditional on working [Hours per week], Women

Is this a time trend?

Other outcomes

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- **Exposure non-monotonic in regularity**
  - jobs with **intermediate levels** of regularity most exposed

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

**Job regularity** = Fraction of individuals with a **regular schedule** pre-2009

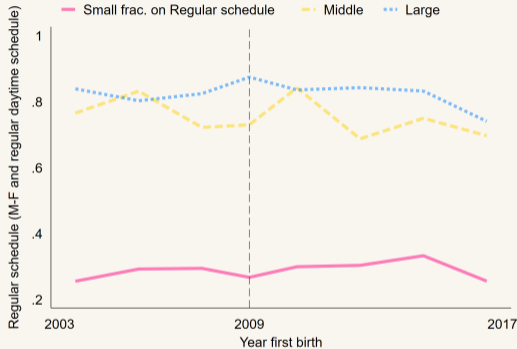
- ▶ Robust to using only observations of men in the whole sample period

Graph

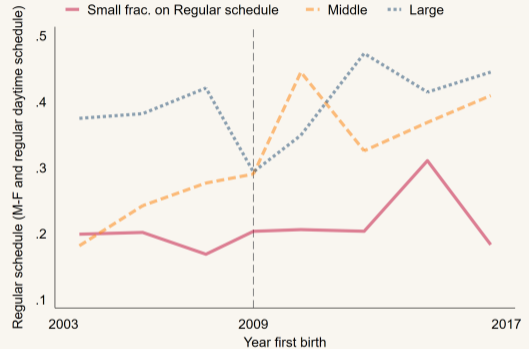
- Assign mothers level of regularity of job they have two years before childbirth
- Compare child penalty pre-post reform by different levels of exposure
- Sample sizes:  $\sim$  125 mother per tercile in the early cohort (2005-2008) and  $\sim$  215 per tercile in the late cohort (2010-2013)

Descriptives

# POST-BIRTH REGULARITY ONLY ↑ FOR MOTHERS IN MIDDLE TERCILE



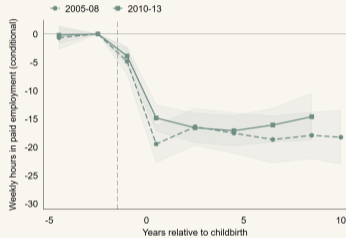
(a) Before childbirth (years -6 to -1)



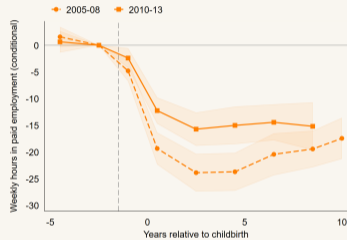
(b) After childbirth (years 0 to 5)

**Figure:** Fraction of (will-be) mothers on regular schedules by terciles of job regularity

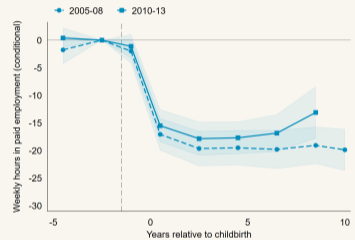
# CHILD PENALTY IN WORK HOURS BY TERCILES OF JOB REGULARITY



Pre-birth job in top tercile of regularity



Middle tercile [most exposed]



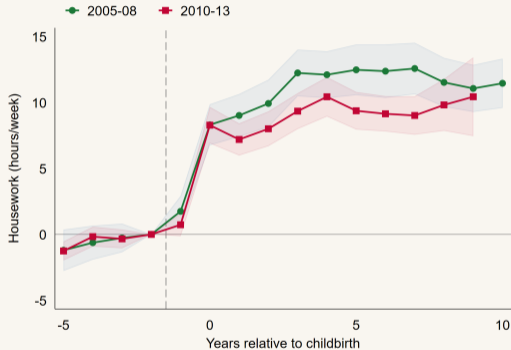
Bottom tercile

Table

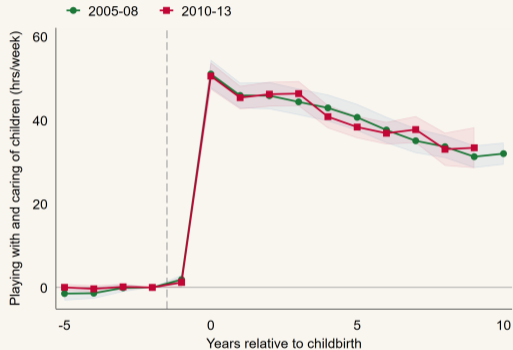
Their partners

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# MUMS WHO WORK MORE DO LESS CHORES BUT NOT LESS PARENTING



(a) Housework [Hrs/week]



(b) Playing with and caring of children [Hrs/week]

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- If allowed to choose, mothers want Regular schedules
- When given regular schedules, their child penalty in hours worked drops
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- If allowed to choose, mothers want Regular schedules
- When given regular schedules, their child penalty in hours worked drops
- Effect fully concentrated in women in jobs more exposed to the Fair Work Act
- Housework is partially traded-off to allow more time working, partners pick up less than 40% of the slack
- Time spent parenting is unaffected for treated mothers and their partners

THANK YOU!  
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