WHAT WORKS FOR WORKING MOTHERS?
A Regular Schedule Lowers the Child Penalty

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- Similar earnings growth before children
- Women face a child penalty, men don’t
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Here: Role of work arrangements in explaining the child penalty
In the literature: Goldin’s (2014) hypothesis:

- **Flexibility** key in explaining gender wage gaps across occupations
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▶ Flexibility key in explaining gender wage gaps across occupations

*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)
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
In the literature: Goldin’s (2014) hypothesis:
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Among policy makers: assumed causal link between work arrangements and parental labor supply

[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
Do work arrangements matter for the child penalty?
Research Questions

- Do work arrangements matter for the child penalty?
- 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]
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)
Which work arrangements do mothers choose?

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?
**Research Questions and Answers**

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2. **Does changing work arrangements affect the child penalty?**
   i. **Interrupted Time Series**
      - Compare CP of women who become mothers in different years
      ⇒ 17% smaller child penalty in labor supply in post-Fair Work Act cohorts
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2 Does changing work arrangements affect the child penalty?
   i. Interrupted Time Series
      - Compare CP of women who become mothers in different years
        ⇒ 17% smaller child penalty in labor supply in post-Fair Work Act cohorts
   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%
Overview

1. Data and Definitions
2. The 2009 Fair Work Act shifted (some) work arrangements
3. The 2009 Fair Work Act reduced the child penalty in labor supply
4. Exposure to the Fair Work Act via occupation and industry
5. Conclusion
Household, Income and Labour Dynamics in Australia

- Representative sample of Australian population (sample size ~ 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

- ~ 1200 women have their first child in our sample years
**Work Arrangements**

- **Regular schedule:** Work M-F on a regular daytime schedule
  - 42% of all women and 53% of all men

- **Flexibility:** agreement with “My working times can be flexible” (yes/no)
  - 49% of all women and 52% of all men

- **Work from Home:** Hours worked from home in a typical week
  - 2.31 on avg for all women and 2.48 for all men
Data and Definitions

The 2009 Fair Work Act shifted (some) work arrangements

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Exposure to the Fair Work Act via occupation and industry

Conclusion
\[ Y_{it} = \beta_C \times \mathbb{1}\{C(i, t) < 6\} + \beta_{C, post} \times \mathbb{1}\{C(i, t) < 6\} \times \mathbb{1}\{t > 2009\} + \alpha_i + \delta_t + \gamma_{h(i)} + \epsilon_{it} \]

- \(C(i, t)\): 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

\[ Y_{it} = \sum_{a \in A} \left( \beta_{Ca} \times \mathbb{1}\{C(i, t) \in a\} \right) + \sum_{j \neq 2009} \beta_{Ca,j} \times \mathbb{1}\{C(i, t) \in a\} \times \mathbb{1}\{t = j\} \right) + FEs + \epsilon_{it} \]

- Age ranges \( a \in A: 0-2, 3-5, 6-8, 9-10, 10+ \)
- Coefficients of interest are \( \beta_{Ca,j} \): 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 for mothers

First child 0-2 years old

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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- No increase in flexibility

Note: The Fair Work Act did not observably affect selection into childbearing 
Fertility 
Balance tab
Effects of the Fair Work Act on Work Arrangements

- For mothers, after the Fair Work Act: (Table)
  - Work becomes more regular:
    - they are more likely to work M-F, and less on variable days
    - they are more likely to work a regular daytime schedule, and less on call / on an irregular schedule
  - No increase in flexibility (Graph)
  - Noisy and small effect on WFH (Graph)

- For fathers, nothing changes after the Fair Work Act

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Balance tab
Data and Definitions

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Exposure to the Fair Work Act via occupation and industry

Conclusion
Time evolution of child penalty

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

\[ E(i) \] 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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\( E(i) \)  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 \( \rightarrow \) Child Penalty in year \( k \)

- 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
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► If everyone on regular schedule (e.g. government job) → no room for improvement
► If no one on regular schedule, likely technological reasons (e.g. bartender) → employer can refuse on “reasonable business grounds”
► If half on regular schedule, likely no technological reasons against, and room for improvement (e.g. nurses)
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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
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: ~125 mother per tercile in the early cohort (2005-2008) and ~215 per tercile in the late cohort (2010-2013)
(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
The 2009 Fair Work Act shifted (some) work arrangements

The 2009 Fair Work Act reduced the child penalty in labor supply

Exposure to the Fair Work Act via occupation and industry

Conclusion
(a) Housework [Hrs/week]  
(b) Playing with and caring of children [Hrs/week]
Exploiting the variation from the **2009 Fair Work Act**, we showed:

- 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**
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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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