

To what extent do childcare subsidy reforms
promote maternal employment and formal care
usage in Australia?

Final Presentation

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Introduction

- ▶ Rising dual incomes and maternal employment is driving demand for childcare.
- ▶ Childcare subsidies aim to boost maternal employment and formal care use.
- ▶ In Australia, the government spends \$13b annually on ECEC.
- ▶ Research rarely examines specific childcare reforms due to limited data (US) or little variation (Europe's subsidised care).

This Paper

Uses longitudinal survey data from Australia to evaluate the impact of the 2022 childcare subsidy increase on:

- ▶ Use of formal childcare services
- ▶ Maternal labour market outcomes

Preview of Results

Formal care

- ▶ Formal care participation $\uparrow$ 9 p.p. ($\uparrow$ 32%),
- ▶ Weekly formal care $\uparrow$ 2.4 hrs ($\uparrow$ 28%).

Maternal employment

- ▶ Mixed effects — better-identified models show no significant change.

Literature

- ▶ **Canada:** \$5-day care ↑ maternal employment 7–8 p.p., formal care use 14–15 p.p (Baker et al., 2008; Lefebvre & Merrigan, 2008)
- ▶ **Norway:** Means-tested subsidies → no employment effect, improved child outcomes (Black et al., 2014)
- ▶ **Australia:** Small or negative effects of childcare costs on maternal work; 2018 CCS: small childcare uptake, no labour impact (Doiron & Kalb, 2005; Breunig et al., 2012; Clarke et al., 2024)
- ▶ **This study:** First causal evaluation of 2022 CCS reform

Why Australia?

Policy Relevance, Data & Variation:

- ▶ High childcare costs (26% of earnings) among OECD
- ▶ Women's earnings drop 55% post-parenthood (Bahar et al., 2023)
- ▶ HILDA survey: rich longitudinal data (2008-2023)
- ▶ Means-tested subsidies & flexible childcare policies

Institutional Setting: the 2022 CCS reform

Policy Background

- ▶ 2004–2018 reforms shaped the system; subsidy linked to **income** (means-tested) and **activity** (work/study hours)

2022 CCS Reform

- ▶ Second+ children: $\uparrow$ 30% subsidy; First child: unchanged
- ▶ Treatment: multi-child families with 2+ children in childcare
- ▶ Control: multi-child families, max one child in childcare

Methodology: Event Study DiD (1)

$$Y_{itk} = \alpha_i + \text{age}_{itk} + \sum_{k=-4}^6 \beta_k (\text{age}_{t-k} \times \text{Treatment}_i) + \theta_k X_{itk} + \epsilon_{itk} \quad (1)$$

i = child, k = age, t = time, β_k captures reform effect at age k

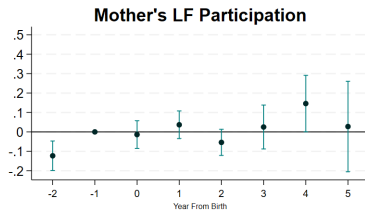
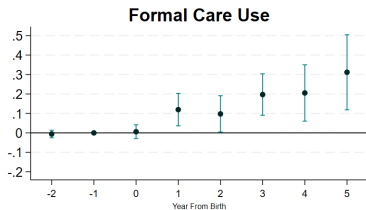
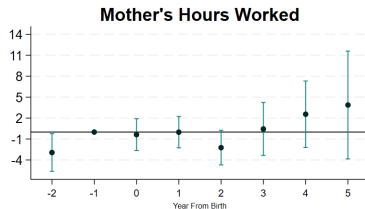
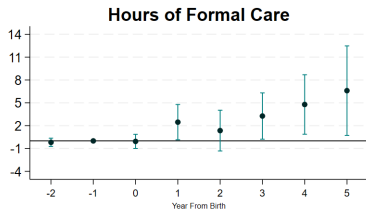
Identifying assumption:

- ▶ Parallel trends: treatment and control would follow similar trends in the absence of the 2022 reform

Additional considerations:

- ▶ Restrict to children born after 2013: both treatment and control exposed to 2018 reform
- ▶ Partial treatment: children affected only at certain ages

Event Study Results



- ▶ Formal childcare shows sustained increases after birth
- ▶ Mother outcomes are mixed but present pre-trends.

Estimation Results

	Childcare Hrs/wk	Childcare Use	Mother LF	Mother Hrs/wk
Treat $\times$ After	2.435***	0.113***	0.074***	1.048
Mean (Control)	7.67	0.40	0.76	22.56
Observations	9,350	9,350	9,350	9,350

Significance: *** 1%, ** 5%, * 10%. Controls include parental age, education, birthplace, language, Indigenous status, state/region dummies, sibling age, separation status.

- ▶ Formal care: $\uparrow$ 2.4 hrs/week ($\uparrow$ 32%); $\uparrow$ 11 p.p use ($\uparrow$ 28%)
- ▶ Mother outcomes: $\uparrow$ 7.4 p.p LF participation ($\uparrow$ 10%); insignificant effect on hrs worked

Methodology: Cohort Analysis DiD (2)

$$Y_{it} = \beta_0 + \beta_1 Treatment_i + \beta_2 Year_t + \beta_3 (Treatment_i \times Year_t) + \theta X_{it} + \epsilon_{it} \quad (2)$$

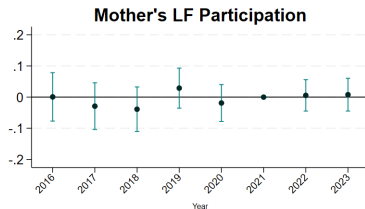
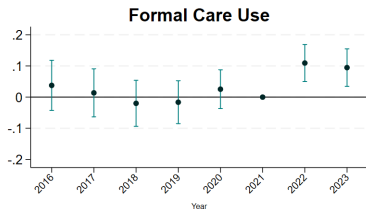
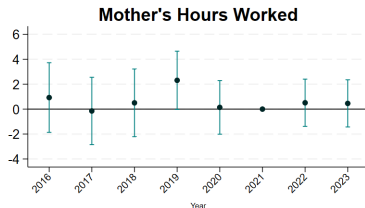
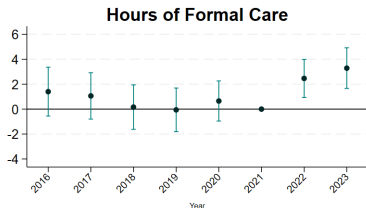
i = mother, t = time

- ▶ DiD (1) may pick up systematic cohort differences that generate differential trends—especially for mother outcomes.
- ▶ DiD (2) compares mothers of the same age across years to reduce this bias.

Treatment: Mothers with 2+ children, with ≥ 2 aged 0–5 in 2022

Control: Mothers with 2+ children, with ≤ 1 aged 0–5 in 2022

Event Study Results (Cohort)



- ▶ Significant increase in child outcome variables
- ▶ No significant changes in mother outcome variables

Estimation Results (Cohort)

	Childcare Hrs/wk	Childcare Use	Mother LF	Mother Hrs/wk
Treat $\times$ After	2.376***	0.089***	0.011	-0.215
Mean (Control)	7.67	0.40	0.76	22.56
Observations	19,005	19,005	19,005	19,005

Significance: *** 1%, ** 5%, * 10%. Controls include parental age, education, birthplace, language, Indigenous status, state/region dummies, sibling age, separation status.

- ▶ Formal care: $\uparrow$ 2.4 hrs/week ($\uparrow$ 31%); $\uparrow$ 9 p.p use ($\uparrow$ 22%)
- ▶ Mother outcomes: statistically insignificant effects

Heterogeneity Analysis: Reform Effects by Income Group

	Childcare Hrs/wk	Childcare Use	Mother Hrs/wk	Mother LF
Group 1 (0–70k)				
Treat×Birth	1.514 (1.730)	0.074 (0.067)	-1.387 (1.401)	-0.006 (0.034)
Control Mean	2.63	0.19	9.20	0.48
Group 2 (70–175k)				
Treat×Birth	1.480* (0.807)	0.069** (0.028)	-1.726** (0.817)	-0.022 (0.016)
Control Mean	7.38	0.41	20.01	0.71
Group 3 (175–254k)				
Treat×Birth	2.743** (1.172)	0.060 (0.045)	1.971 (1.294)	0.017 (0.027)
Control Mean	9.01	0.43	26.35	0.88
Group 4 (254–400k)				
Treat×Birth	3.349** (1.648)	0.152** (0.064)	0.959 (2.078)	-0.007 (0.039)
Control Mean	8.95	0.48	30.79	0.91
Observations	1,474	8,414	3,798	2,011

Significance: *** 1%, ** 5%, * 10%. Control Mean = average outcome in control group.

- ▶ Formal care: ↑ with income (Groups 2–4: 20%, 30%, 38%)
- ▶ Mother outcomes: mostly insignificant; hrs ↓ 9% (Group 2)

Robustness Checks

- ▶ **AT–NT:** Compare always vs. never eligible families to address partial exposure
- ▶ **Full controls:** Include all covariates to test sensitivity
- ▶ **Exogenous controls only:** Use only covariates unaffected by the reform (e.g., child age)

Link to robustness tables→

Conclusion and Future Research

Conclusion

- ▶ 2022 CCR increased formal care participation and weekly hrs.
- ▶ No robust effect on mothers' LF participation or hours worked.

Future Research

- ▶ Investigate long-term effects as more data becomes available.
- ▶ Study interactions with welfare/tax policies to explain the lack of maternal employment effects.

Appendix / Supplementary Material

This section includes additional tables, robustness checks, and figures referenced in the main presentation.

Appendix: Robustness Tables (1)

Outcome	Main Reg.	AT-NT	Full Controls	Exog Controls
	(1)	(2)	(3)	(4)
Formal Care Hrs/week	2.435***	3.007***	2.213***	2.487***
Formal Childcare Use	0.113***	0.113***	0.104***	0.117***
Mother LF Participation	0.074***	0.098***	0.025*	-0.006
Mother Hours/week	1.048	1.841*	0.012	-3.346***
Obs	9,350	5,660	9,350	8,864

- ▶ Formal care: effects are consistent across specifications
- ▶ Mother outcomes: sensitive to model choice

Robustness Checks (2)

Outcome	Main Reg. (1)	AT-NT (2)	Full Controls (3)	Exog Controls (4)
Formal Childcare Hrs/week	2.376***	1.863***	2.273***	1.584***
Formal Childcare Use	0.089***	0.093***	0.085***	0.056***
Mother LF Participation	0.011	0.009	-0.010	-0.015
Mother Hours/week	-0.215	-0.282	-0.722	-0.996
Obs	19,005	16,847	19,005	29,367

- ▶ Formal care: effects are consistent across specifications
- ▶ Mother outcomes: effects are consistently insignificant

[Back to Robustness](#)