

What Drives Child Penalties?

Evidence from a Global Organization

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Main findings

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- ▶ Mothers sort into flexible jobs with weaker advancement prospects

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- ▶ **Sample**

- ▶ HQ professional staff observed before and after first childbirth
- ▶ 1,617 mothers and 1,710 fathers

Event-study DiD around first childbirth

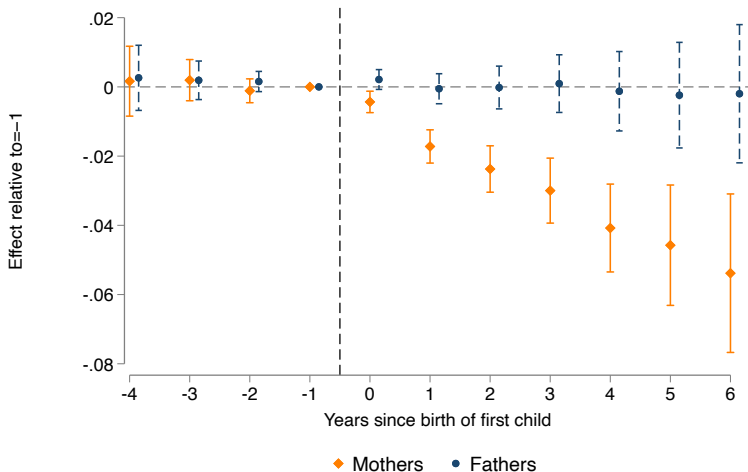
de Chaisemartin and D'Haultfoeuille (2024)

$$\hat{\delta}_{\tau} = \sum_b \omega_{b\tau} \left[\underbrace{\Delta_{b-1}^{b+\tau} \bar{y}_{B=b}}_{\text{birth cohort } b} - \underbrace{\Delta_{b-1}^{b+\tau} \bar{y}_{B>b+\tau}}_{\text{not yet parents}} \right]$$

- ▶ $\hat{\delta}_{\tau}$: average effect τ years after first childbirth
- ▶ Identification comes from variation in timing of first birth
- ▶ Estimated separately for mothers and fathers
- ▶ Outcomes are scaled by their $\tau = -1$ mean within gender $\times$ age-at-first-birth cells.

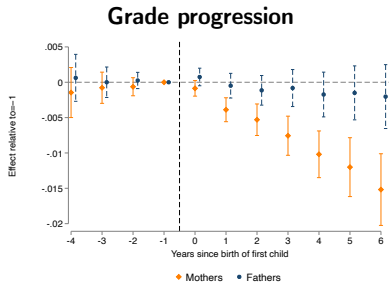
▶ No evidence of differential attrition

Child penalty in earnings for mothers but not for fathers



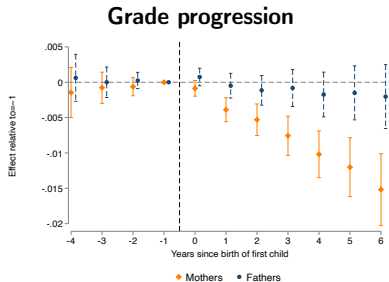
Average penalty across 6 years: 3.1%

Mothers' career progression slows down

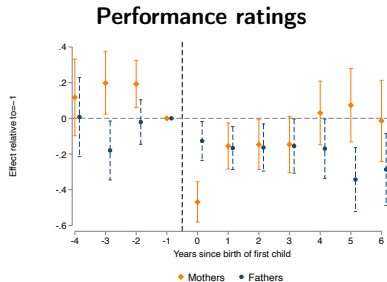


After six years, mothers are
one-quarter of a promotion behind

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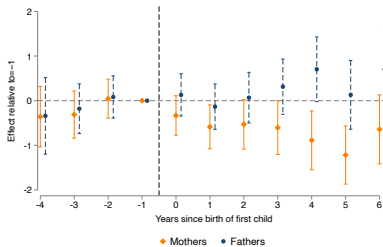
After six years, mothers are one-quarter of a promotion behind



No durable decline in performance ratings

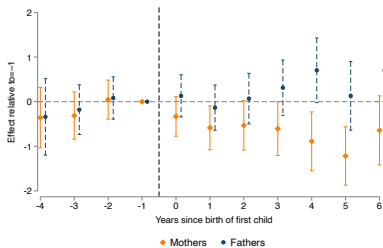
Mothers take on fewer leadership responsibilities

Initiates a development project



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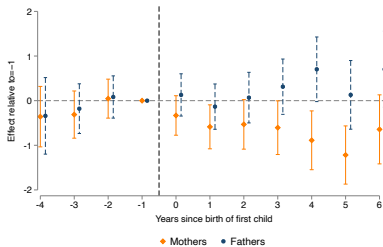
Initiates a development project



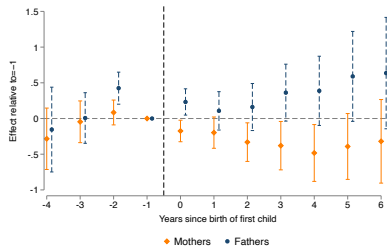
Baseline for mothers: 12%
After childbirth: Pr. ↓ **64.5%**

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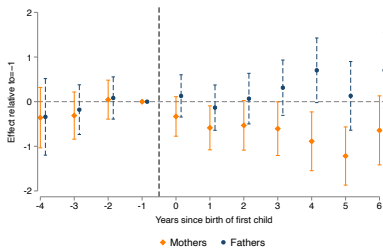
Supervises an external consultant



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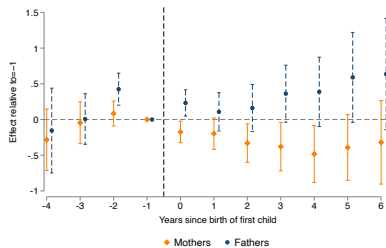
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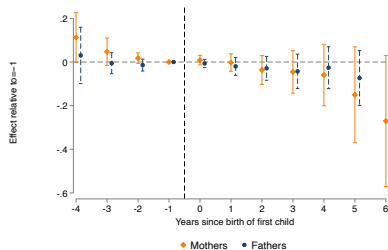
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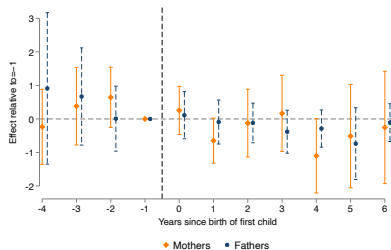
Baseline for mothers: 11%
After childbirth: Pr. ↓ **32.5%**

No decline in quality of realized outputs

Project outcome ratings
Supervised projects



Downloads
New working papers



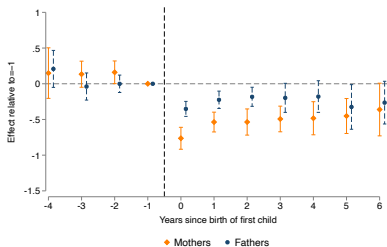
Also no detectable effect on **Project delays**

Number of new working papers

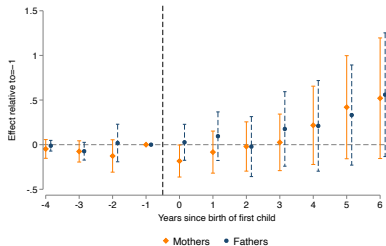
Mothers reduce travel especially sharply

Home-based work increases, but estimates are imprecise

Days of work-related travel



Weeks of home-based work



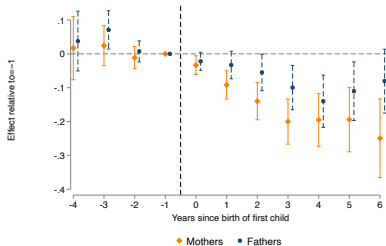
	Baseline	After childbirth
Mothers	36 days	↓ 51.8%
Fathers	38 days	↓ 24.6%

insignificant ↑ for mothers and fathers

Parenthood induces sorting

Mothers shift away from advancement opportunities toward flexibility more than fathers

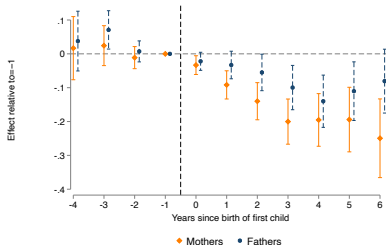
High-promotion-potential job



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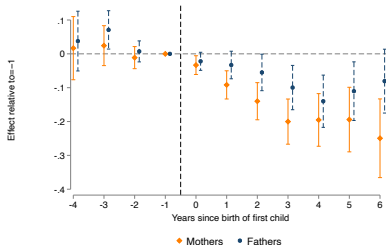


- Parents move out of high-promotion-potential jobs

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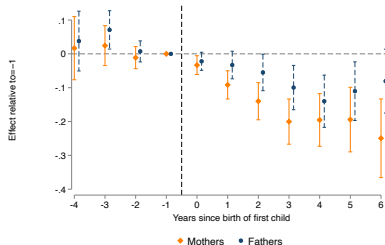


- ▶ Parents move out of high-promotion-potential jobs
 - ▶ Larger decline among mothers

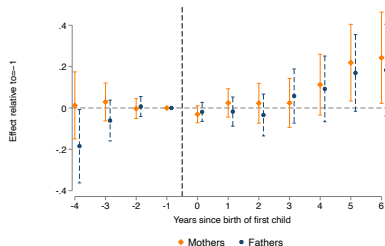
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Job amenable to home-based work

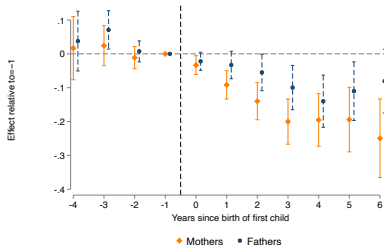


- ▶ Parents move out of high-promotion-potential jobs
 - ▶ Larger decline among mothers
- ▶ Toward jobs with greater use of home-based work and less travel

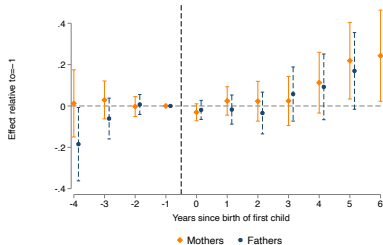
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High-promotion-potential job



Job amenable to home-based work



- ▶ Parents move out of high-promotion-potential jobs
 - ▶ Larger decline among mothers
- ▶ Toward jobs with greater use of home-based work and less travel
 - ⇒ Consistent with **Advancement–flexibility trade-off**:
 - ▶ Higher penalties in greedy jobs

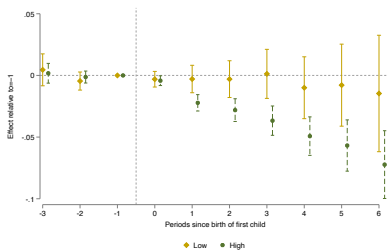
Conclusion

- ▶ **The motherhood penalty is an advancement penalty**
 - ▶ 3.1% average earnings penalty over six years
 - ▶ driven by slower grade progression
 - ▶ no penalty for fathers
- ▶ **Responsibilities change more than performance**
 - ▶ Mothers take on fewer leadership responsibilities and travel less
 - ▶ Quality of realized output does not change
- ▶ **Mothers sort toward flexibility at the expense of advancement**

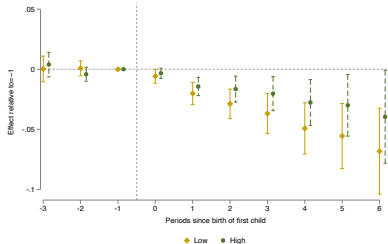
Extra Slides

Larger penalties in greedy jobs

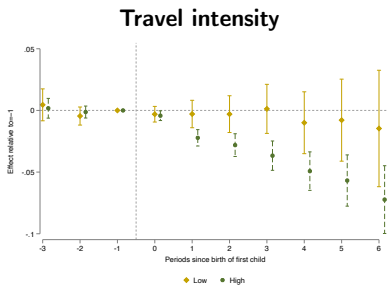
Travel intensity



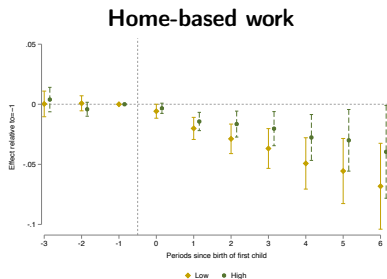
Home-based work



Larger penalties in greedy jobs



Larger penalties in
travel-intensive jobs



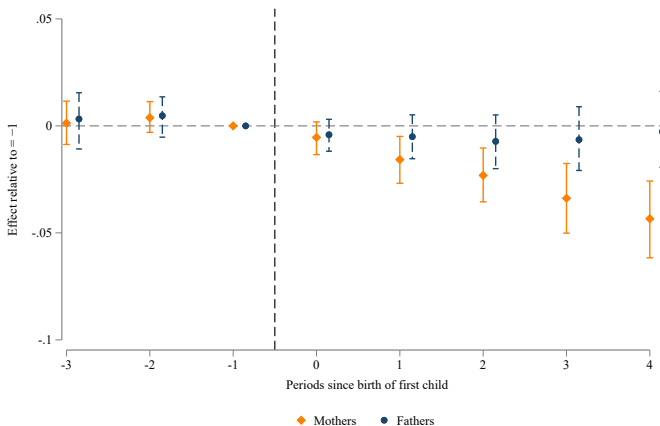
Smaller penalties where
home-based work is more common

► [Back to sorting results](#)

Comparison with Melentyeva and Riedel

Stacked DiD by age at first birth

Figure 1: Stacked DiD (M&R)



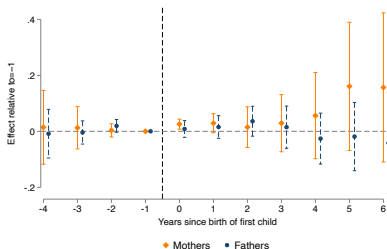
Are mothers more likely to exit than comparable women?

	Exit			
	(1)	(2)	(3)	(4)
Mother	-0.031*** (0.002)	-0.009*** (0.002)	-0.026 (0.022)	-0.003 (0.002)
Mother × PhD			0.004 (0.004)	
Mother × Selective entry			-0.007 (0.006)	
Mother × Compressed schedule			0.003 (0.003)	
Mother × Home-based work			0.0001 (0.0001)	
Mother × Performance rating			0.005 (0.006)	
Mother × Promotion rate			-0.005 (0.005)	
Baseline controls	No	Yes	Yes	Yes
Behavior controls	No	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Individual FE	No	No	No	Yes
Joint test of interactions (p)	—	—	0.44	—
Observations	85,273	21,295	21,295	24,629

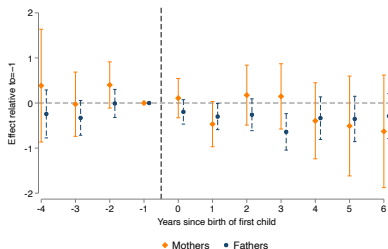
Notes: Employee-year observations for female HQ staff entering at grade GE or above. The outcome equals one if the employee exits in that year. *Mother* equals one after first childbirth; the comparison group comprises not-yet-mothers and never-mothers. Controls include demographics, grade, entry characteristics, performance, promotion history, and flexible-work use. Standard errors are clustered by employee. Probit estimates are similar. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

No detectable effect on other outputs

Project delays
Closed projects



Number of new working papers
Annual production



[◀ Back to output quality](#)

Alternative (Non-) Explanations

- ▶ Managers and differential treatment
 - ▶ No heterogeneity in penalty by manager characteristics
 - ▶ No evidence for differential evaluation conditional on observable performance
- ▶ Culture
 - ▶ No heterogeneity in penalty by gender norms
- ▶ Reduced labor supply