



The Motherhood Penalty: Fertility Policy and Analyst Forecasts



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Abstract

We document a **7.45% decrease in forecast accuracy among female analysts** of reproductive ages compared to their male peers after China's Two-Child policy.

This effect is more pronounced in provinces with a stronger fertility culture and when covered firms are more challenging to forecast.

Providing childcare resources that **enhance family-career compatibility can mitigate the effect**. In contrast, policies focused solely on **extending maternity leave may further disadvantage female analysts**.

Finally, the **decline in productivity can lead to unfavorable career outcomes for female analysts**, highlighting important implications for fertility policymakers and working women.

Research Questions

Examining the impact of a fertility policy has been difficult, as past policy changes in many countries have often been minor adjustments to existing policies. This makes it challenging to determine whether the impact of a fertility policy is due to the policy itself or concurrent changes in economic conditions.

We leverage China's easing of the long-standing One-Child Policy^[1] to explore the impact of a sudden change in fertility policy on female sell-side analysts. Our research focuses on the following questions:

RQ1: How does fertility policy influence the productivity and career trajectories of female financial analysts?

RQ2: What factors might intensify or alleviate these effects?

Table 1. The Under Representation of Female Analysts

	No. of Female Analysts	No. of Male Analysts	Percentage of Female Analysts
Analysts aged 30-40	376	789	32.27%
Analysts at All Ages	513	1,067	32.47%
Percentage of Analysts aged 30-40	73.29%	73.94%	

Methodology

We perform a Difference-in-Differences (DiD) estimation and control for various firm, analyst, and broker characteristics, and fixed effects:

$$\frac{EPS_{i,f,t,r}}{Extreme_EPS_{i,f,t,r}} = \beta_0 + \beta_1 DiD_{i,t} + \beta_2 Treat_i + \beta_3 Post_t + Controls + Year\ FE + Firm\ FE + Broker\ FE + \varepsilon_{i,f,t,r}$$

Treatment Group: Female analysts at the peak of reproductive ages (30-40 yrs old).

Control Group: Male analysts in the same age cohort as the female analysts^[2].

Moreover, to explore the fertility pressure experienced by analysts, we designed a structured survey to validate the efficacy of the Two-Child Policy on financial analysts^[3].

Results

The fertility relaxation puts female analysts at a disadvantage in their careers:

Reduced Productivity: Female analysts demonstrate higher forecast errors, make fewer forecast revisions, and respond less promptly to earnings news.

Work Hiatus: Female analysts are more likely to take an extended gap exceeding 98 days, which is the designated maternity leave duration in China.

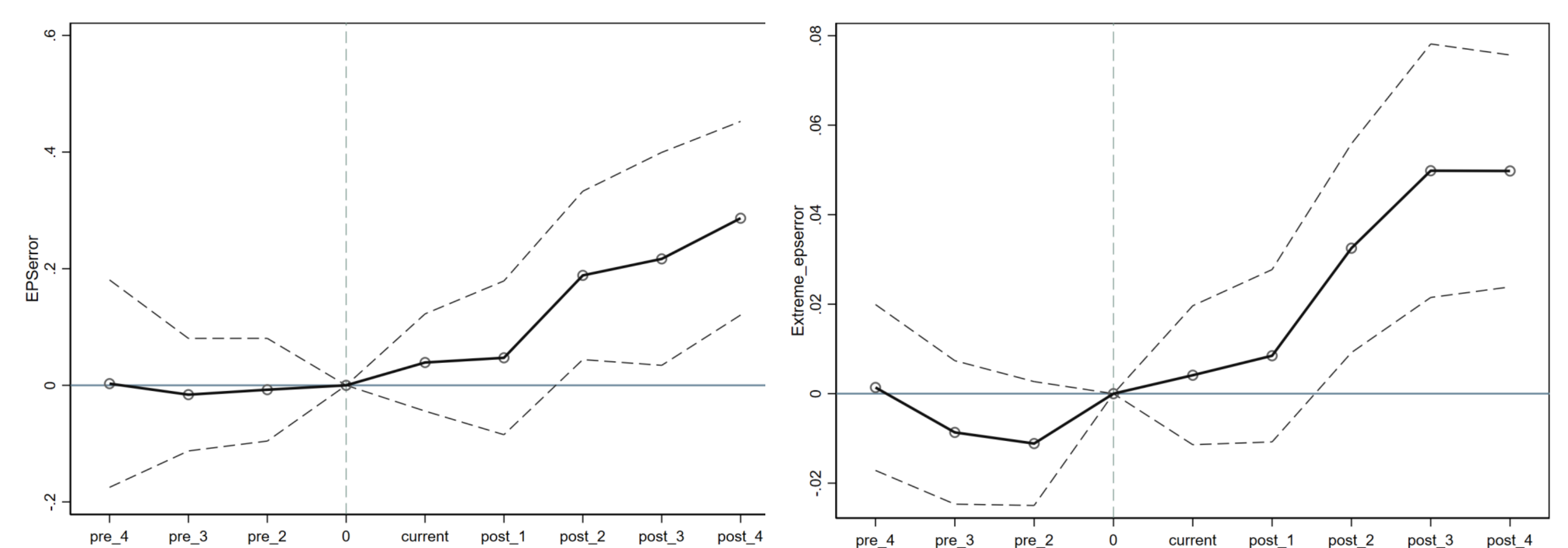
Career stagnation: Female analysts face lower chances of being named Star Analyst and have a higher likelihood of exiting the profession.

The adverse impact of fertility policy on female productivity can be mitigated by:

Family Support: Accessibility to nannies, nursing schools, fatherhood support, etc.

Workforce Support: Inclusive corporate culture and extensive team backing.

Figure 1. The Parallel Trend of Forecast Errors



Contribution

Recent papers document the adverse impact of the Covid-19 pandemic on the labor productivity of female researchers and analysts (Barber et al. 2021; Li and Wang 2024; Du 2023; Li and Wang 2024). Different from the broad yet **temporary** shocks such as Covid-19, China's fertility-relaxation policy catalyzes a shift in fertility inclinations, thus exerting a more **enduring influence on additional childcare responsibilities**. Consequently, this policy has the potential to significantly alter analysts' career outcomes.

In addition to previous papers on shocks to **external supporting resources** such as school closures, our paper sheds light on **supporting resources within the workplace, such as an inclusive corporate culture and accessibility to team collaborations**. Hence, our paper offers crucial corporate socially responsible policy implications: workplace resources that enhance compatibility between family and career can significantly alleviate the burden of the motherhood penalty.

Lastly, our setting with a unique fertility policy shock **rules out the taste-based discrimination**, which typically originates from ingrained household mindsets and is unlikely to be swayed by a policy shock. Our results, suggest that **statistical discrimination based on stereotypes about women's productivity** plays a significant role in shaping the female underrepresentation documented in earlier papers (Kumar 2010).

Conclusion

This paper uncovers the **unintended outcome of a fertility relaxation policy** through the lenses of female securities analysts' work quality and career prospects.

More importantly, we provide implications for **how society, while benefiting from women's child-rearing effort, can implement measures to reduce the adverse impact on their professional development**.

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Footnotes

- China's One-Child Policy, which was implemented in 1979, restricted many Chinese families to having a single child. In January 2016, China transitioned to a fertility-relaxation policy, allowing all Chinese couples to legally have two children.
- Our results are robust to a set of placebo tests using a pseudo-treated sample of female analysts aged below 30 or above 40, a sample of male analysts only, and using 2010 as the pseudo fertility policy year.
- 48.28% of respondents expressed a desire for more children if not limited by current fertility policies, indicating a discrepancy between their actual and ideal family size. Notably, analysts who have two or more children all had their second or third child after 2016, which validates the efficacy of the policy.