Policy Concerns in an Era of Low Fertility:

Social Comparisons and Intensive Parenting

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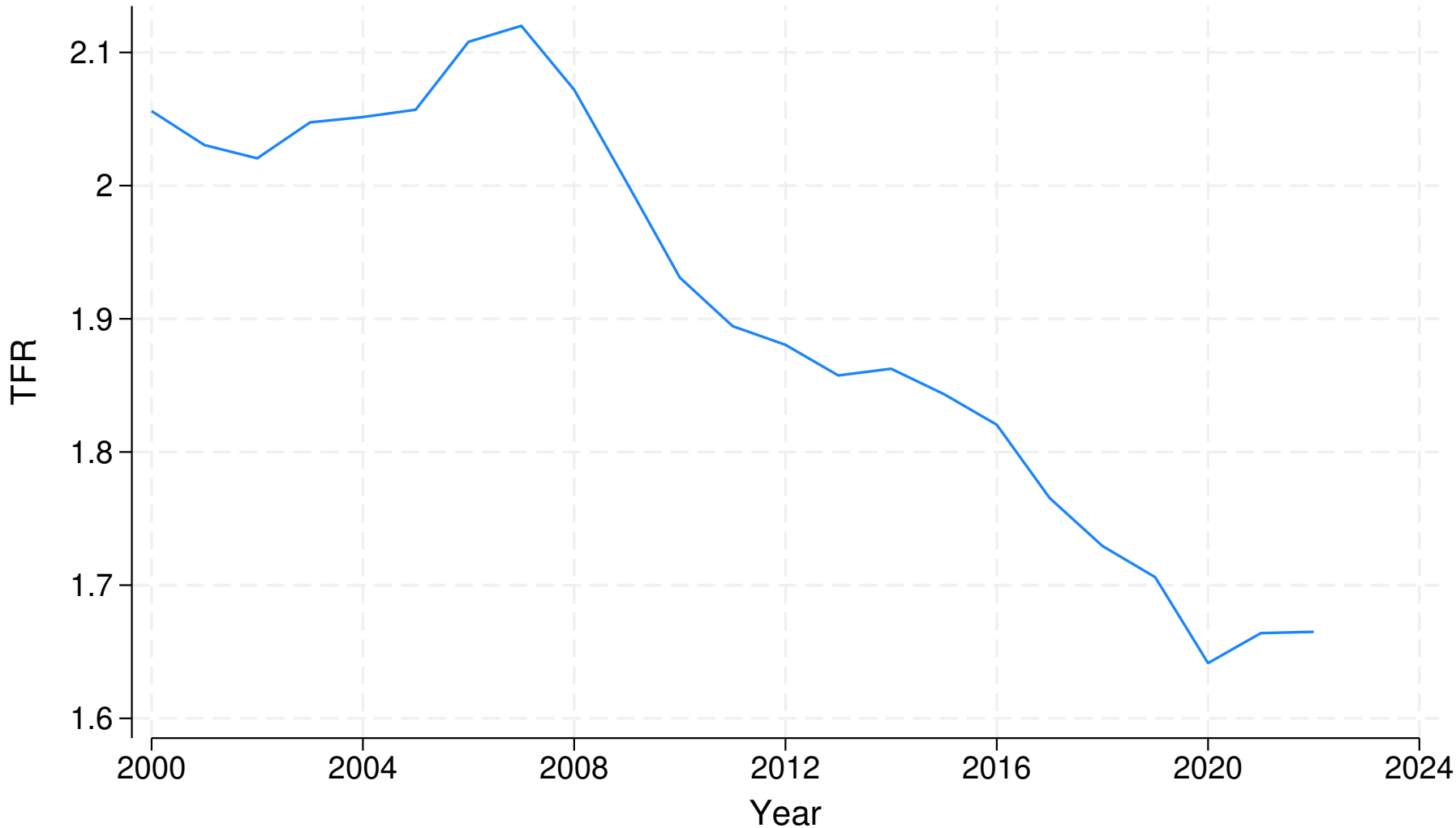
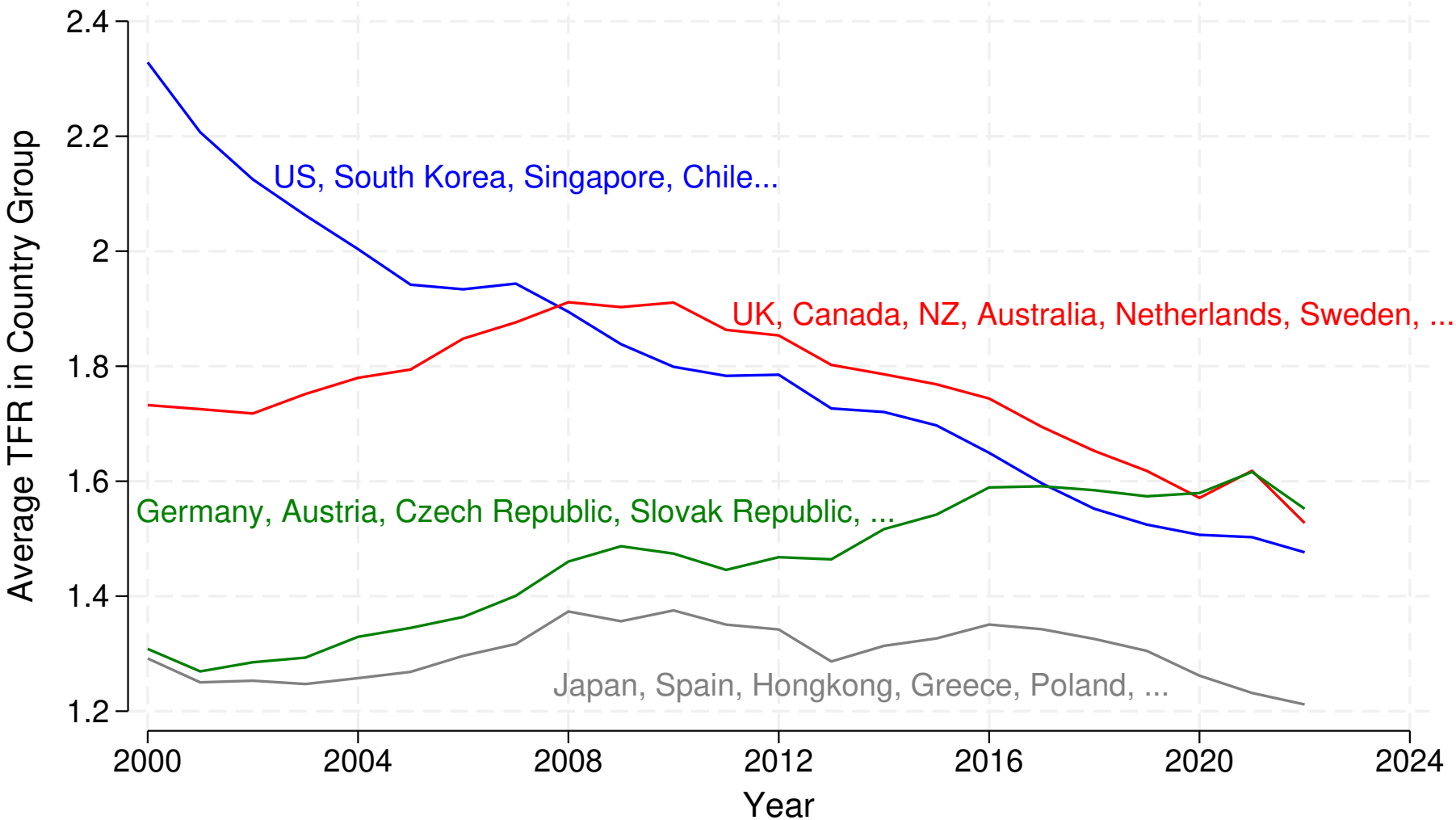
Motivation

- Global fertility rate at record low.
- Much discussion among policy-makers.
- We propose a new reason for low birth rates: comparison motives.
- Novel policy insights.

Recent Fertility Decline in the United States



Not All Countries Are Declining!



Very heterogeneous paths among high-income countries.

A Novel Explanation: Social Comparison Motives

- People care about relative status (Veblen 1899).
- Catching-up-with-the-Joneses – large literature in macro.
- We believe status concerns are also relevant when it comes to children: Parents compare educational outcomes of their children to those of other people's children.
  - → Tilts the Q-Q trade-off towards quality.
  - → Makes children expensive.
  - → Depresses the birth rate.

Outline

1. Formalize the idea
2. Evidence
3. Policy implications

A Simple Model

Parents choose fertility n and how much time to invest in each child x.

Comparison motive: Parents care about child human capital relative to $\tilde{h}$.

$$\begin{aligned} \max_{c,n,x} \quad & \left[\ln c + \omega_n \ln n + \omega_h \ln\left(h - \chi\tilde{h}\right)\right] \\ \text{s.t.} \quad c &= (1 - \lambda n - xn)z \\ h &= h_0 + x \end{aligned}$$

Benchmark human capital level $\tilde{h}$ is determined in equilibrium by the choices of all other parents.

χ governs the strength of the comparison motive.

Suppose countries differ in χ.

Model Results

Result 1 (cross-country): Countries/regions with a stronger comparison motive (larger χ), invest more (higher x), and have lower fertility, n.

Extended Model & Additional Results

- Add heterogeneity (high and low productivity parents).
- Add parental monetary investments.
- Upward comparison motives.
- Consider productivity changes over time z_t.

Result 2 (changes over time): If z_t grows over time, fertility falls. The fall is larger, the stronger the comparison motive (χ).

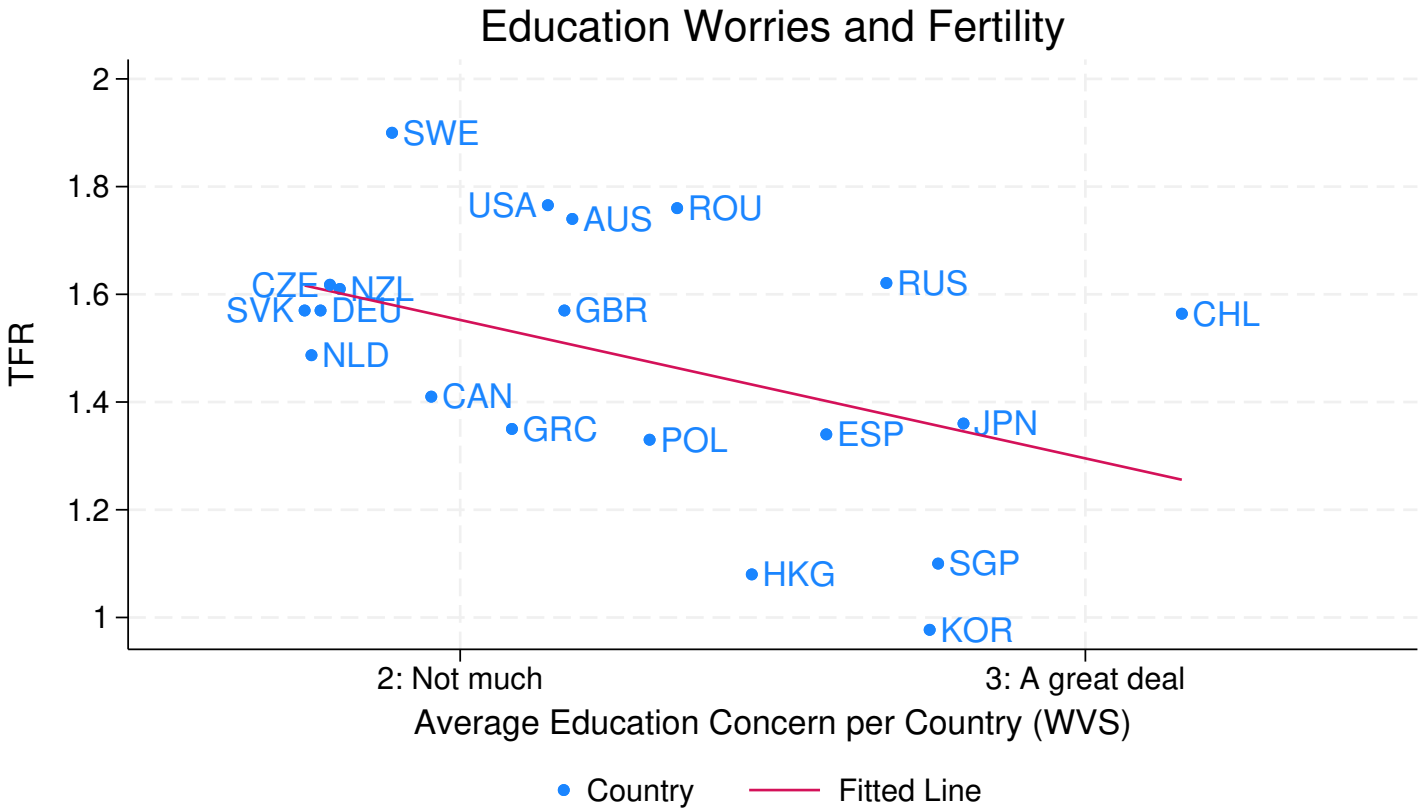
Result 3 (spillovers): With upward comparison motives, fertility declines even for groups that experience no income growth.

Empirical Evidence

Cross-Country Evidence (Result 1)

Model predicts negative relationship btw comparison motives & fertility.

- First proxy "education worries" from WVS.



Cross-Country Evidence: Changes over Time (Result 2)

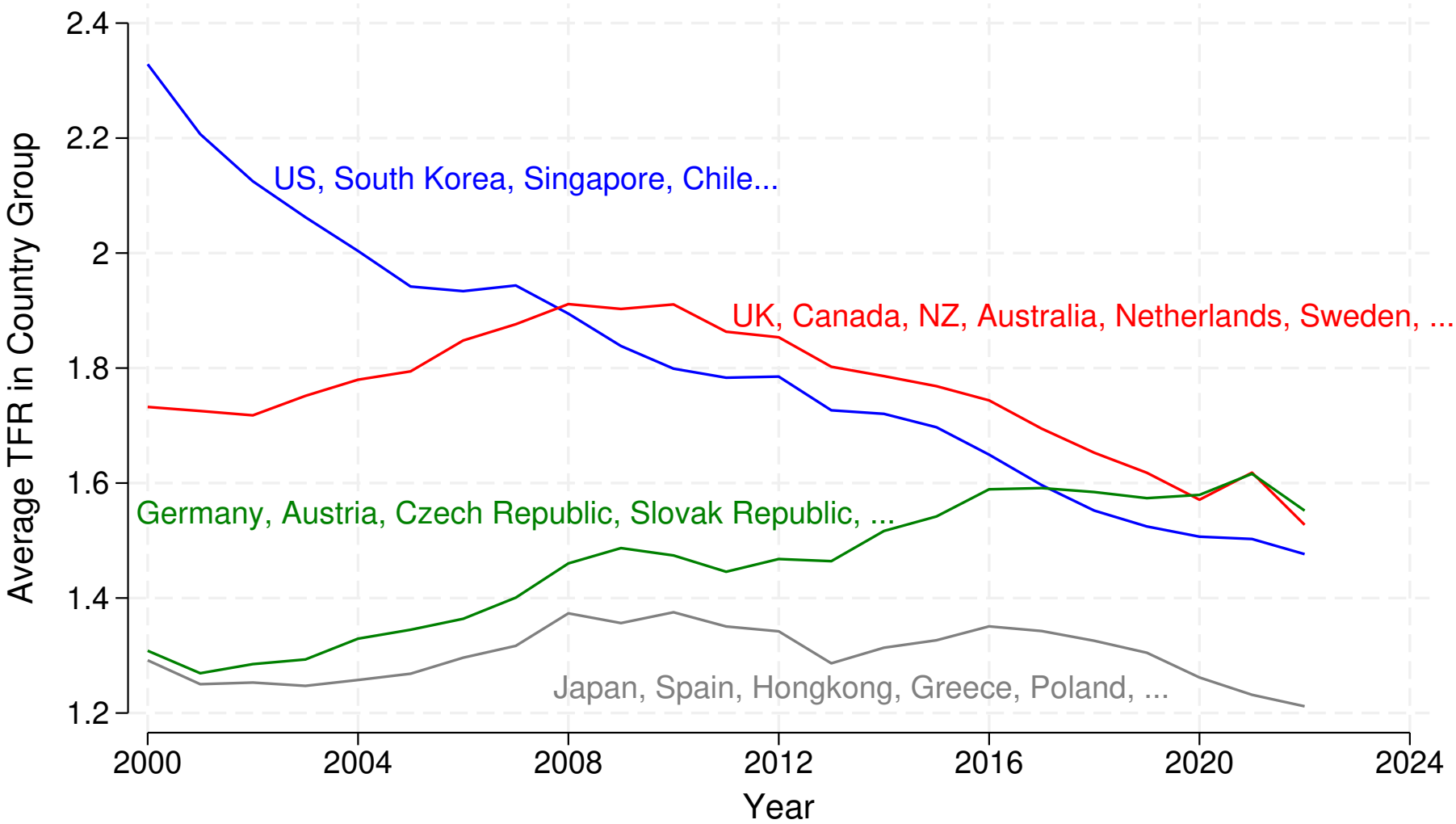
Model predicts a larger TFR fall over time (as incomes increase) in countries with more education worries.

Dependent Variable	Log TFR Change
Education worries	-0.205**
(World Values Survey)	(0.0817)
Controls	yes
Observations	20
R^2	0.450

** $p < 0.05$

Controls: GDP per capita, population, unemployment rate.

Comparison Motives and Fertility Paths

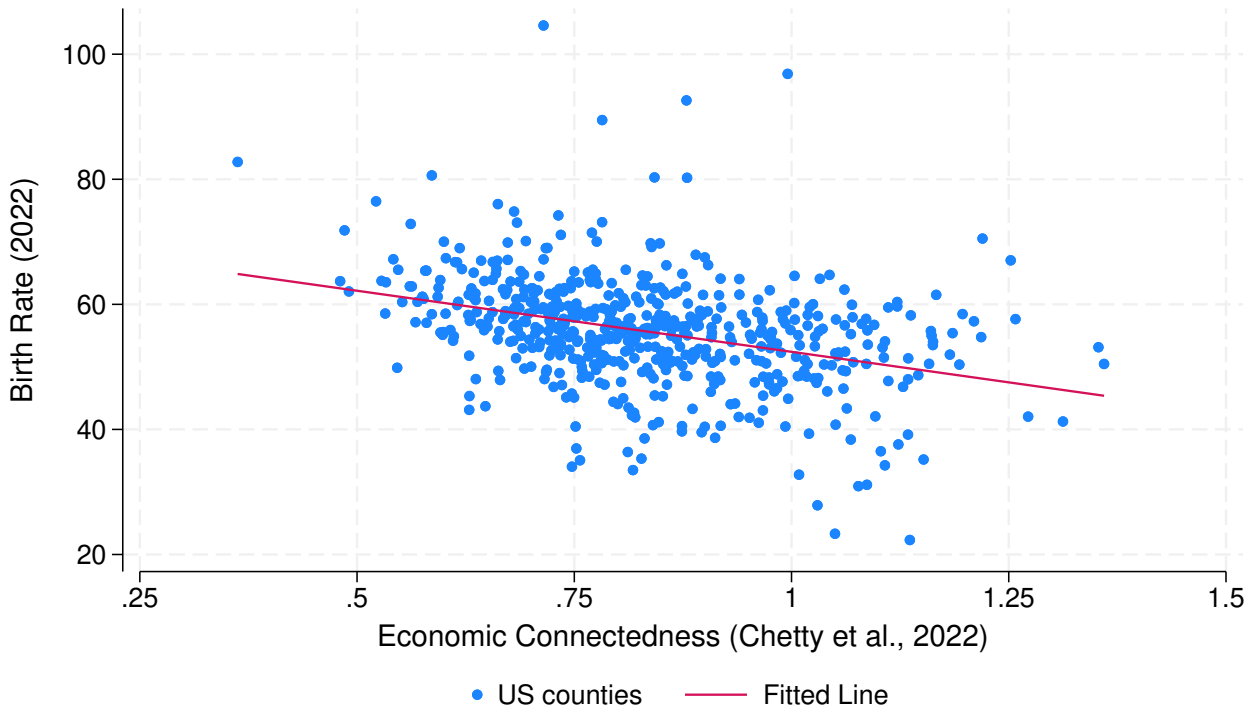


Singapore, Chile and Korea have strong comparison motives.

Evidence from U.S. Counties: Social Media (Result 1)

- Economic Connectedness (EC): share of above-median SES friends among below-median SES individuals on Facebook.

→ Model predicts that higher EC counties should have lower birth rates.



U.S. States: College Competitiveness (Result 1)

- Comparison motives might be partly driven by college competition.

→ Model predicts that states with more college competition have fewer births.

	Birth Rate 2007
Competitiveness Index	-12.26***
Bound et al. (2009)	(2.302)
Observations	51
R^2	0.200

Controls: State GDP, Population, Employment.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

- A state at the 75th percentile of college competitiveness (1.045) has 3.5 births less per 1,000 women (aged 15-44) than a state at the 25th percentile (0.76).

Fertility Policy

- Switch in policy stance:
  - 20th century: birth control policies common in many countries.
  - By now, more than 30% of countries try to encourage births.
- Should governments try to curb or stimulate fertility?
- Answering this question requires understanding the reasons behind low fertility rates.

Comparison Motives Justify Govt Intervention

- Comparison motives pose an externality.
  $\rightarrow$ leads to inefficiently high education investments.
  $\rightarrow$ equilibrium fertility inefficiently low.
- First-best can be implemented by a combination of pro-natal transfers financed through taxes on education.

Will Reducing Parental Investments be Bad for the Kids?

- Not necessarily!
- Some investments are arguably socially wasteful (SAT prep courses?).
- Some even harmful (excessive study times $\rightarrow$ myopia $\uparrow$, obesity $\uparrow$, child mental health $\downarrow$).
- We build a model of college admission where banning test preparation is welfare improving and does not lower child HK.

Novel Policy Implications

- Tax or regulate private education institutions.
  → Examples from other countries:
  - China's "Double Reduction Policy" includes ban of private for-profit after-school tutoring.
  - Curfews on *hagwons* in Korea.
  - UK abandoned VAT tax exemption on private schools in 2025.

  → Recent changes in U.S. 529 plans went in opposite direction.
- Weaken people's ability to act on comparison motives:
  - Reduce high stake exams.
  - Communicate precise rank information cautiously (e.g. Korea recently replaced exact scores with a 5-tier scale for college entrance exam).
  - Communities should be careful in publishing school rankings.
- Social media regulation? (Role of Momfluencers?)

Summary

- Comparison motive as novel reason for low fertility.
- Evidence that
  1. comparison motives and birth rates are negatively related (Result 1).
  2. fertility declines more pronounced in countries with strong comparison motives (Result 2).
- Novel policy implications