Economic Growth, Gender Wages and Fertility: Will Fertility Rebound in Japan?

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Japan’s population is set to fall to 1/3 of its current size by 2050. Could fertility rebound with economic growth?
Evidence of fundamental change in the fertility - development relationship in OECD economies

Myrskyla et al (2009) (cross-sectional, longitudinal data, >100 countries) find the relationship between fertility and Human Development Index (HDI)

- once negative in 1975
- has become positive for countries with HDI > 0.9 in 2005.

For 30 OECD countries (1960-2007) Luci and Thevenon (2010) find

- per capita Gross Domestic Product (GDP) has a positive impact on fertility in 2007, after controlling for birth postponement and country specific effects.
Association between fertility, per capita GDP and gender wages?

HDI of 0.9 ⇒ 75 years life expectancy, per capita GDP US$25,000 in year 2000 PPP and 0.95 education index (literacy and enrolment ratios)

HDI does not reveal information on:

- how its components interrelate
- aspects of development which benefit women rather than men
Observation 1: Fertility and per capita GDP once negatively correlated across OECD

Fig. 1: TFR vs. GDP per capita, PPP (constant 2005$), 1980-84
Observation 2: Fertility and per capita GDP now positively correlated across most high income OECD

Fig. 2: TFR vs. GDP per capita, PPP (constant 2005$), 2005-09
Observation 3: OECD countries with lowest female relative wages have the lowest fertility

Figure 3: Gender Wage Gap for 22 OECD countries, 2006

OECD average = 17.6 percent
Key questions

Why do low female relative wages persist in Japan despite growth in per capita GDP?

Is a positive relationship between fertility and per capita GDP robust?
Could economic growth cause fertility rebound?

Galor and Weil (1996):

Economic growth $\Rightarrow$ Female Relative Wages rise
Opportunity cost of maternal time increases $\Rightarrow$ fertility declines

Apps and Rees (2004):

Rise in Female Wages $\Rightarrow$ competing income and substitution effect
If households substitute child care for maternal time $\Rightarrow$ fertility may rise
Day (2012)

(i) links rising Female Relative Wages to gender equity in the allocation of human capital in the workforce;

(ii) assumes child care uses female labour $\implies$ if Female Relative Wages rise, child care prices increase less than proportionate to household income.
Key Results

Result 1  If men work with increasing capital relative to women, then economic growth need not close the gender wage gap.

Result 2  Fertility of households using childcare rises with female relative wages for an endogenously increasing price of childcare.

Result 3  Overall fertility in the economy rises with female relative wages only if productivity in childcare is sufficiently high.
Japan is an outlier in portion of women in senior positions.

**Fig. 4 TFR vs. Female Legislators, Senior Officials and Managers as % of total, OECD, 2007**
Policy Perspective 1: Gender Equity

More equitable allocation of capital between male and female skilled workers may hold the key to a fertility rebound in Japan.

Challenges:

- patriarchy strongest in older generations in senior positions
- investment in human capital confined to workers without career interruptions
While other OECD countries begin to grapple with rising childcare prices, Japan has the unique opportunity to create a WIN-WIN for women and its future population both by

- reducing the gender wage gap and
- establishing an efficient childcare sector.

There is cause for optimism about the future course of fertility in Japan.
‘Will Fertility Rebound in Japan?’ won the ANU JG Crawford Prize for best piece of original research on Japan.


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