Women’s Empowerment, the Gender Gap in Desired Fertility, and Fertility Outcomes in Developing Countries

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Fertility and Development

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  - Children are costly.
  - Link to human capital accumulation.
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- **A research agenda:**
  - Incorporate household bargaining into models of fertility.
  - Model interaction between women’s rights and fertility.
OECD Social Institutions and Gender Index (SIGI) measures women’s rights on scale from 0 (full rights) to 1 (no rights).
Female Empowerment and Fertility

- Cross-country correlation TFR and SIGI: 0.66.
- After controlling for GDP per capita:
  One standard deviation increase in empowerment associated with decline in TFR of 0.57.
- Suggests women want fewer children, and more empowerment gives women more say.
- Consistent with Ashraf, Field, and Lee (2014): Giving women access to concealable birth control substantially lowers fertility.
Women’s and Men’s Desired Fertility across Countries

Demographic and Health Surveys, various years.
Gender Gaps in Desired or Realized Fertility?

- Countries with high population growth and large age gaps between spouses also have gender gaps in realized fertility.
- If there is polygyny and every man marries $n$ women, have:
  
  $$f_m = nf_f.$$

- How this adds up: With age gap $a$ and population growth $\eta$, every man can marry $n = (1 + \eta)^a$ women.
- Also possible without polygyny: either more women remain childless, or serial monogamy.
- Empirically, polygyny accounts for substantial part of gender gap in desired fertility.
Gaps in Desired Fertility at the Couple Level

- Demographic and Health Surveys.
- Illustrate with two countries:
  - Burkina Faso (high polygyny), year 2010-2011.
  - Ethiopia (low polygyny), year 2011-2012.
- Focus on women age 40+ (to measure completed fertility).
Distribution of Gap in Desired Fertility between Husband and Wife
Desired Fertility Matters for Realized Fertility

Regressions of realized on desired fertility (women 45+, desired children 15 or less):

<table>
<thead>
<tr>
<th></th>
<th>Burkina Faso</th>
<th>Burkina Faso</th>
<th>Ethiopia</th>
<th>Ethiopia</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\bar{n}_f$</td>
<td>0.38***</td>
<td>0.33***</td>
<td>0.16**</td>
<td>0.08</td>
</tr>
<tr>
<td>$\bar{n}_m$</td>
<td>0.19***</td>
<td>0.12*</td>
<td>0.20**</td>
<td>0.12*</td>
</tr>
<tr>
<td>$h_f$</td>
<td>-4.30***</td>
<td>-4.97***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$h_f \times \bar{n}_f$</td>
<td>0.36*</td>
<td>0.34*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$h_f \times \bar{n}_m$</td>
<td>0.24</td>
<td>0.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.21</td>
<td>0.25</td>
<td>0.09</td>
<td>0.23</td>
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</tbody>
</table>
Desired Fertility Matters for Realized Fertility

- However, role of empowerment not clear cut.
- Some variables that don’t have large effects:
  - Education gap between spouses.
  - Age gap between spouses.
  - Female labor supply.
  - Index of woman’s power in decision making.
Why Do Spouses Disagree on Optimal Number of Children?

- We don’t know much.
- In Burkina Faso, polygyny and education gap matter; not so in Ethiopia.
- In Ethiopia, women’s say in household decisions matters; not so in Burkina Faso.
- Generally, in regressions only small fraction of variation can be accounted for ($R^2$ well under 10 percent).
From Desired to Actual Fertility in Models of Household Decision Making

- Role of female empowerment depends on mode of decision making in the household.
- Doepke and Tertilt (2009): polar cases of patriarchy (men decide) and equal power. Empowerment regime maximizes sum of utilities under commitment.
  - Patriarchy: Actual fertility equal to man’s desired fertility.
  - Empowerment: Actual fertility is weighted average of woman’s and man’s desired fertility.
From Desired to Actual Fertility in Models of Household Decision Making

- Very different outcome in bargaining model with limited commitment (Doepke and Kindermann 2009):
  - Sequential fertility choice, each spouse has veto power over adding children.
  - Actual fertility is \textit{minimum} of woman’s and man’s desired fertility.
  - Dispersion in desired fertility has \textit{first order} effect on average fertility.
- Doepke and Kindermann argue that veto model matches rich-country data well.
- What happens at intermediate stages between patriarchy and full empowerment?
Conclusion & Research Agenda

- Theory suggests that women’s empowerment and household decision making should be **hugely** important for fertility in developing countries.

- Data supports this view.

- **Need better models:** Bargaining over fertility beyond polar cases of patriarchy and full empowerment.

- **Need better data:** Desire to have an additional child right now linked to fertility outcomes.