The Curious Case of Ghana: Can Reproductive Health Laws Help to Explain the Gap Between Contraceptive Use and Fertility Decline?

International Conference on Family Planning
December 2, 2011
Dakar, Senegal

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* Funded by the William and Flora Hewlett Foundation
Introduction

The Role of Supply vs Demand for Contraception in Fertility Decline (e.g., Easterlin, 1975; Bongaarts, Maulden and Phillips 1990; Pritchett 1994a; 1994b; Knowles, Akin and Guilkey 1994).

1. **Demand-side factors:** Changing preferences for children drives fertility decline regardless of availability of contraception.

2. **Supply-side factors:** Improve access to contraception to reduce unmet need.

3. **Induced demand:** Increasing supply can induce demand.

   - “Development is the best contraceptive” vs Family Planning Programs
For there to be even a debate about the relative role of supply or demand in fertility decline, modern contraception needs to first be legally available.

In many countries, restrictive laws concerning access to and advertising of family planning limits the availability of contraception, particularly abortion.
Reproductive Health Laws and Access to Contraception

Reproductive health laws as a natural experiment: Easing constraints on access allows us to see what happens when one supply-side barrier is discontinuously removed but demand remains constant.

- **Hypothesis**: If supply-side factors are at play, we should see an increase in contraceptive uptake following liberalization and a decline in fertility.

- **Assumption**: Change in reproductive health laws is exogenous to other factors that may have simultaneously affected demand.
Reproductive Health Laws: Exogenous Change or Endogenous to Preferences?

- However, it is not immediately obvious that reproductive health law liberalizations are exogenous:
  Example: Sexual Revolution (Bailey, 2010)
  1. Did the pill cause the sexual revolution?
  2. Or did changes in sexual mores lead to pressures to liberalize the pill?

- To what degree do changes in reproductive laws reflect changing underlying preferences or constitute an exogenous change that enables greater access for those who wish to use it?
Research Purpose

- **Country Case: Ghana.**

- **Mixed Methods Approach.**
  - Assess how the legal changes came about, and
  - Evaluate the impact these changes on fertility decline.
Fertility Decline in Ghana

- In Ghana, fertility has declined substantially since the mid-80’s and it presently has one of the lowest TFRs in SSA.

At 18.7% in 2008, the % of women using any modern method remains low and is not sufficient on its own to explain the decline in fertility.

Contraceptive Use in Ghana Compared with Similar Countries

The Curious Case of Ghana: Fertility Decline without Contraceptive Uptake?

- On its own, an increased supply of modern contraception is unable to explain the fertility decline in Ghana (see Blanc & Grey, 2002).
- Abortion, is one modern contraceptive method that is not well documented in available data.
- Could abortion be a reason for the gap between documented modern contraceptive use and fertility decline?
The Case of Ghana: Changes in Reproductive Health Laws

1985: Abortion became legal for a broad range of circumstances:

- Rape,
- Fetal impairment,
- Save the life,
- Physical health, or
- Mental health of the mother.
Empirical Motivation: Fertility Trends Pre and Post Liberalized Abortion Law

Subsequent to abortion liberalization in 1985, fertility declined steeply and discontinuously compared with prior trends.

Mixed Methods Approach

**Quantitative Analysis**
- We examine how legal changes in 1985 affected fertility decisions for women controlling for age, marital status, # children/yr, education, partner’s education & rural/urban.
- Stratified by desire for more children.
Mixed Methods Approach

Qualitative Key Informant Interviews

- Conducted in Ghana, Sept 2010.
- Purpose: To assess the relative merit of different interpretations of the cause and effect of reproductive health law changes on fertility decline in Ghana.
Table 2: Regression Results

<table>
<thead>
<tr>
<th></th>
<th>(1) Pooled</th>
<th>(2) Wants more</th>
<th>(3) Undecided</th>
<th>(4) No more</th>
<th>(5) Sterilized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abortion Laws</td>
<td>0.960***</td>
<td>0.993</td>
<td>0.963***</td>
<td>0.963***</td>
<td>1.016</td>
</tr>
<tr>
<td></td>
<td>(0.969 - 0.991)</td>
<td>(0.977 - 1.010)</td>
<td>(0.936 - 1.033)</td>
<td>(0.945 - 0.980)</td>
<td>(0.920 - 1.122)</td>
</tr>
<tr>
<td>Contraceptive Pill Law</td>
<td>0.970</td>
<td>0.822**</td>
<td>0.988</td>
<td>0.954</td>
<td>1.440</td>
</tr>
<tr>
<td></td>
<td>(0.764 - 0.992)</td>
<td>(0.683 - 0.990)</td>
<td>(0.566 - 1.724)</td>
<td>(0.731 - 1.118)</td>
<td>(0.443 - 4.676)</td>
</tr>
<tr>
<td>Mothers Age</td>
<td>0.918***</td>
<td>0.954**</td>
<td>0.856***</td>
<td>0.880***</td>
<td>0.873</td>
</tr>
<tr>
<td></td>
<td>(0.893 - 0.942)</td>
<td>(0.917 - 0.992)</td>
<td>(0.764 - 0.960)</td>
<td>(0.842 - 0.919)</td>
<td>(0.683 - 1.116)</td>
</tr>
<tr>
<td>Mothers Age Squared</td>
<td>0.999***</td>
<td>0.998***</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>(0.998 - 1.000)</td>
<td>(0.997 - 1.000)</td>
<td>(0.999 - 1.003)</td>
<td>(0.999 - 1.001)</td>
<td>(0.995 - 1.004)</td>
</tr>
<tr>
<td>In School (Lagged 1 Year)</td>
<td>0.740***</td>
<td>0.798***</td>
<td>0.798</td>
<td>0.827***</td>
<td>0.887</td>
</tr>
<tr>
<td></td>
<td>(0.691 - 0.791)</td>
<td>(0.643 - 0.779)</td>
<td>(0.597 - 1.067)</td>
<td>(0.742 - 0.922)</td>
<td>(0.489 - 1.610)</td>
</tr>
<tr>
<td>Married (Lagged 1 Year)</td>
<td>6.894***</td>
<td>7.968***</td>
<td>7.566***</td>
<td>4.195***</td>
<td>15.20***</td>
</tr>
<tr>
<td>Number of Siblings</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of Children Who have Died (Cluster Average)</td>
<td>0.905</td>
<td>0.859</td>
<td>0.751</td>
<td>0.942</td>
<td>0.823</td>
</tr>
<tr>
<td></td>
<td>(0.775 - 1.056)</td>
<td>(0.687 - 1.073)</td>
<td>(0.386 - 1.460)</td>
<td>(0.734 - 1.208)</td>
<td>(0.201 - 3.372)</td>
</tr>
<tr>
<td>Place of Residence</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Education of the Partner</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Baseline: Completed Secondary or Higher</td>
<td>1.103***</td>
<td>1.177***</td>
<td>1.160*</td>
<td>1.048</td>
<td>0.869</td>
</tr>
<tr>
<td>Completed Primary</td>
<td>(1.060 - 1.147)</td>
<td>(1.106 - 1.253)</td>
<td>(0.974 - 1.382)</td>
<td>(0.990 - 1.110)</td>
<td>(0.655 - 1.152)</td>
</tr>
<tr>
<td>No education or incomplete primary</td>
<td>1.140***</td>
<td>1.262***</td>
<td>1.206*</td>
<td>1.062*</td>
<td>0.716*</td>
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<tr>
<td></td>
<td>(1.096 - 1.198)</td>
<td>(1.183 - 1.354)</td>
<td>(0.993 - 1.466)</td>
<td>(0.993 - 1.135)</td>
<td>(0.482 - 1.065)</td>
</tr>
<tr>
<td>Partner in Agriculture</td>
<td>1.082***</td>
<td>1.097***</td>
<td>1.021</td>
<td>1.0511</td>
<td>1.052</td>
</tr>
<tr>
<td></td>
<td>(1.051 - 1.115)</td>
<td>(1.050 - 1.147)</td>
<td>(0.896 - 1.164)</td>
<td>(1.003 - 1.101)</td>
<td>(0.799 - 1.384)</td>
</tr>
<tr>
<td>Religion</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year</td>
<td>1.000</td>
<td>1.005</td>
<td>0.995</td>
<td>1.005</td>
<td>0.994</td>
</tr>
<tr>
<td></td>
<td>(0.996 - 1.004)</td>
<td>(0.999 - 1.011)</td>
<td>(0.978 - 1.011)</td>
<td>(0.999 - 1.011)</td>
<td>(0.957 - 1.032)</td>
</tr>
<tr>
<td>Survey Year</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>195,474</td>
<td>104,144</td>
<td>9,756</td>
<td>63,806</td>
<td>2,294</td>
</tr>
<tr>
<td>Number of Women (re)</td>
<td>18,198</td>
<td>10,328</td>
<td>867</td>
<td>4,529</td>
<td>150</td>
</tr>
</tbody>
</table>

Notes: Outcome Variable= Had a Child or not (1/0). Ghana 1974-2008, panel of women aged 15-35 by year (from year of interview back to the year the woman was 15). Pooled results, and results for stratified sample, where stratification is by the preference for more children at the time of interview. Additional control variables included survey year, urban/rural, religion, partner’s education, partner in agriculture.
Empirical Results: Interpretation

- The fact that women who desire fewer children respond more to the legal change suggests that access has made a difference.

- However, it is possible that the liberalization of abortion was brought about by the same forces that led to fertility decline—a sexual revolution—and this effect is coincidental.

- Therefore, we sought to parse out the causal story through Key Informant Interviews.
Legal Changes and Direction of Causality

- If the legal change was exogenous (sudden and unexpected), then we can more readily claim an independent effect of supply-side factors (access to contraception).

- If the legal change is endogenous to other changing social conditions and mobilization pushing for greater access, then it is more difficult to disentangle supply-side factors from demand-side factors.
Key Informant Interviews

- 20 key informants, September 2010.
  - 6 Non-governmental organizations (IPAS and Pop Council),
  - 5 Academic institutions
  - 2 Government,
  - 2 Medicine,
  - 1 Legal agency.

Interviews conducted primarily btw Sept. 27th-Oct 1st, 2010.
Key Informant Interviews, cont.

Major questions addressed in key informant interviews:

1. Factors that precipitated the liberalization of abortion law in 1985.
2. Potential effect of legal change on the provision of abortion.
3. Other factors that might explain fertility decline in the absence of substantial increase in contractive use or abortion.
4. Potential data sources to assess alternative explanations.
Key Informant Interviews: Major Themes

Reasons for legal change in 1985:

- *Famine & Economic Hardship*- Military government liberalized abortion to offset impact of famine.
  - Decision made in a closed door session.
- *Physician Advocacy*- Physicians tired of seeing induced abortion cases pushed for reform.
  - Advocacy from women’s groups not a factor.

These are largely exogenous.
Effect of Legal Changes on Abortion Rates?

- **No direct effect** - abortion law not enforced.
- **Indirect effect** - Women know they can get safe abortion and go to the doctor more.
- **Coincidental Effect** -
  1. Simultaneous Liberalization of Advertising of Abortifacient Tonics.
  2. Famine both induced change in law and reduced fertility, but through an increased use of traditional methods.
Key Informant Interviews: Conclusions

- Are changes in reproductive health laws endogenous to socio-cultural change or exogenous?
- In the case of Ghana, we can say that legal changes were clearly exogenous, largely elite-driven and catalyzed by exogenous events.
- But, the clear link between the liberalization of abortion and abortion uptake is obscured by the fact that the de jure legal change was not implemented de facto.
Access to contraception, especially abortion, is frequently circumscribed by restrictive laws limiting availability. Liberalizing reproductive health laws should lead to increased access. If access(supply) rather than preferences(demand) is a major determinant of fertility decline, we should see a steep drop in fertility with the sudden advent of greater access. In Ghana we see a sharp decline in fertility following the liberalization of abortion. We further find that the liberalization was brought about for reasons unrelated to demand for more contraception. The liberalization of abortion is therefore one plausible explanation for a subsequent decline in fertility that is unexplained by an increase in modern contraception alone.
Let’s plan when to have our baby

Choose the method that’s right for you

- The Pill
- Sterilization
- IUD
- Condom
- Implant

It’s Your Life. It’s Your Choice

Life Choices