

Gender Gap, Intra Household bargaining and Sex Selective Abortion in Albania

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Motivation of the project

- There is a sex imbalance in Albania because of sex selective abortion (*UNFPA Report 2011 Sex Imbalances in Albania*)
- Sex Ratio in Albania is 112 boys per girls, while the Biological one is 104-105
- SSA may affect the marriage market by increasing age of marriage for males, divorce and remarriage (*Becker, A Theory of Marriage 1974*)
- SSA also affects the gender based violence and overall violence (*Valerie M. Hudson and Andrea M. den Boers 2004*)

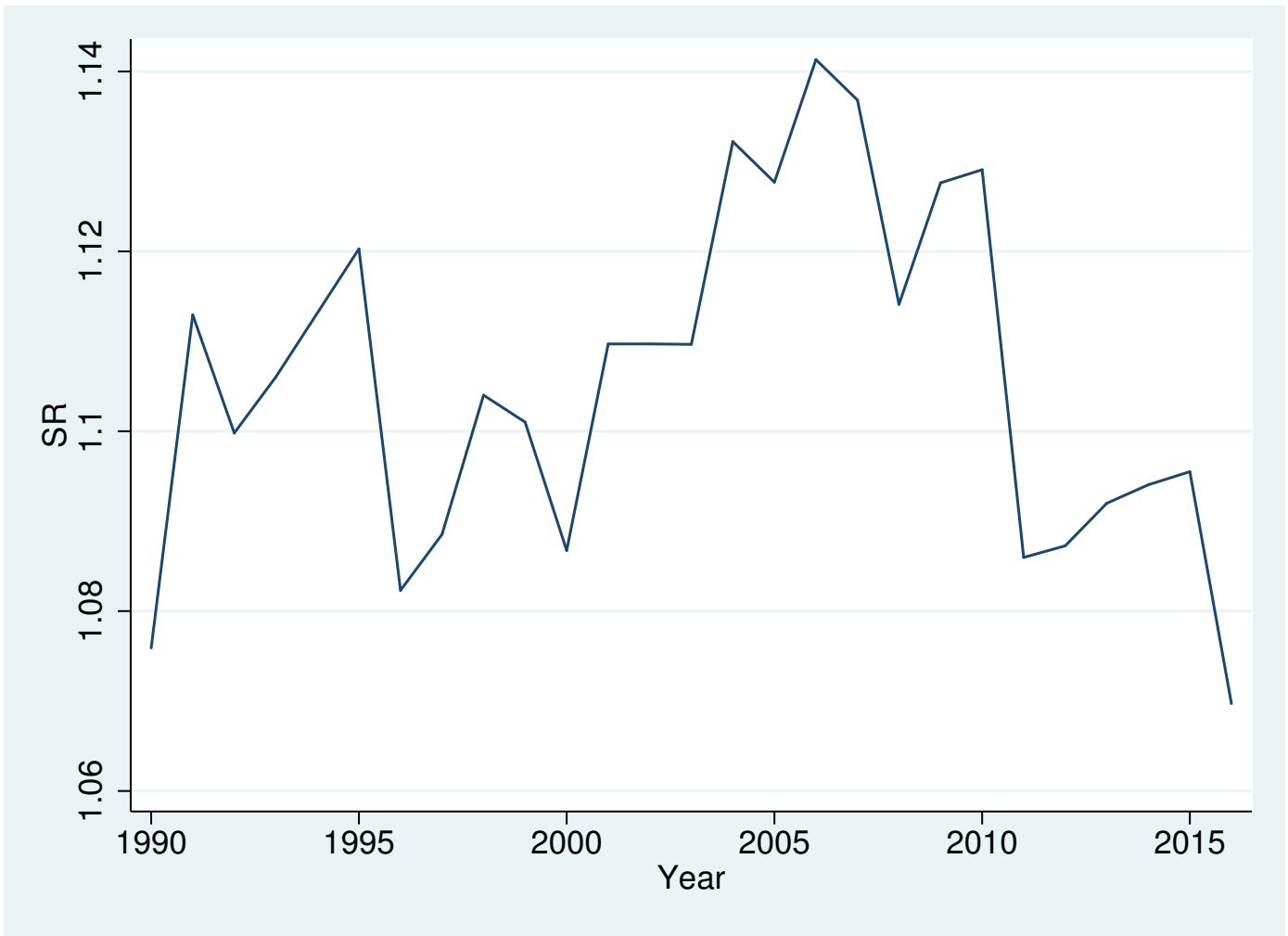


Figure: Sex Ratio during years



Causes

Two possible reasons behind this problematic are:

- ① Boys receive more weight than girls in the preferences of parents (*Selenica 1927, Christophe Guilmoto Sex Imbalances at Birth in the Westerns Balkans 2013*)
- ② Utility cost of abortion does not weight much because women do not have a say (*Karl Kaser Patriarchy after Patriarchy in the Balkans 2008*)

Research Question

- How to evaluate the quantitative significance of these two channels
- The development of a minimalistic model which incorporates different utilities for boys and girls, the bargaining between family members and the decision about abortion

Model

Family with 2 kids, up to 1 abortion during pregnancy history

$$U_{Mother} = \ln(c_M) + \gamma \ln(n_b x_b + n_g x_g) - D \frac{1}{\delta_M}$$

$$U_{Father} = \ln(c_F) + \gamma \ln(n_b x_b + n_g x_g) - D \frac{1}{\delta_F}$$

$$U_{Family} = \theta U_M + (1 - \theta) U_F$$

$$U_{Family} = \theta \ln(c_M) + (1 - \theta) \ln(c_F) + (n_b x_b + n_g x_g) - A$$

where

$$A = \theta \frac{1}{\delta_M} + (1 - \theta) \frac{1}{\delta_F}$$

At pregnancy possibility of aborting the girl ($EU_A > U_G$) or continuing the pregnancy ($U_G > EU_A$)

Model

- ① Assume first child is boy:
 - Abort the second girl if $A < \bar{A} = p\gamma \ln\left(\frac{2x_b}{x_b+x_g}\right)$
- ② Assume first child is a girl:
 - Abort first child if $A < \bar{A} = p\gamma \ln\left(\frac{2x_b}{x_b+x_g}\right)$
 - Abort second child if $A < \hat{A} = p\gamma \ln\left(\frac{x_b+x_g}{2x_g}\right)$

Considering that $A = \theta * \frac{1}{\delta_M} + (1 - \theta) * \frac{1}{\delta_F}$ and $\delta_M = r\delta_F$ the

Tresholds for the Costs of Abortion: $\bar{\delta} = \frac{\theta + (1-\theta)}{p\gamma + \ln \frac{1}{1+g}}$ $\hat{\delta} = \frac{\theta + (1-\theta)}{p\gamma + \ln \frac{1+\frac{1}{g}}{2}}$

DHS Data

Parameters to be measured:

- 1 *Wifes bargaining power* θ : How powerful is the wife in the household and health decision making
- 2 *Relative preference for children (F child/M child)* g : How many activities do parents invest with the female kid versus the male child
- 3 *Sex Ratio* sr : Ratio of male to female children in the DHS clusters

Unknown Parameters:

- 1 γ is the weight of kids into the parents utility function
- 2 λ is rate parameter of the exponential distribution for the sex ratio

DHS Dataset 450 clusters

How are these parameters measured:

- ① *Wifes bargaining power θ* is composed by:
 - final say on own health care
 - final say on making large household purchases
 - final say on making household purchases for daily needs
 - final say on visits to family and relatives
 - final say on decising what to do with money husband earns
- ② *Relative preference for children g* is composed by: "Parents were reading, naming, counting, drawing, telling stories, singing songs playing and taking the child outside for respective female and male children (F/M)"
- ③ *Sex Ratio sr* is composed by: "Total number of male children relative to total number of female children for each cluster"

Calibration

- Tresholds for the Cost of abortion: $\hat{\delta} = \frac{\theta_i + (1 - \theta_i)}{p\gamma + \ln \frac{1 + \frac{1}{g_i}}{2}}$ $\bar{\delta} = \frac{\theta_i + (1 - \theta_i)}{p\gamma + \ln \frac{1}{1 + g_i}}$



Figure: Costs of Abortion Distribution

Calibration

- δ distributed according to an Exponential distribution

$$f(\delta, \lambda) = \{\lambda e^{-\lambda\delta}, \delta \geq 0\}$$

- Sex Ratio $h_i(\lambda)$

$$h_i(\lambda) = \int_0^{\hat{\delta}} p f(\delta) d\delta + \int_{\hat{\delta}}^{\bar{\delta}} p' f(\delta) d\delta + \int_{\bar{\delta}}^{\infty} p'' f(\delta) d\delta$$

where p , p' , and p'' are the respective sex ratios of "never aborting", "aborting when the first child is a girl" and "always aborting"

Estimation

Finding values for

$$\min_{\lambda, \gamma, r} \sum_i (h_i - \phi(i, \lambda, r, \gamma))^2$$

Policy

Analysing the sensitivity of sex ratio on bargaining power and children preferences