The Effect of Ethnic Conflict on Son Preference

The Case of the First Nagorno Karabakh War

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Introduction

This paper investigates the effect of ethnic conflict on son preference in Armenia and Azerbaijan during and after the First Nagorno Karabakh War (1988-1994). By merging DHS data with two different sources of conflict-related casualties - UCDP data and a *novel* conflict exposure dataset - we create a comprehensive fertility history panel for women from the 1980s to 2005. The focus on the First Nagorno Karabakh conflict is driven by the fact that these two countries not only share a common history of conflict but also have some of the world's highest sex ratios at birth (SRB).

Motivation

- Armenia and Azerbaijan have high prevalence of son preference - preference for male offspring
- Some of the highest SRB registered around the world
- Long ethnic conflict: First Nagorno Karabakh War (1988-1994)

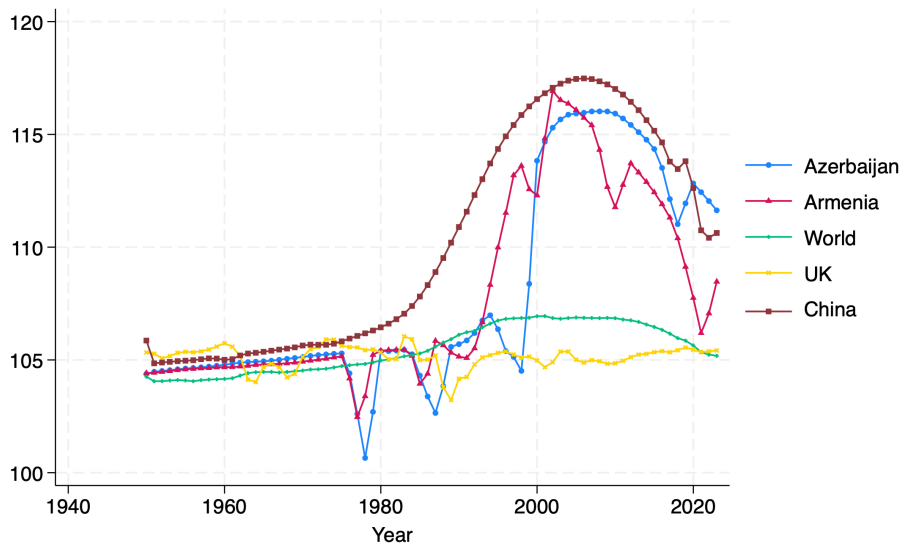

Figure 1: SRB around the world

Data

- Conflict Data
  - Uppsala Conflict Data Program (UCDP)
  - We construct a **novel dataset** from the "*Chronicle of Glory: National Liberation Struggle OF NKR 1988-2009*", a memoir of casualties of the First Nagorno Karabakh War compiled by the Armenian Government (henceforth *The List*)
- Fertility Data: Demographic and Health Survey Data (DHS) Armenia 2005 + Azerbaijan 2006

Empirical Model

To estimate the effect of ethnic conflict on son preference, we leverage (i) geographical variation derived from the locations of casualties in the First Nagorno Karabakh War; (ii) differences in the composition of families (i.e. the gender of the children of woman i in year $t-1$); and (iii) its evolution over time as provided by the fertility history panel data. We estimate the following model:

$$Y_{irt} = \beta(GenderComposition_{irt-1} * deaths_{rt-1}) + \theta GenderComposition_{irt-1} + \eta deaths_{rt-1} + \phi children_{irt-1} + X_i'\gamma + \psi_t + \alpha_r + \epsilon_{irt}$$

where:

- Y_{irt} is a dummy for any: i) birth ii) birth of a male iii) birth of a female, for woman i living in region r in year t
- *Gender Composition* is a categorical variable that can take the following values:
  - *No children* if woman i has no children at $t-1$
  - *Only females* if woman i has only female children at $t-1$
  - *Variety* if woman i has female and male children at $t-1$
  - *Only males* (omitted category) if woman i has only male children at $t-1$
- $deaths_{rt}$ is total number of deaths over 1,000 inhabitants, standardized using the mean and standard deviation from the empirical distribution
- $children_{irt-1}$ is the number of children for woman i
- X_i' includes women's characteristics
- α_r and ψ_t are region and time fixed effects to capture any time-invariant province heterogeneity and any year-specific shock

Results

Table 1: LPM: Probability to give birth in t

	Any birth	Male birth	Female birth
No Children × lag_deaths	-0.002	0.011	-0.012**
	(0.002)	(0.001)	(0.001)
Only Females × lag_deaths	**0.007****	**0.008*****	**-0.000**
	(0.003)	(0.002)	(0.002)
Variety × lag_deaths	-0.003	0.001	-0.003***
	(0.002)	(0.001)	(0.001)
R-Squared	0.418	0.193	0.198
Mean Dep. Variable	0.140	0.073	0.066
Std. Dep. Variable	0.346	0.260	0.249
Observations	82,108	82,108	82,108

Exposure to conflict for son-less families leads to a 10% increase in the probability of having a son with respect to the mean.

Additional Results & Robustness

- UCDP and *The List* results are similar in magnitude and significance
- We explore abortion as a **mechanism**
- Exclude regions hit by the Spitak Earthquake in 1988 - Results are unchanged

Conclusion

Our findings reveal that **conflict increases fertility** in the very short term and **exacerbates gender biases**, with families prioritizing the birth of sons.