



Democracy and Child Mortality: Can We Claim Causality?

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Motivation

- Current U.S. foreign policy is dedicated to spread of democracy
 - Bill Clinton's 1994 State of the Union
 - “Ultimately, the best strategy to ensure our security and to build a durable peace is to support the advance of democracy elsewhere.”
- What are the benefits?
- What do the people gain?



Question

- Has the spread of democratic institutions improved human well-being?



Current Answers

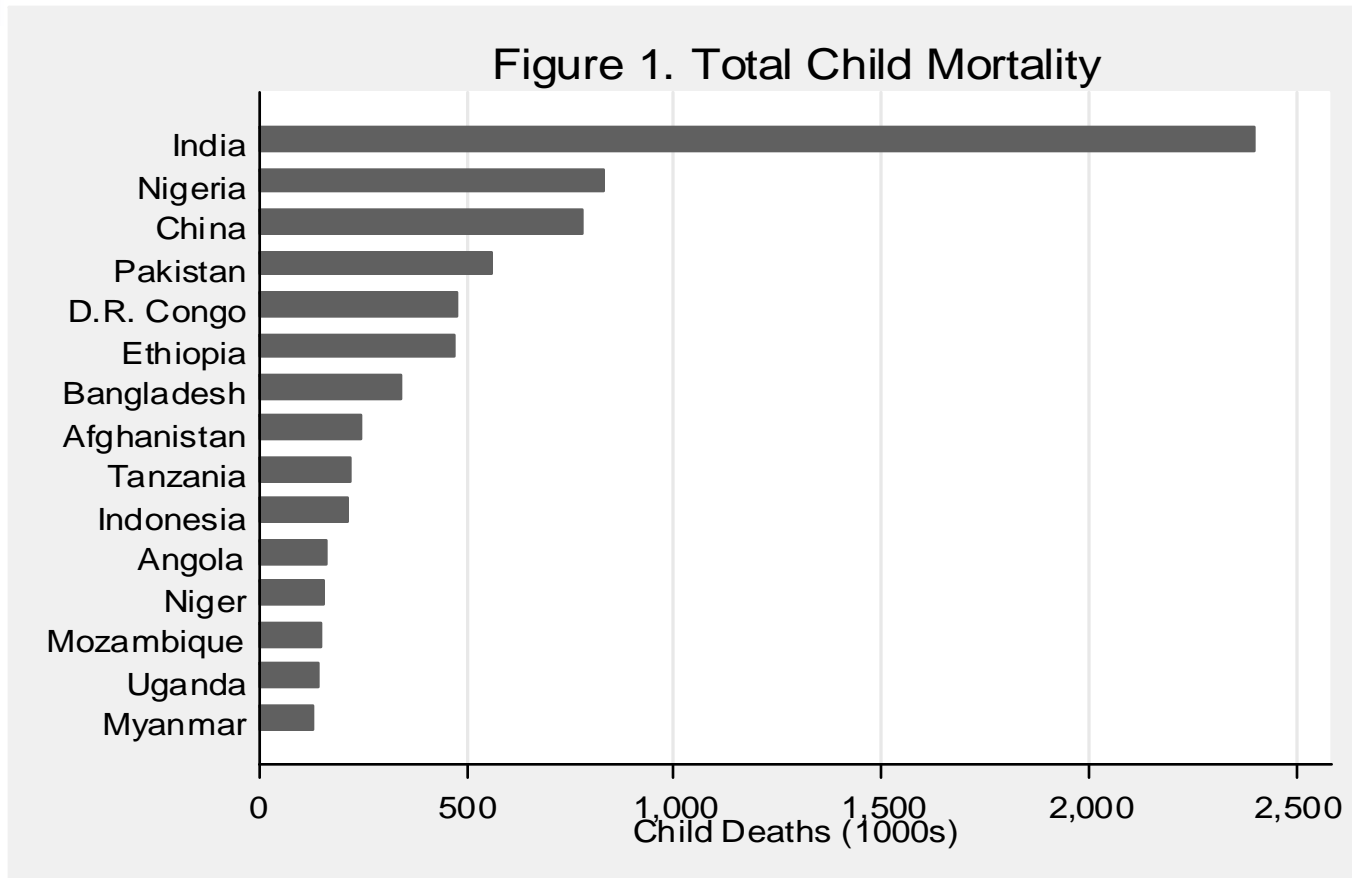
- Yes
 - Increased economic development (Przeworski et. al. 2000)
 - Magnitude of environmental degradation (Li and Reuveny 2006)
 - Less income inequality (Reuveny and Li)
- No
 - No effect on economic growth (Barro 1996)



Focus on Child Mortality

- Accurate measure of human well-being (Sen 1998)
- One of the United Nations' Millenium Development Goals
 - Conditions other goals including maternal well-being

Global Child Mortality





Democracy and Child Mortality

- Inverse relationship
 - Franco et. al. (2006)
 - Besley and Kudamatsu (2006)
 - Countries democratic since 1956 compared to autocratic countries have 17 less infant deaths (per 1,000)
- No effect
 - Houweling et. al. (2005)
 - Ross (2006)



Dictatorships & Child Mortality

- Przeworski et. al. (2000)
- Zweifel and Navia (2000)
 - Attribute 47,000 extra infant deaths to Suharto dictatorship



Hypothesis

- Besley and Kudamatsu
 - “Whether democracy matters, per se, or simply serves as a proxy for societal and political development presents a difficult problem...”
- This is correct
 - Democracy indirectly affects child mortality
 - How? Due to increased levels of female literacy and income



Expectation

- Female literacy and income per capita act as intervening variables
- Regression results should indicate
 - Democracy has statistical and practical effect on child mortality
 - But, result holds until intervening variables are controlled for in the regression model



Results

	(1)	(2)	(3)	(4)	(5)	(6)
Democracy	0.169 (0.057)**	0.073 (0.048)	0.051 (0.043)	0.049 (0.043)	0.046 (0.038)	0.051 (0.038)
Female Lit.		-0.028 (0.003)**	-0.011 (0.003)**	-0.010 (0.003)**	-0.011 (0.002)**	-0.011 (0.002)**
Income p.c.			-0.664 (0.075)**	-0.567 (0.097)**	-0.402 (0.083)**	-0.381 (0.086)**
Health Exp.				-0.196 (0.171)	-0.267 (0.160)	-0.320 (0.166)
Measles Cov.				-0.009 (0.004)*	-0.005 (0.003)	-0.004 (0.003)
Pop Density					-0.000 (0.000)**	-0.000 (0.000)**
Tuberculosis					0.002 (0.000)**	0.002 (0.000)**
Foreign aid						0.001 (0.001)
Constant	3.103 (0.225)**	5.554 (0.288)**	9.865 (0.565)**	10.470 (0.674)**	8.893 (0.668)**	8.844 (0.667)**
Observations	115	115	115	114	113	113
R-squared	0.07	0.48	0.69	0.71	0.80	0.80

Dependent variable is the under-five mortality rate (natural log). GDP per capita and public health expenditures are measured in natural logs. * significant at 5%; ** significant at 1%



Results: No Intervening Variables

	(1)	(2)
Democracy	0.100 (0.041)*	0.102 (0.037)**
Health Exp.	-0.857 (0.172)**	-0.767 (0.152)**
Measles Cov.	-0.016 (0.005)**	-0.014 (0.005)**
Pop Density	-0.000 (0.000)**	-0.000 (0.000)**
Tuberculosis	0.002 (0.000)**	0.002 (0.000)**
Foreign aid	0.002 (0.001)	0.002 (0.001)*
Constant	7.592 (0.833)**	6.849 (0.715)**
Observations	113	113
R-squared	0.63	0.65

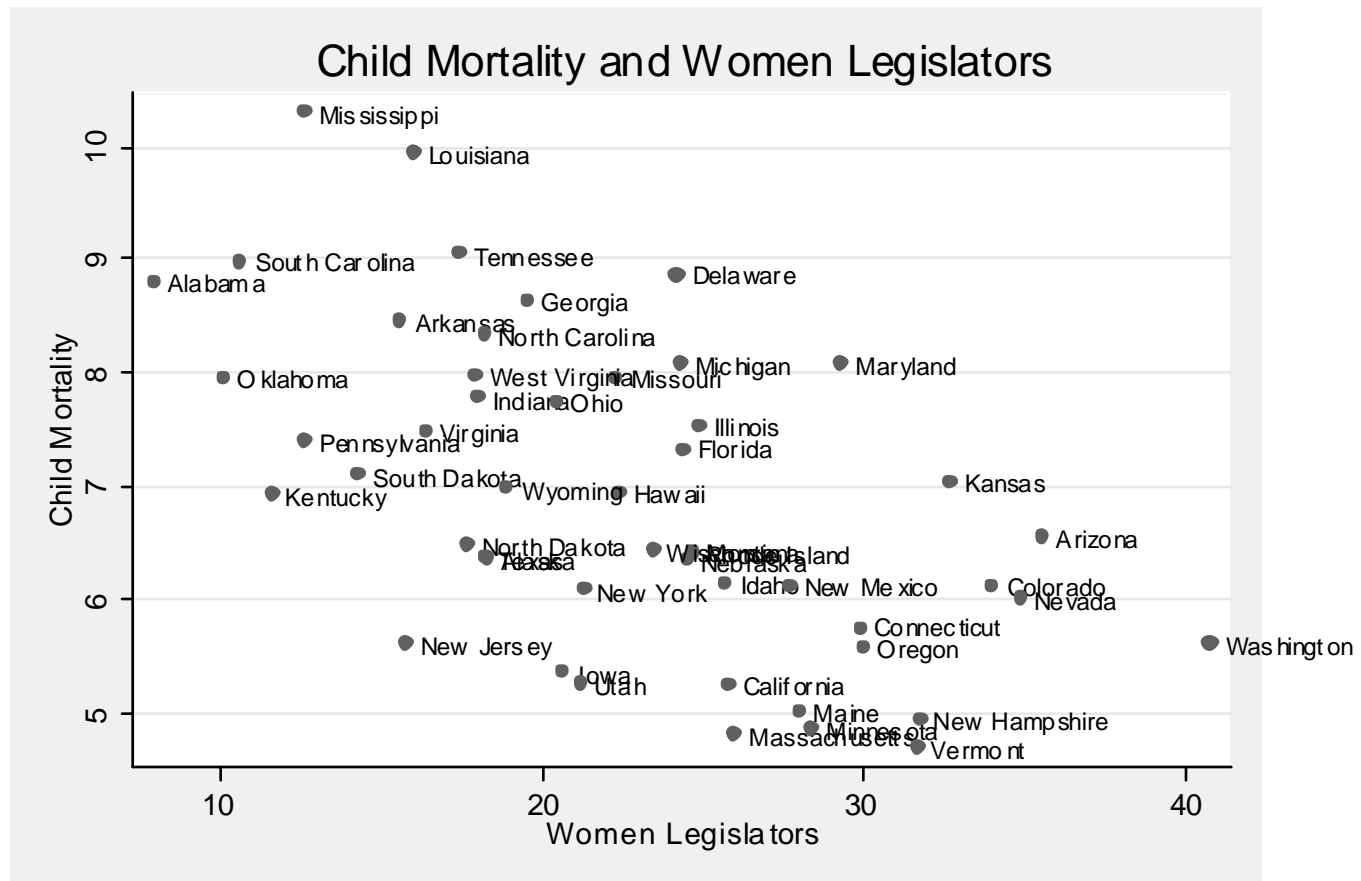
Dependent variable in column 1 is the under-five mortality rate (natural log) and in column 2 the dependent variable is the infant mortality rate (natural log). Public health expenditure is measured in natural logs. * significant at 5%; ** significant at 1%



Future Work

- Does democracy allow women to gain political power?
- Will this alter the composition of spending?
- Preliminary evidence from the U.S. indicates more women in state legislatures have less child mortality

Future Work





Conclusion

- Democracy indirectly empowers women and this leads to less child mortality
- However, if over time women control policy then it might be the case that democracy can be said to directly lower child mortality