

Make Two Democracies and Call Me in the Morning:

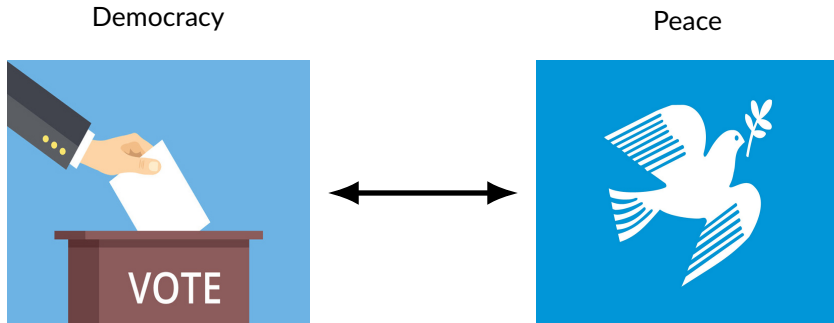
Endogenous Regime Type and the Democratic Peace

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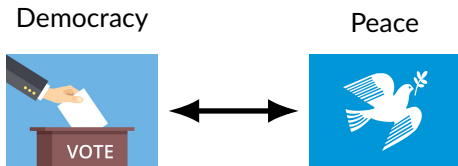
Online Peace Science Colloquium

The democratic peace: consensus about the **correlation**

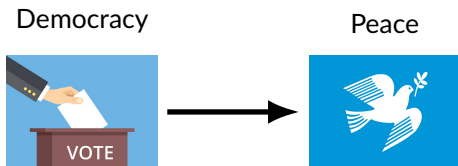


Pairs of democracy rarely, if ever, fight wars with each other.

The democratic peace: disagreement about the **causation**



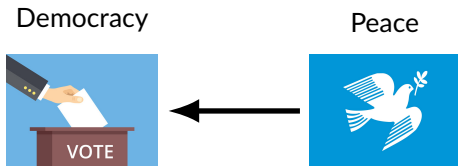
The democratic peace: disagreement about the **causation**



1. “Democratic Peace theory”

- norms (Maoz & Russet 1993)
- institutions (BdM et al. 1999)
- information (Fearon 1994, Schultz 1998)

The democratic peace: disagreement about the **causation**



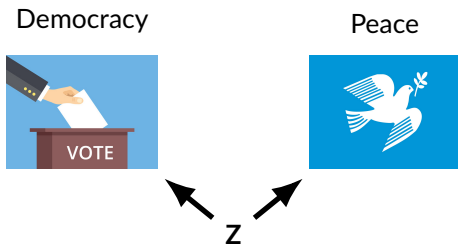
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James, Solberg & Wolfson (1999), Mitchell, Gates, & Hegre (1999)

3. Spurious correlation

- Alliance (Farber & Gowa 1997)
- National interests (Gartzke 1998, 2000)
- Capitalist economy (Gartzke 2007)
- Stable border (Gibler 2007)

So many theories; not as many credible empirical tests.

Looking for causality

Previous attempts

- ▶ Observational studies
 - Too few controls (omitted variable bias)
 - Too many controls (post-treatment bias)
 - Unobservable confounder (endogeneity)
- ▶ Experimental studies
 - RCT on war and peace not possible
 - Effect of regime type on something else (e.g., public support for war)

Our contributions

- ▶ Quasi-experimental design (IV)
- ▶ Result: Democracy **increases** conflict

Identification strategy: fertility rate as an instrument

Our instrument:

A country's average **fertility rate** (# of childbirths per woman)

Relevance

fertility rate \Rightarrow democracy

- ▶ Low fertility rate \rightsquigarrow female empowerment \rightsquigarrow democracy
- ▶ Studies show quantitative and qualitative empirical evidence

Exclusion restriction

fertility rate is not directly related to international conflict

- ▶ Falsification tests

Instrument relevance: fertility rate decline \Rightarrow democracy

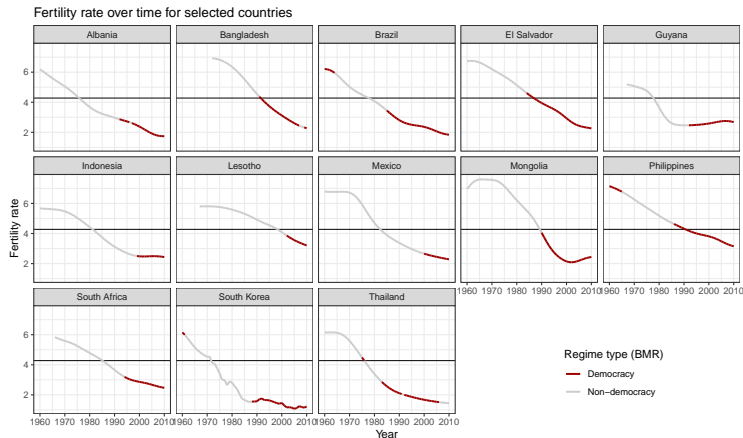
For many countries

- ▶ Low fertility & democracy
- ▶ High fertility & non-democracy

throughout 1960-2010.

Countries that transitioned

- ▶ Initially, high fertility & non-democratic
- ▶ Then, a sizable decline in fertility
- ▶ Then, democratization



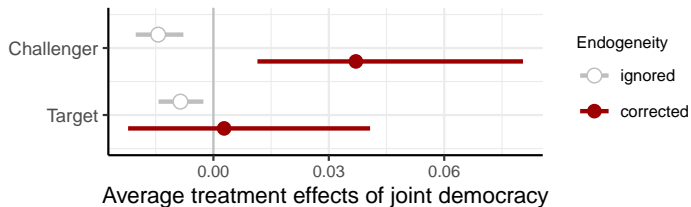
Instrument relevance: first-stage estimates

Table: Lower fertility rate \Rightarrow democracy

Democracy equation (probit)	
Fertility	−0.133*** (0.042)
Per capita GDP	0.299*** (0.065)
Infant mortality	−0.471*** (0.105)
Urban population share	−0.010*** (0.003)
Decades fixed-effects	✓
Region fixed-effects	✓

Main findings

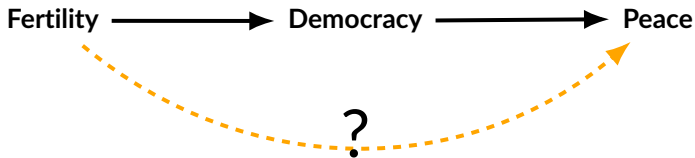
- ▶ When ignoring endogeneity, democracy has a **negative effect on conflict**.
- ▶ When correcting for endogeneity, the effect is **positive** for challenger.



Critical assumption

Exclusion restriction

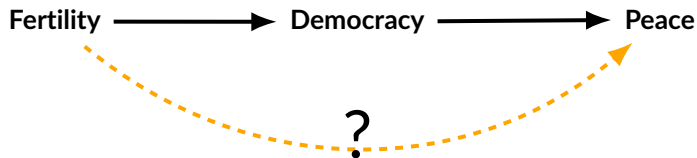
Fertility influences peace **exclusively through** democracy



Fertility **must not** influence peace directly.

- ▶ Cannot be **verified** empirically, even if it's true
- ▶ Can be **falsified**, if it's false

Falsification tests



Three falsification tests to assess the plausibility:

1. Fertility, female empowerment, and female leader
2. Reduced-form analyses
3. Model of fertility

Falsification test 1: fertility \Rightarrow conflict?

Some studies find: fertility rate \Rightarrow conflict

- ▶ Caprioli (2000): positive effect
- ▶ Regan & Paskeviciute (2003): negative effect

Our claim:

Fertility rate may affect conflict **only via inducing democratization** first.

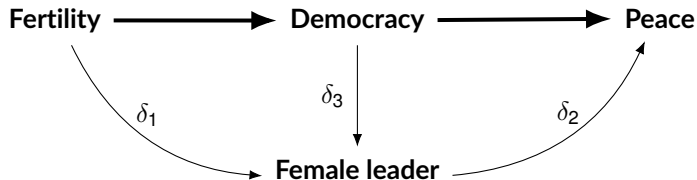
Falsification test 1: fertility \Rightarrow conflict?

The theoretical argument of previous studies:

- (a) Women have more peaceful preference than men.
 - (b) Lower fertility rate \Rightarrow female empowerment
 - (c) Female empowerment \Rightarrow women's preference reflected in politics \Rightarrow peace/conflict
-
- ▶ We agree with (a) and (b).
 - ▶ We argue that (c) necessarily involves democratization.
 1. Female empowerment \Rightarrow democratization
 2. For women's preference to be reflected in foreign policy, there has to be some mechanism (e.g., democracy)
 - ▶ Any other ways that brings about women's preferences \Rightarrow foreign policy?

Falsification test 1: fertility \Rightarrow conflict?

Having a female leader may open up a backdoor path.



- ▶ If $\delta_1 \neq 0$ AND $\delta_2 \neq 0 \Rightarrow$ exclusion restriction is **violated**
- ▶ However, if $\delta_1 = 0$ (maybe $\delta_3 \neq 0$) OR $\delta_2 = 0$, exclusion restriction **still holds**.

Falsification test 1: fertility \Rightarrow conflict?

Table: Fertility rate has no effect on female leaders

	DV = female leader or not		
Fertility rate (δ_1)	-0.042 (0.153)		-0.095 (0.175)
Democracy (δ_3)		1.166*** (0.325)	1.186*** (0.318)
Per capita GDP	-0.443* (0.238)	-0.427* (0.237)	-0.392 (0.252)
Infant mortality	-0.615** (0.271)	-0.638** (0.280)	-0.542* (0.325)
Urbanization	0.010 (0.010)	0.006 (0.011)	0.005 (0.011)
Decade fixed-effects	✓	✓	✓
Region fixed-effects	✓	✓	✓
Years since last female leader	✓	✓	✓
N	6,595	6,595	6,595

Conclusions

- ▶ Joint democracy **does not** have a pacifying effect.
 - ▶ If anything, democracy **increases** the risk of conflict initiation.
 - ▶ Need to revisit the debate about causal mechanisms (norm / institution / audience costs)
- ▶ Caveat: this is LATE (*local* average treatment effect) \neq ATE
 - ▶ Fertility-induced causal effect of joint democracy
 - ▶ That said, **better LATE than nothing!**