Immigration and armed conflicts: Era of globalization

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Recap: Food for thought

Will immigration increase/decrease conflicts? Not easy to answer.

- **Increase**: (1) Conflicts between natives (2) Bring immigrants' conflicts into the country.
- **Decrease**: Higher proportion of immigration may increase the opportunity cost for one group to disturb the peace.

Indirect effect could also matter!

- The opportunity cost of starting a war could increase if the opponent has large portion of immigration from other countries.

Recap: Research question

Does immigration increase or decrease war/armed conflicts?

- Heterogeneous effects depending on the types of conflict.
- Direct and indirect effect of immigration.

Research design

- Use worldwide immigration patterns from 1990-2022.
- Identification strategy: Shift-share IV to causally estimate the impact of immigration.

(Updated) Preview of results

Some trial and error

- Applied shift-share IV regression to estimate impact of immigration on intrastate conflict.
- Regression specification not robust to the change in specification.
- **Dig into the descriptive statistics of the main outcome (intra- interstate war) to check any patterns in the data.**
- Try out different specification for IV.
- Pivot? **Different data?**

(Recap) Data

Immigration

- UN Global migration database (1990-2024, 5 years): Destination-origin pair of immigration stock, at least 190 countries every year.
- World Bank migration data (1960-2000, decennial): Use it for exogenous IV share.

Armed conflicts

- UCDP/PRIO Armed conflict dataset (1946-2022, annually): Incidence of conflicts (at least 25 battle death, interstate, intrastate)

Other data for controls

- CEPII: Trade volume, GDP, WTO, GATT, etc.

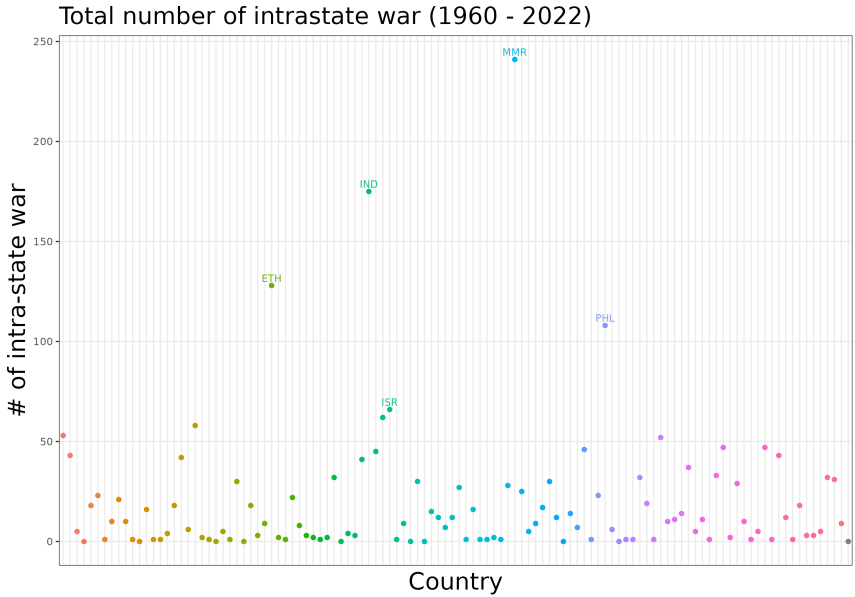
Final sample: 1990-2022, destination-origin pair of countries.

Summary statistics: Conflicts data

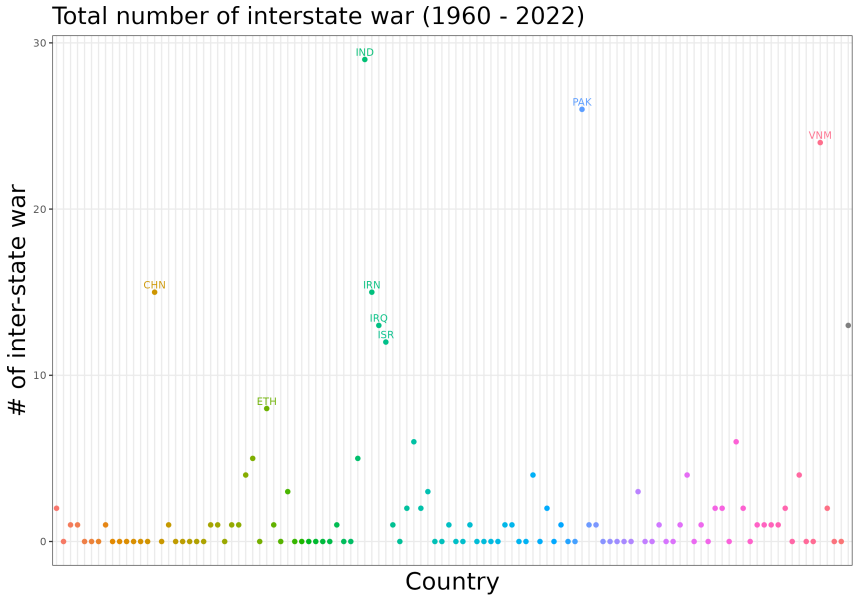
year		mean
1995	intra	0.95
	inter	0.05
1996	intra	0.91
	inter	0.09
1997	intra	0.95
	inter	0.05
1998	intra	0.90
	inter	0.10
1999	intra	0.90
	inter	0.10
2000	intra	0.90
	inter	0.10

- **(mean)** should be understood as proportions here.
- Most of the conflicts are intrastate.
- Unlike interstate, there can be other various factors leading to intrastate conflicts, lessening the effect from immigrant.

Conflicts data visualization: Intrastate



Conflicts data visualization: Interstate

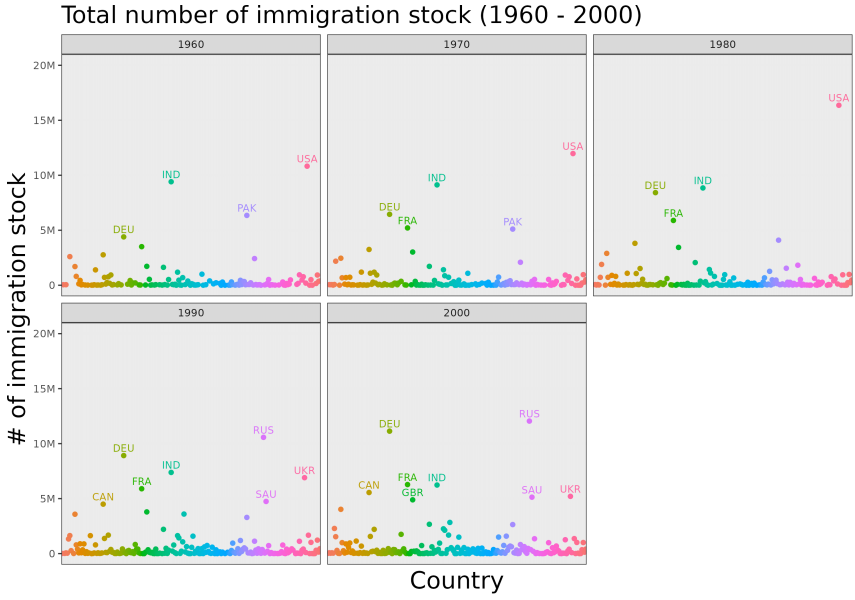


Summary statistics: Immigrant data

year	immigration stock (total)	immigration share (mean)
1960	71,124,984	0.055
1970	80,422,844	0.069
1980	92,427,478	0.074
1990	139,297,313	0.088
2000	163,748,711	0.093

- Noticeable jump from 1980 to 1990.
- Is this data issue? Or is this some true exogenous shock (immigration policy change, globalization, etc).

Immigration data visualization



Baseline regression

We aggregate the destination-origin pair to destination for now.

$$y_{it} = \alpha + \beta D_{it} + \Gamma' X_{it} + \varepsilon_{it}.$$

- Note that the years are aggregated to every 5 years.
- y_{it} is the cumulative sum of conflicts that country i was involved in during 5 years after year t.
- D_{it} is share of share of total immigration stock (w.r.t. total population) in start of the year T.

Identification strategy: Shift-share IV

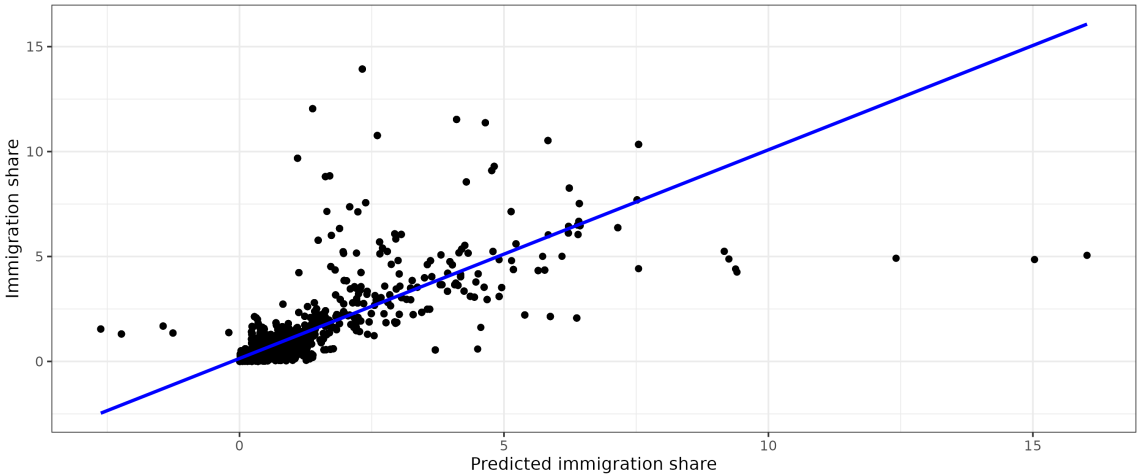
We construct shift-share IV as follows:

$$D_{it} = \text{IMM}_{it}/\text{POP}_{it} \quad \text{where}$$

$$\text{IMM}_{it} = \widehat{\text{IMM}_{i,t-1}} + \sum_j \overbrace{\text{WORLD}_{j,t-1}}^{\text{Shift}} \times \underbrace{\frac{\text{CNTRY}_{ij,1960}}{\text{CNTRY}_{i,1960}}}_{\text{Share}}$$

- IMM_{it} is number of immigration stock in country i in year t.
- $\text{WORLD}_{j,t-1}$ is the number of total immigration flow coming out from country j between year t and $t-1$.
- CNTRY just implies the share of immigration stock in country i that came from country j in year 1960.
- Identification assumption: (1) Some exogenous portion of immigration shift starting from 1990s, (2) Some exogenous portion of immigration share by fixing it to 1960.

First-stage result



IV's predictive power seems to be pretty great but values are kinda weird. . . Perhaps due to some measurement error (or my error).

2SLS results

	# Intrastate conflict					
	(1)	(2)	(3)	(4)	(5)	(6)
Immigration Share	-0.28723432***	-0.28699595*	-0.28723432***	0.03818684	0.03818684	-0.41221111***
	(0.01965546)	(0.13404667)	(0.09467774)	(0.02881842)	(0.11832251)	(0.11310151)
log(flow)				-0.09117770***	-0.09117770**	-0.08886925**
				(0.01208146)	(0.03587297)	(0.03809858)
log(pop)				0.83362658***	0.83362658***	
				(0.05440805)	(0.23977371)	
log(gdp)				-0.42120239***	-0.42120239***	0.23455568**
				(0.03811449)	(0.15883189)	(0.09110345)
gatt				1.068843***	1.068843**	0.33046273
				(0.10712409)	(0.42260551)	(0.36971182)
wto				-1.480862***	-1.480862***	
				(0.12426541)	(0.31666096)	
year FE				Yes	Yes	Yes
region FE				Yes	Yes	Yes
Observations	5,038	5,027	5,038	4,902	4,902	4,902
R^2	0.02175	0.02178	0.02175	0.23837	0.23837	0.16371
F-stage	660.4	38.7	88.7	354.9	56.9	90.3
Cluster	hetero	region (11)	country	hetero	country	country

Notes. ***: 0.01, **: 0.05, *: 0.01

Alternative Shift-share IV: In progress

- Shift: Total number of immigrants in each period by origin country.
- Share: 1960 Share of immigrants in each country by origin country.
- Validity: Exogenous shift? Exogenous share?
- In fact, I tried this sometime ago: First-stage not strong.

Discussion: Other data on conflicts?

- There are other data on worldwide conflicts that we can use.
- e.g. Correlates of War.
- Timespan: 1816 – 2007.
- Level of war is higher: At least 1,000 battle death.
- Not much info on type of conflict.

Discussion: Problems with using two different data on immigration

- In the analysis, I use 1960 immigrant data from World Bank for constructing IV.
- But for regressor, I use 1990-2022 immigrant data from UN.
- Since I am using two data for one analysis, this might be problematic (measurement issue).
- This could also be the reason why some of my results in first-stage is weird

Conclusion

- Is it an interesting question? $\Rightarrow$ Maybe.
- Perhaps relation between immigration and war might not be significant enough.
- Better data on immigration? $\Rightarrow$ Not easy to find a better data.