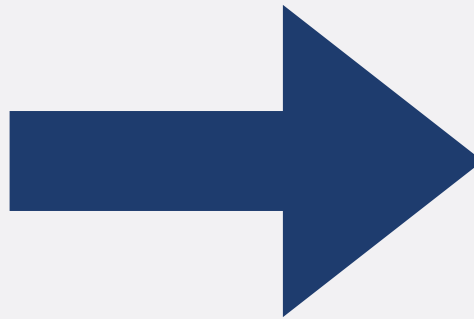# DATA ANALYTICS FOR POLITICAL SCIENCE

ESTIMATING CAUSAL EFFECTS WITH OBSERVATIONAL DATA

RUSSIA AND UKRAINE

Receiving Russian TV → **Pro-Russian Voting Behavior**

UA_PRECINCTS.CSV

| variable	description
russian_tv	identifies precincts that receive Russian TV: 1=there is reception or 0=there is no reception
pro_russian	vote share received in the precinct by pro-Russian parties in the 2014 Ukrainian parliamentary election (in percentages)
prior_pro_russian	vote share received in the precinct by pro-Russian parties in the 2012 Ukrainian parliamentary election (in percentages)
within_25km	identifies precincts that are within 25 kilometers of the Russian border: 1=it is within 25 kilometers of the border or 0=it is not within 25 kilometers of the border

RUSSIA AND UKRAINE
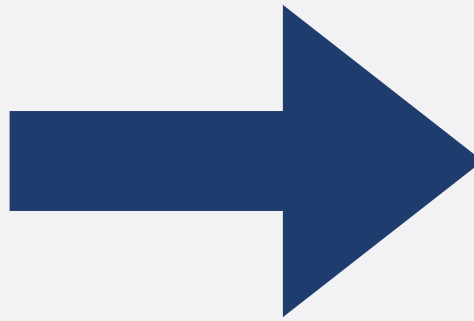
Receiving Russian TV → **Change in Pro-Russian Voting Behavior**

- Compute difference-in-means
- Estimate regression

RUSSIA AND UKRAINE

Living within
25km of border

Receiving
Russian TV

Pro-Russian
Voting Behavior
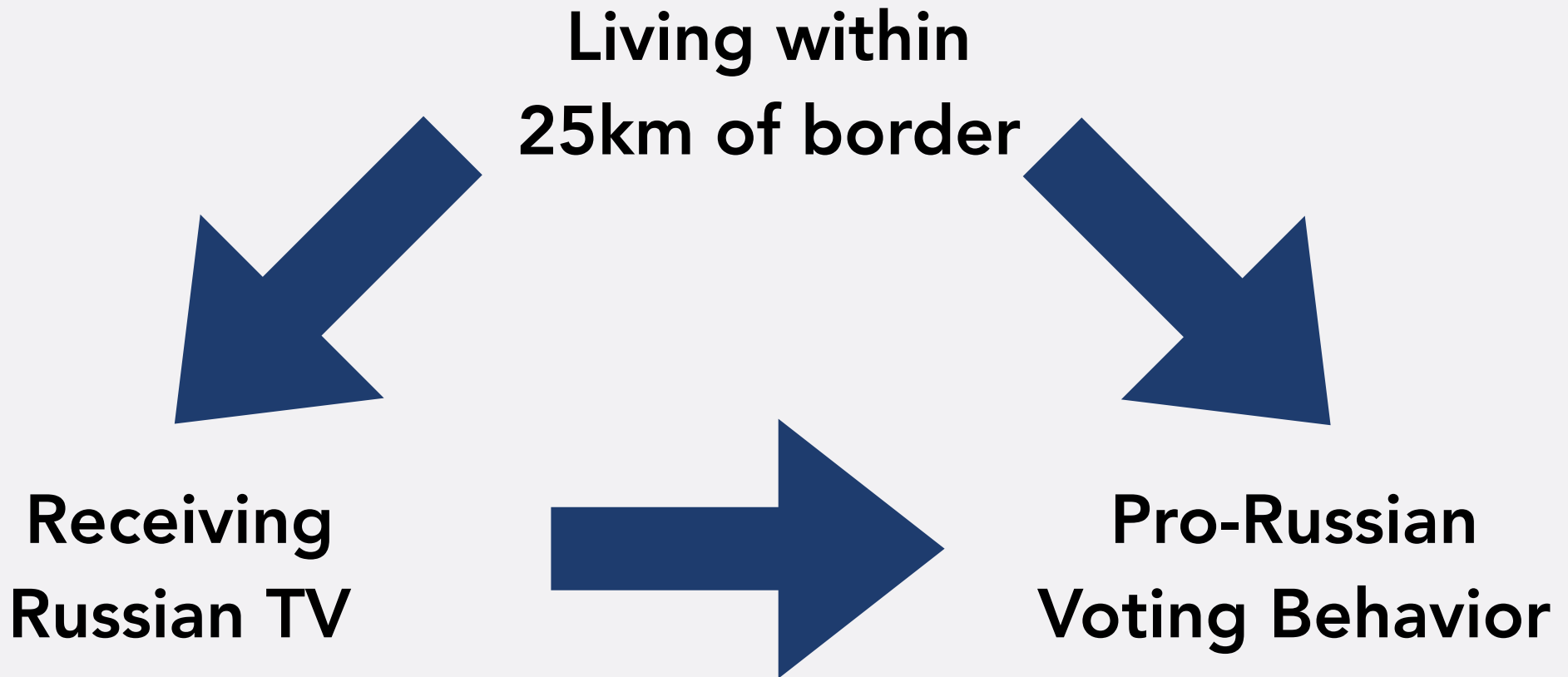
- Estimate regression of effect of Russian TV, controlling for living near border
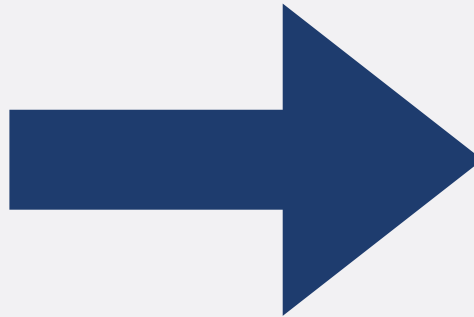
IMMIG.CSV

Name	Description
age	Age (in years)
female	1 indicates female; 0 indicates male
employed	1 indicates employed; 0 indicates unemployed
nontech.whitcol	1 indicates non-tech white-collar work (e.g., law)
tech.whitcol	1 indicates high-technology work
expl.prejud	Explicit negative stereotypes about Indians (continuous scale, 0-1)
impl.prejud	Implicit bias against Indian Americans (continuous scale, 0-1)
h1bvis.supp	Support for increasing H-1B visas (5-point scale, 0-1)
indimm.supp	Support for increasing Indian immigration (5-point scale, 0-1)

- ## DV: Support for more H1B visas (h1bvis.supp)
  - From 0=decrease a great deal to 1=increase a great deal
- ## Main IV: Implicit bias against Indian Americans (impl.prejud)
  - From 0=low implicit prejudice to 1=high implicit prejudice
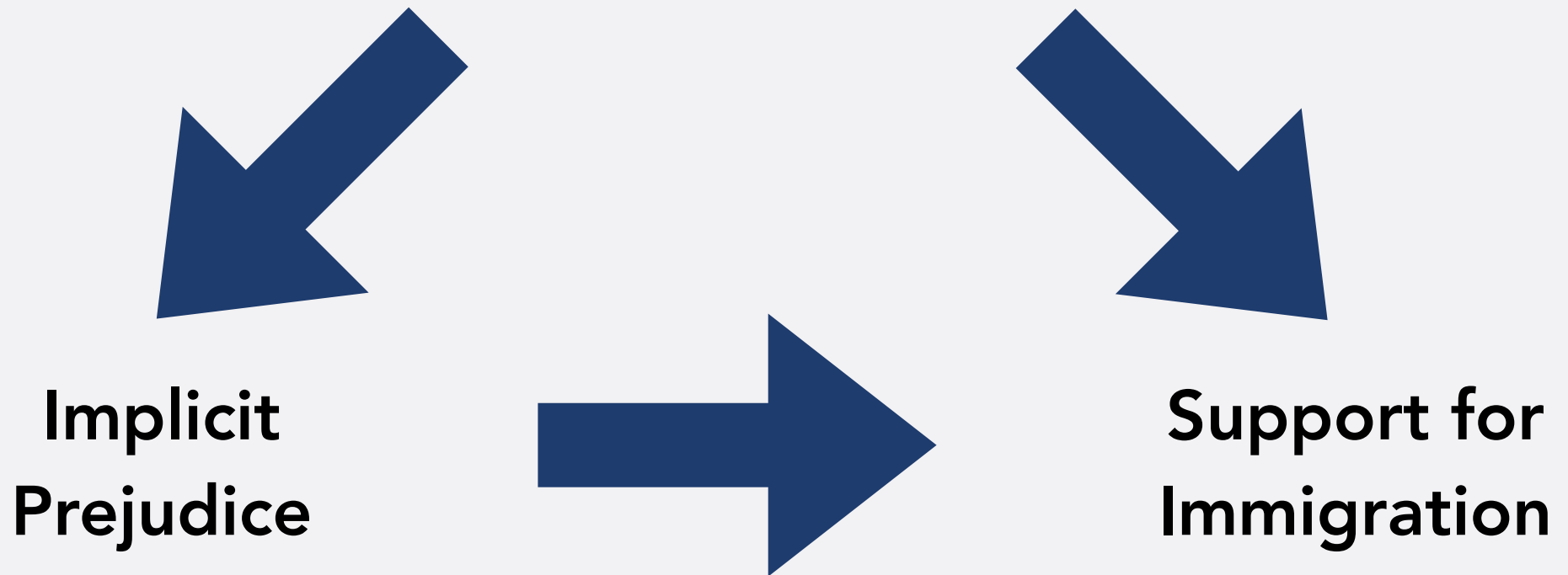
IMMIGRATION ATTITUDES

Implicit Prejudice → **Support for Immigration**

- **Immig. Supp. = α + β * Impl. Prej. + ε**

IMMIGRATION ATTITUDES

Female

Implicit
Prejudice

Support for
Immigration

- Immig. Supp. = α + β_1 * Impl. Prej. + β_2 * Female + ε

IMMIGRATION ATTITUDES

- Immig. Supp. = α + β_1 * Impl. Prej. + β_2 * Female
- Immig. Supp. = 0.5 - 0.21 * Impl. Prej. - 0.07 * Female
- Immig. Supp. = 0.5 - 0.21 * 0 - 0.07 * 1 = 0.44

EXERCISE

- Load Quality of Government data
- Create variable: Difference in literacy between men and women
    - wdi_litradm and wdi_litradf
- Run regression:
    - DV: Literacy rate difference
    - IV: Polity score (p_polity2)
- Add additional controls to regression
    - Expenditure on education as % of GDP (wdi_expedu)
    - Government effectiveness (wbgi_gee)