PSC 400
SYRACUSE UNIVERSITY

DATA ANALYTICS FOR POLITICAL SCIENCE

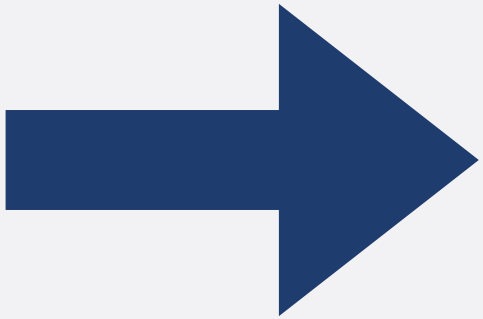
ESTIMATING CAUSAL EFFECTS WITH OBSERVATIONAL DATA

EXERCISE

- Quality of Government data
- DV: Corruption perceptions index: ti_cpi
- IV: pick a (numerical) variable
- Scatterplot, linear regression line, R-squared

RUSSIA AND UKRAINE

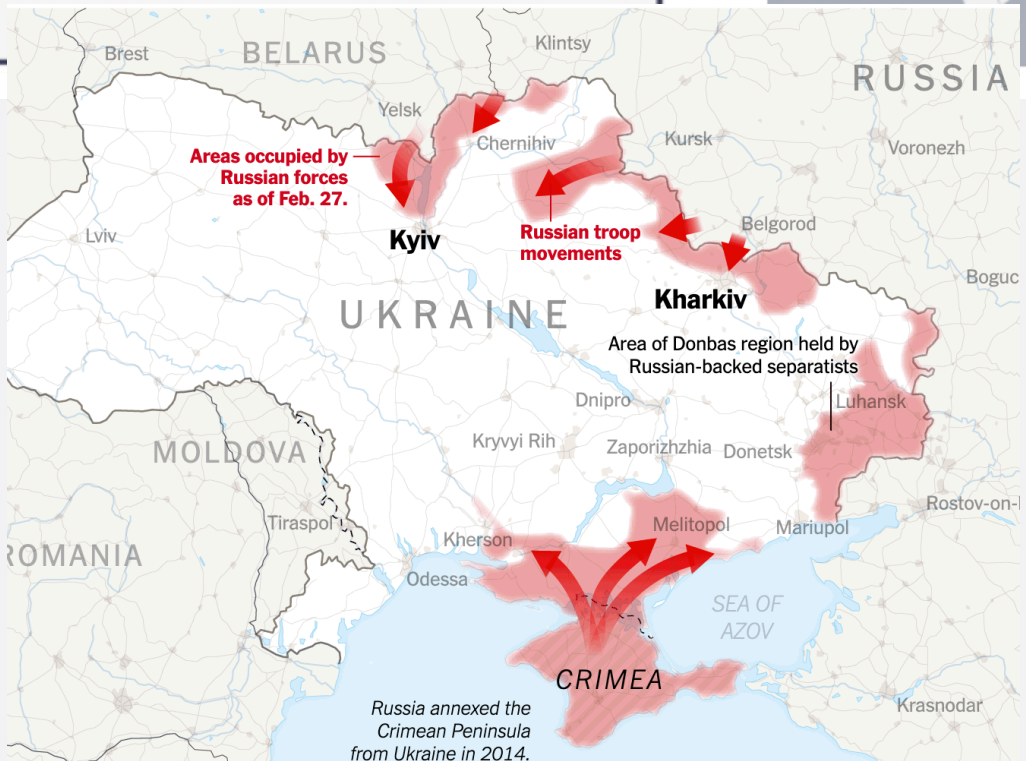
Receiving
Russian TV



Pro-Russian
Voting Behavior

RUSSIA AND UKRAINE

Figure 5.3: In this section, we analyze the effects of receiving Russian TV on Ukrainians living in precincts within 50 kilometers of the border with Russia, which are shown in dark blue.



UA_SURVEY.CSV

variable	description
russian_tv	identifies whether the respondent's precinct receives Russian TV: 1=there is reception or 0=there is no reception
pro_russian_vote	identifies respondents who reported having voted for a pro-Russian party in the 2014 parliamentary election: 1=voted for a pro-Russian party or 0=did not
within_25km	identifies whether the respondent's precinct is within 25 kilometers of the Ukraine-Russia border: 1=it is within 25 kilometers of the border or 0=it is not

RUSSIA AND UKRAINE

Receiving
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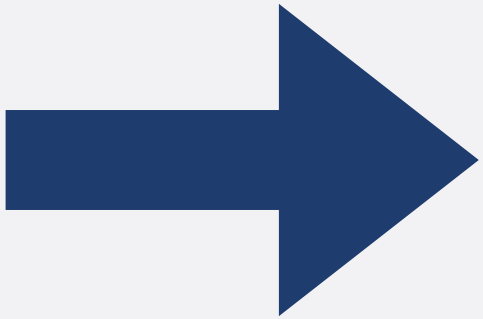
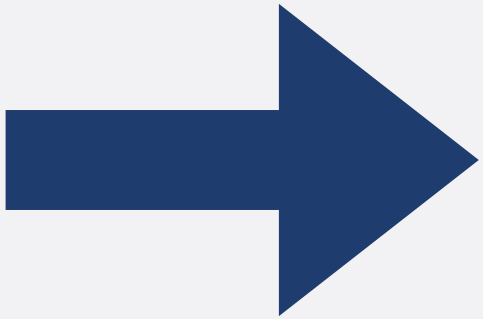


Pro-Russian
Voting Behavior

RUSSIA AND UKRAINE

Receiving Russian TV

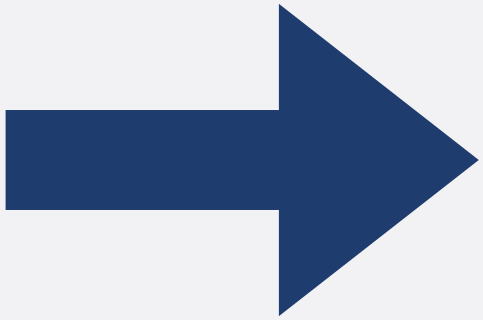


Pro-Russian Voting Behavior

- Difference-in-means: Pro-Russian vote share of those who receive Russian TV - Pro-Russian vote share of those who don't receive Russian TV

RUSSIA AND UKRAINE

Receiving Russian TV



Pro-Russian Voting Behavior

- Regression:
- Pro-RUS vote = α + β * RUS_TV

RUSSIA AND UKRAINE

- Pro-RUS vote = 0.1709 + 0.1191 * RUS_TV
  - RUS_TV is 1 if receives Russian TV, 0 if not

RUSSIA AND UKRAINE

- What is the pro-Russian vote probability for someone who does not receive Russian TV?
- Pro-RUS vote = 0.1709 + 0.1191 * RUS_TV
  - RUS_TV is 1 if receives Russian TV, 0 if not

RUSSIA AND UKRAINE

- What is the pro-Russian vote probability for someone who does not receive Russian TV?
- Pro-RUS vote = 0.1709 + 0.1191 * RUS_TV
  - RUS_TV is 1 if receives Russian TV, 0 if not
- Pro-RUS vote = 0.1709 + 0.1191 * 0 = 0.1709

RUSSIA AND UKRAINE

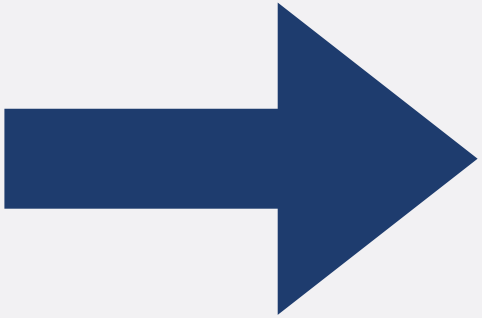
- What is the pro-Russian vote probability for someone who does receive Russian TV?
- Pro-RUS vote = 0.1709 + 0.1191 * RUS_TV
  - RUS_TV is 1 if receives Russian TV, 0 if not

RUSSIA AND UKRAINE

- What is the pro-Russian vote probability for someone who does receive Russian TV?
- Pro-RUS vote = 0.1709 + 0.1191 * RUS_TV
  - RUS_TV is 1 if receives Russian TV, 0 if not
- Pro-RUS vote = 0.1709 + 0.1191 * 1 = 0.29

RUSSIA AND UKRAINE

Receiving
Russian TV

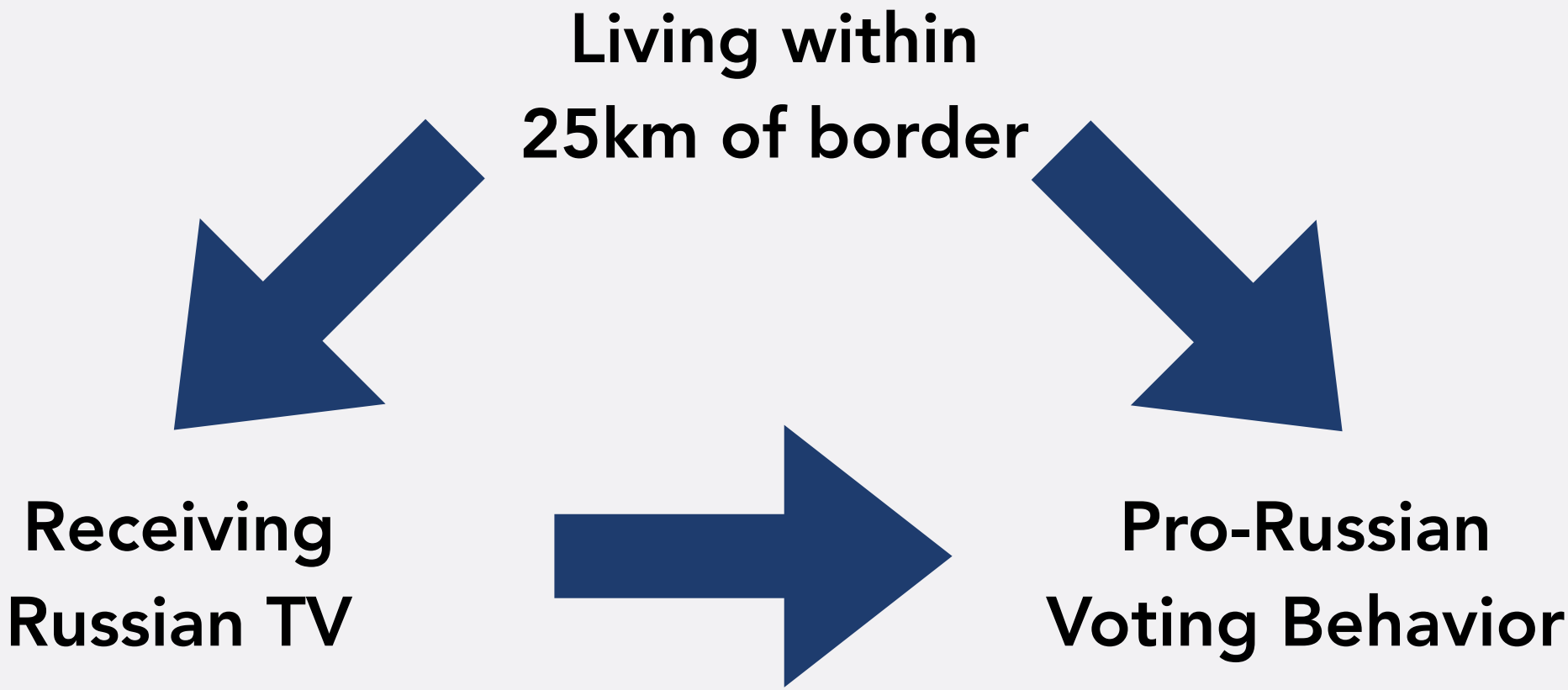


Pro-Russian
Voting Behavior

RUSSIA AND UKRAINE

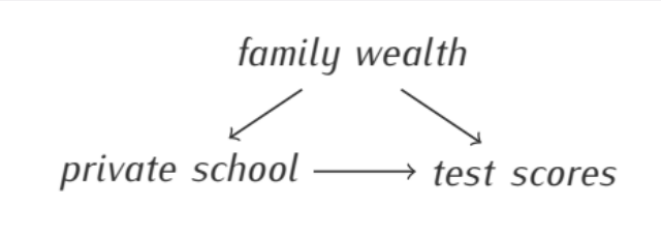
In the months leading up to the 2014 election, Ukraine prepared to defend itself from a possible Russian invasion by deploying its army to the border. The Ukrainian army built military fortifications (trenches and defensive walls) at a distance of up to 10 km from the border, depending on local terrain and road access. Within that buffer zone, the Army positioned tanks and troops in strategic locations and set up military checkpoints. Residents of a precinct located very close to the border (such as within 25 km of it) were either in immediate proximity of a military fortification or, at the very least, aware of its existence, making them especially cognizant of the threat of a Russian invasion and, therefore, more fearful of Russian influence.

RUSSIA AND UKRAINE

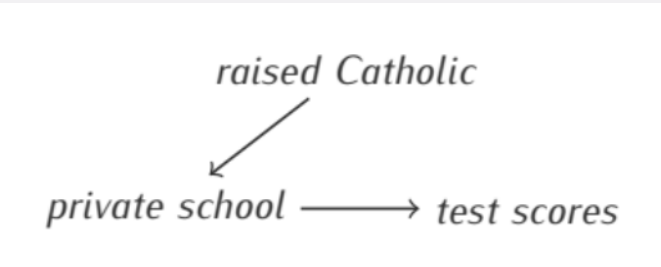


- A potential problem

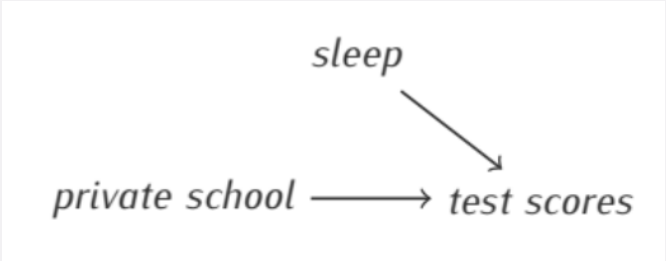
CONFOUNDING



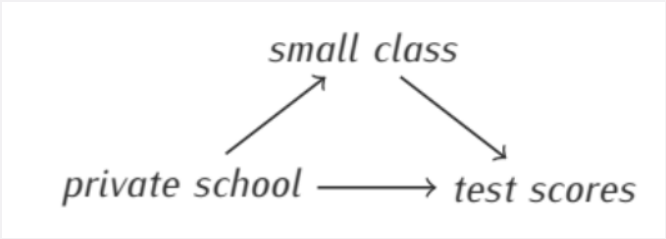
- Potential problem for identification of causal effect



- Not a problem for identification of causal effect



- Not a problem for identification of causal effect



- Not a problem for identification of causal effect

RUSSIA AND UKRAINE

- Pro-RUS vote = 0.1959 + 0.2876 * RUS_TV - 0.2081 * Within_25km
- Holding constant whether someone lives within 25km of the border, someone who receives Russian TV is about 29 percentage points more likely to vote for a pro-Russian party.

EXERCISE

- Quality of Government data
- DV: Corruption perceptions index: ti_cpi
- IV: same variable as before, as well as a potential confounder
- Regression

EXERCISE