Interactions in panel data and other shenanigans

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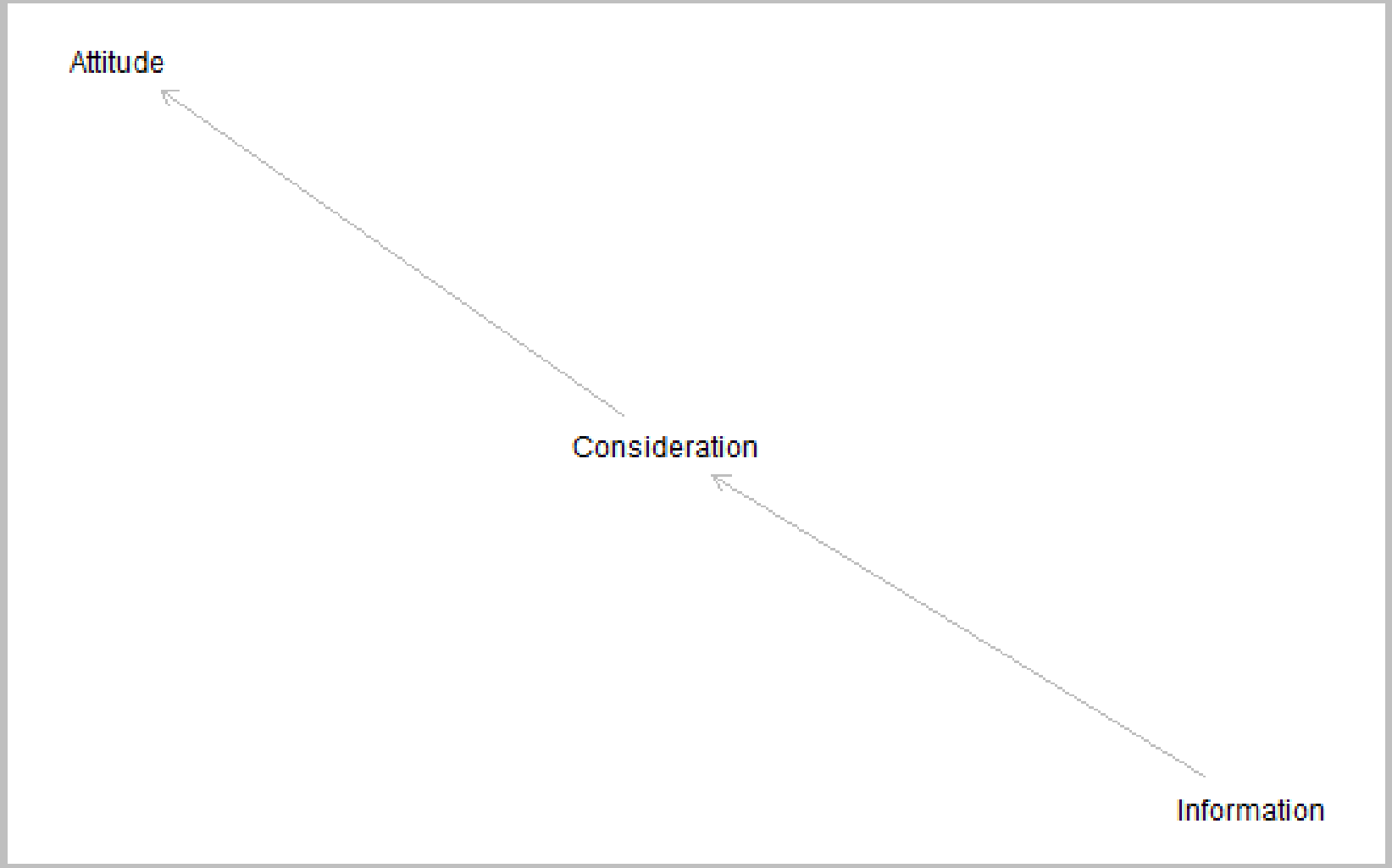
The research question

How do issue definitions in the media affect individual attitudes?

The model



Starting point: Fixed-effect model

$$y_{it} = I_{it} + c_i + c_w + \epsilon_{it}$$

- $y_{it} :=$ attitude of individual i at time t
- $I_{it} :=$ Information consumed by individual i at time t
- $c_i :=$ individual fixed effect (i.e. average individual opinion across time)
- $c_w :=$ wave fixed effect (i.e. average opinion across individuals)

However.... (Problem I)

Zaller: effects of information dependent on

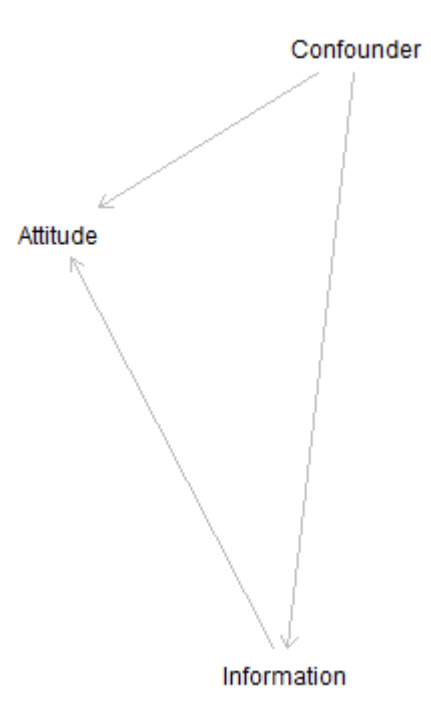
- individual core values
  - Depend which considerations are formed in response to information
  - e.g. perceiving a homeless person: bum or unlucky?
- individual attentiveness to politics
  - increases receptiveness
  - but also ability to relate information to own values

Modeling

- for direct effect: could just use 2-way FEs (or could I?)
- However, values and attentiveness are (considered to be) stable across time
- Hence, including them in the model seems to make FEs rather superfluous

... right?

Candidate I



No individual FEs[1]:

$$y_{it} = I_{it} * V_i * A_i + c_w + \epsilon_{it}$$

- Issue: not controlling for time-constant individual differences

[1]: Imagine constitutive terms.

Candidate II

Lagged DV:

$$y_{it} = I_{it} * V_i * A_i + y_{i,t-1} + c_w + \epsilon_{it}$$

- Issue: post-treatment bias when it comes to values? (values correlate with dv)

Can PTB be an issue here?

There should be a figure here.

Candidate III

With FEs:

$$y_{it} = I_{it} * V_i * A_i + c_i + \epsilon_{it}$$

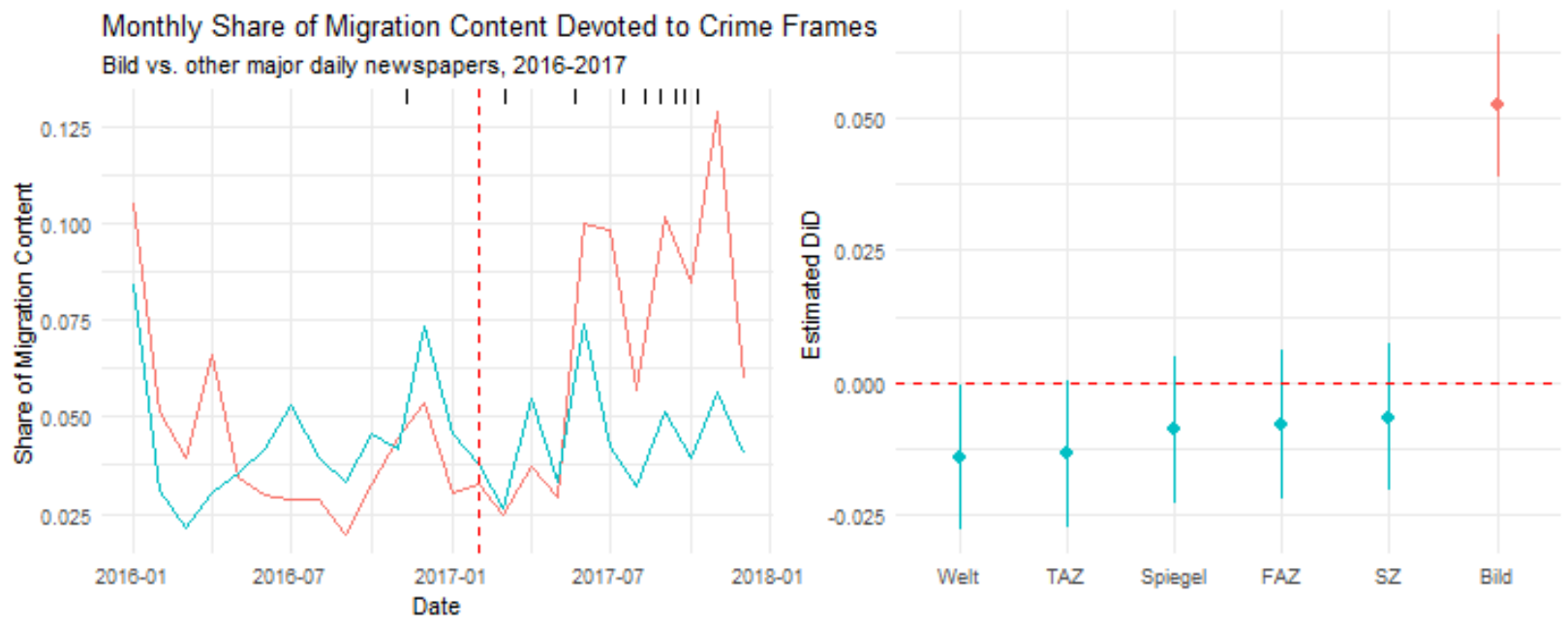
- Issue: Collinearity

→ Currently leaning towards first version (no FEs).

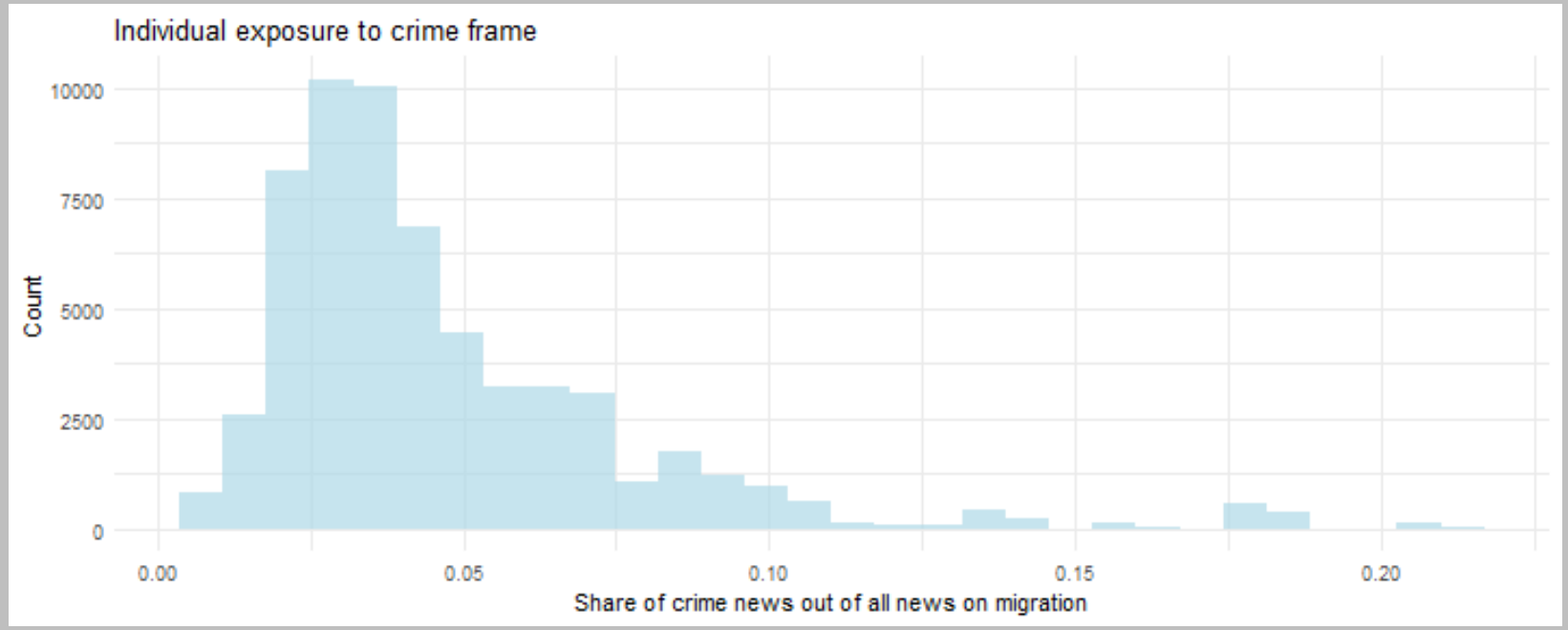
Suggestions? Hot takes? Emotions?

Problem II: No real control in individual model

DiD: no problem



Individual estimates: problem?



Potential solutions?

- Create bins for different levels of exposure?
- Actually not a problem to estimate 2-way FE model? (but *reverse causality*?)
- something else?

Suggestions? Hot takes? Emotions?

Mo' problems

- DiD standard errors: all solved with bootstrap?
- do 2-way FEs account for switching in DiD groups?
- standard error clustering
- test for endogeneity

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