Predictors of AfD party success in the 2017 elections

A Bayesian modeling approach

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FOM
DGPs 2018

Menace to society

Right-wing populism then and now

Causes of 20th century world wars

- *nationalism*

- authoritarianism

- racism

- territorial disputes

- class conflicts

- crisis of capitalism

Source: Kershaw, I. (2016). To hell and back: Europe 1914-1949. New York City, NW: Penguin.

Right-wing populism varies greatly, but...

- shows *anti-establishment* attitude

- the *people* is thought of as a *homogeneous body*

- *elites* are portrayed as *corrupt*, the *people* as *morally pure*

- favors *anti-pluralism*

- provides *low complexity solutions* to societal questions

- narrative of *"forgotton man Joe Plumber"*

- sees threat in *cultural outsiders*

Source: Decker, F. (2003). Der neue Rechtspopulismus. Wiesbaden: VS Verlag für Sozialwissenschaften. Nicole Berbuir, Marcel Lewandowsky & Jasmin Siri (2015) The AfD and its Sympathisers: Finally a Right-Wing Populist Movement in Germany?, German Politics, 24:2, 154-178, DOI: 10.1080/09644008.2014.982546

AfD as a nucleus of the German right-wing movement

The AfD ...

- engages in *close contacts to far-right*

- recruits (ex-)*nazis*

- Indirect *support of violence* towards minorities:

  > "Wenn der Staat die Bürger nicht mehr schützen kann, gehen die Menschen auf die Straße und schützen sich selber."

— Tweet by Markus Frohnmaier (@Frohnmaier_AfD) on August, 26th 2018 in reaction to Chemnitz riots

Source: Fuchs, C., & Middelhoff, P. (2018, May 12). Neue Rechte - Bis in den letzten, rechten Winkel. Retrieved from https://www.zeit.de/politik/deutschland/2018-05/neue-rechte-verteilung-deutschlandkarte
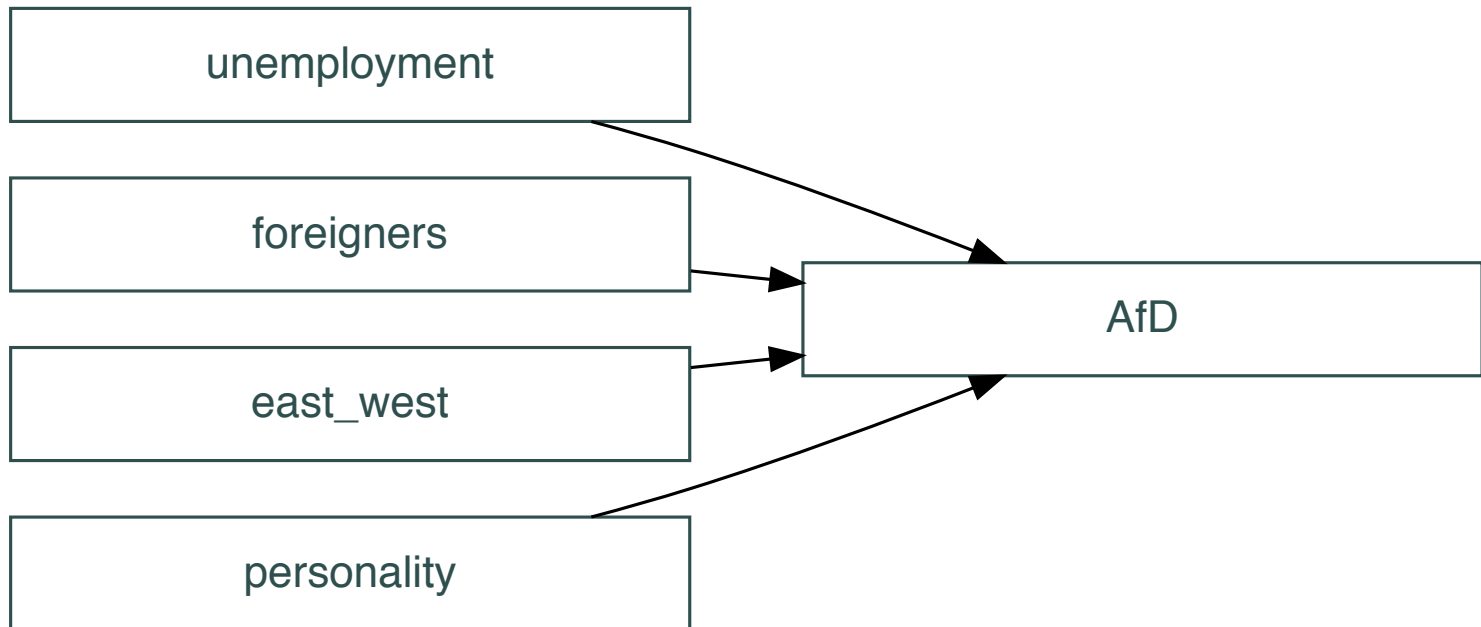
Popular theories on AfD success

Populist party support is fueled by ...

- weak economy ("rust belt hypothesis")

- high immigration ("flooding hypothesis")
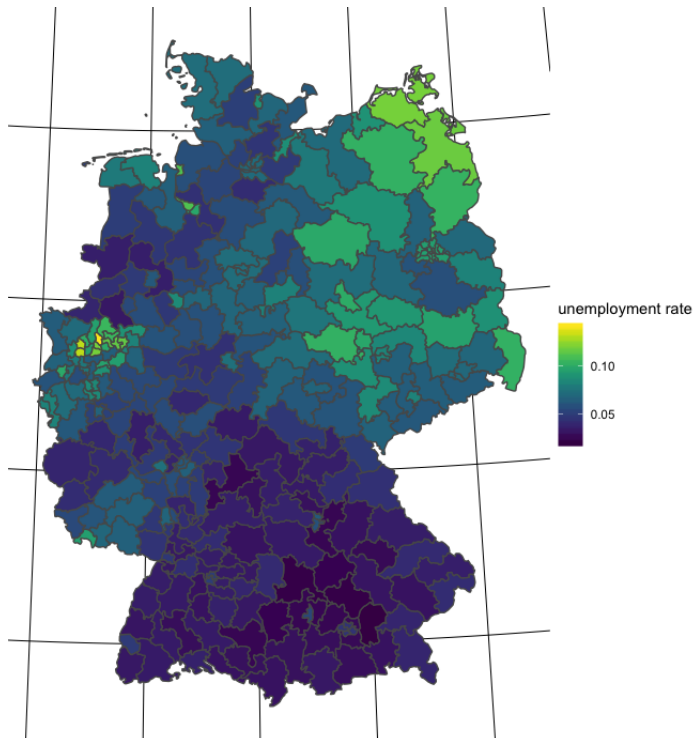
- cultural patterns ("Saxonia hypothesis")
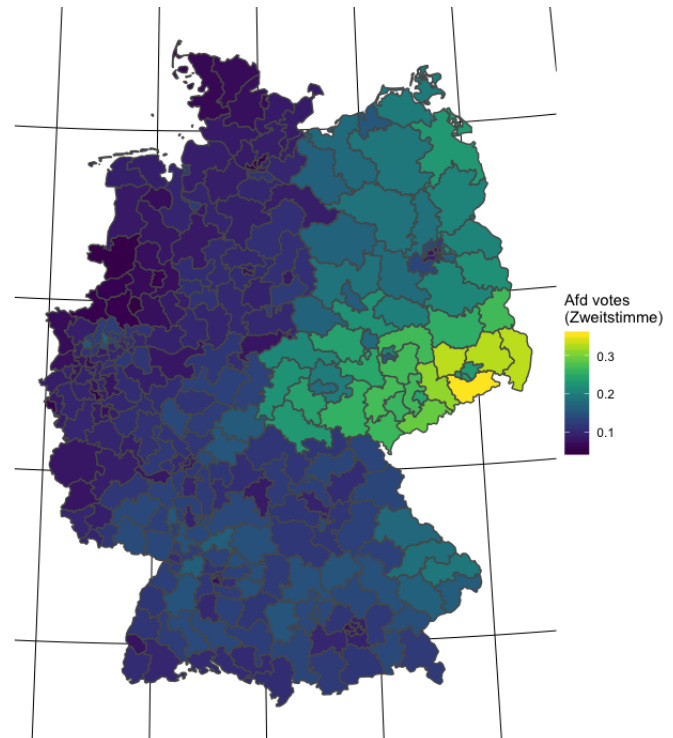
Our research model

AfD votes, and socioenomic factors at the Bundestagswahl 2017
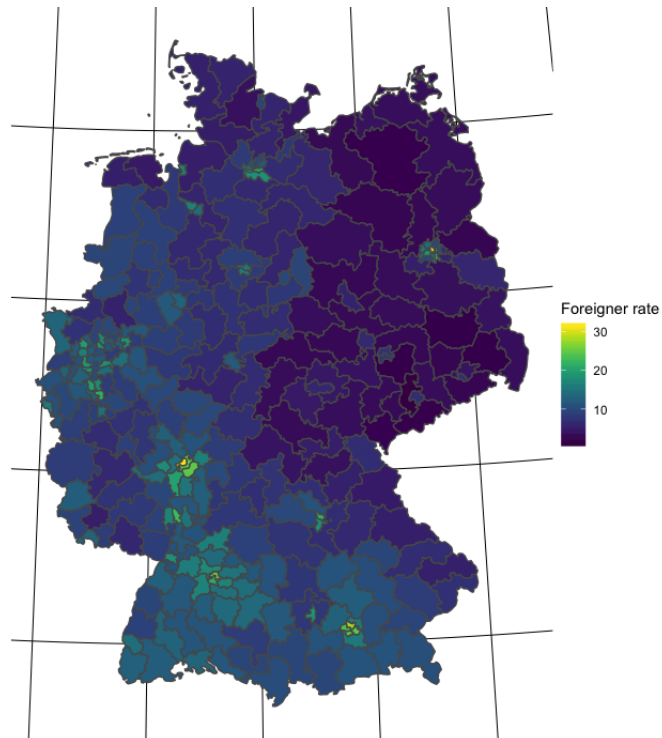
Unemployment and AfD votes

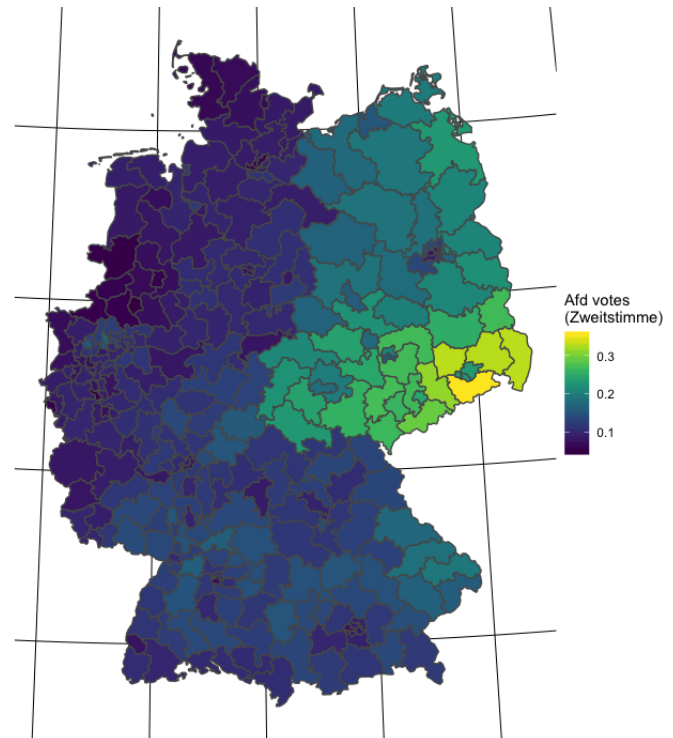Data provided by the Bundeswahlleiter 2017

Data provided by the Bundeswahlleiter 2017

Foreigners and AfD votes

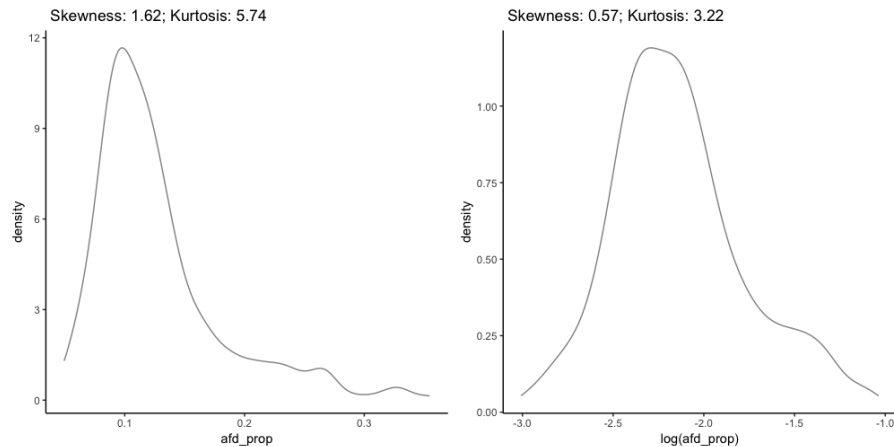Data provided by the Bundeswahlleiter 2017

Data provided by the Bundeswahlleiter 2017

data analysis

Data preparation

- Election related data were obtained from Bundeswahlleiter 2017

- Personality data (n = 22000) were collected by the authors

- Outcome variable: (proportion) was log-transformed for better approximation to normality
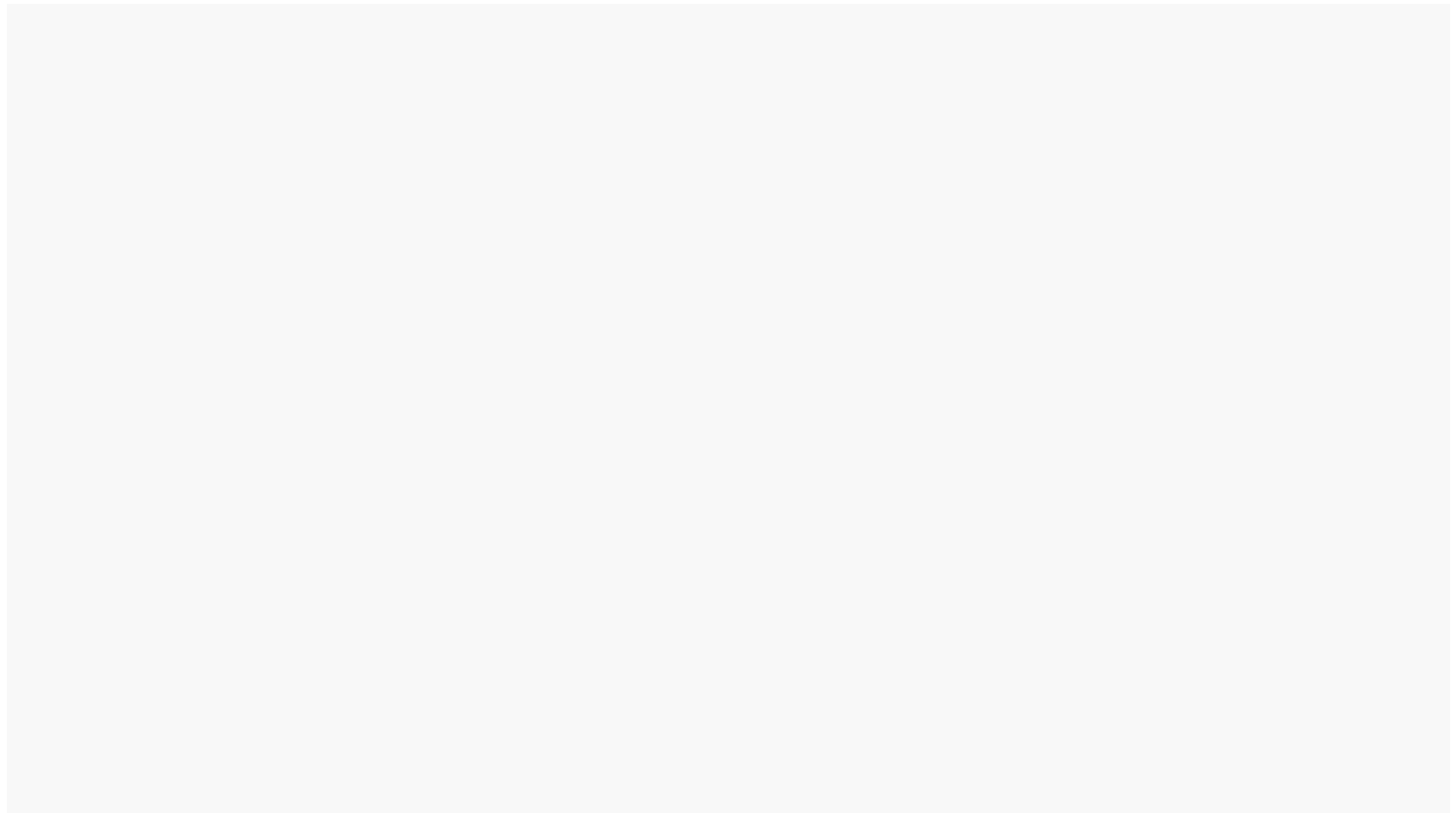
Skewness: 1.62; Kurtosis: 5.74

Skewness: 0.57; Kurtosis: 3.22

Bayes modeling

- Stan via the R packages   and

- Hamiltonian Markov Chain Monte Carlo (MCMC)

- 2000 iterations, 2 chains, 1/2 burn-in

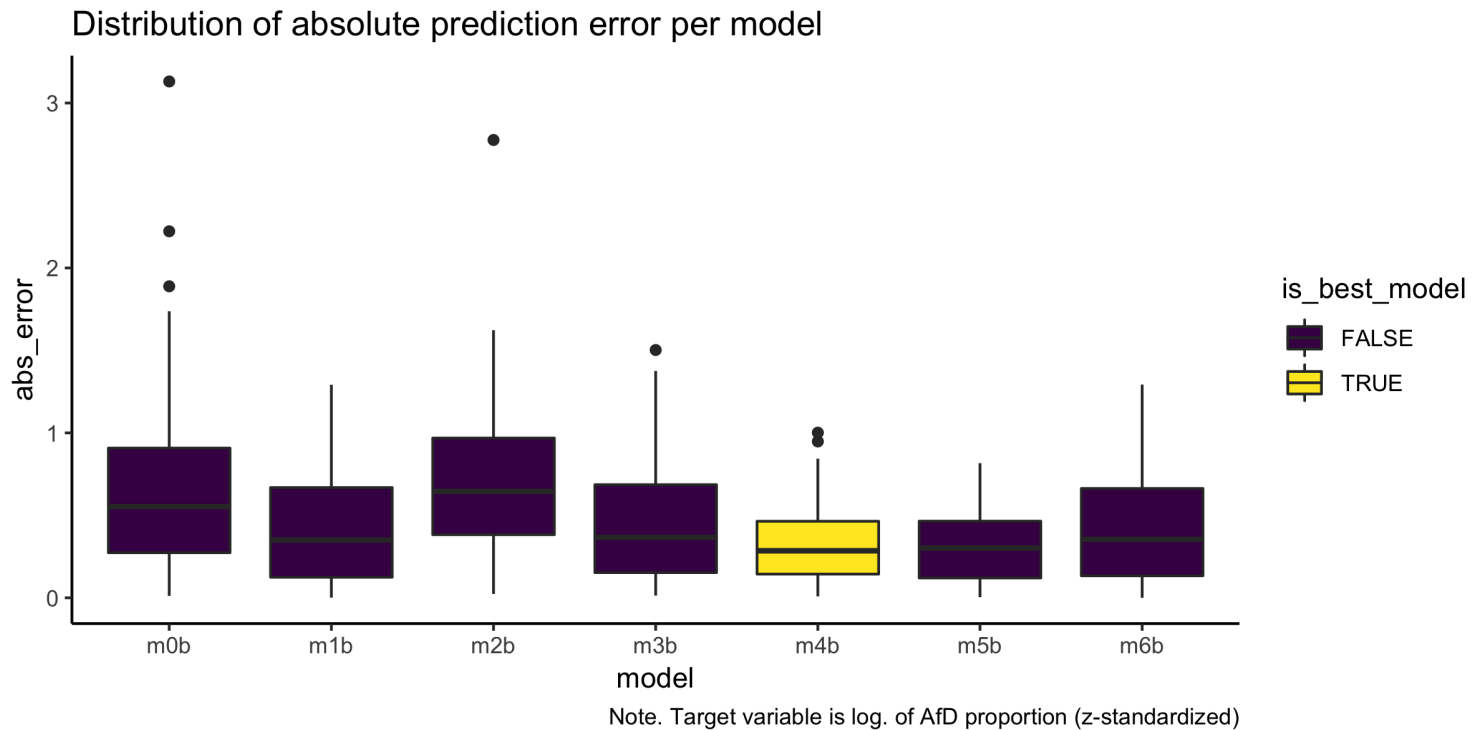- Information criteria (WAIC) were used for model comparison

Guideline: McElreath, R. (2016). Statistical rethinking. New York City, NY: Apple Academic Press Inc.

Model specification
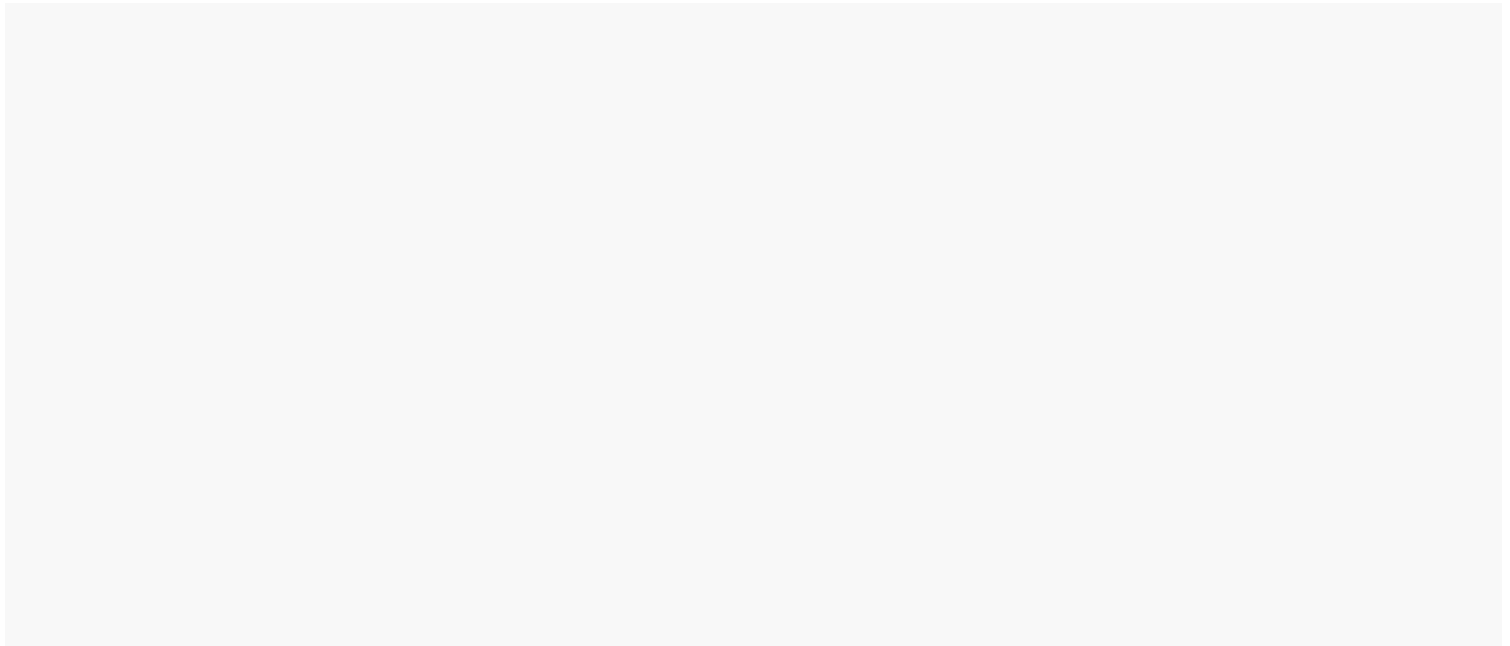
Results

Comparing model errors

Distribution of absolute prediction error per model

Note. Target variable is log. of AfD proportion (z-standardized)

No (strong) evidence of predictive power of our personality data

m5b	state (ML) + foreign + unemp + personality	108.66	15.56	10.69	0.21
m1b	east + foreign + unemp + personality	144.45	7.39	12.13	0.00
m6b	east (ML) + foreign + unemp + personality	145.04	7.58	12.00	0.00
m3b	east (ML) + foreign + unemp	153.80	4.84	12.50	0.00
m2b	east + foreign + unemp	209.29	4.72	13.54	0.00
m0b	null model	209.53	2.46	16.39	0.00

ML: Multi Level

Model specification of most favorable model

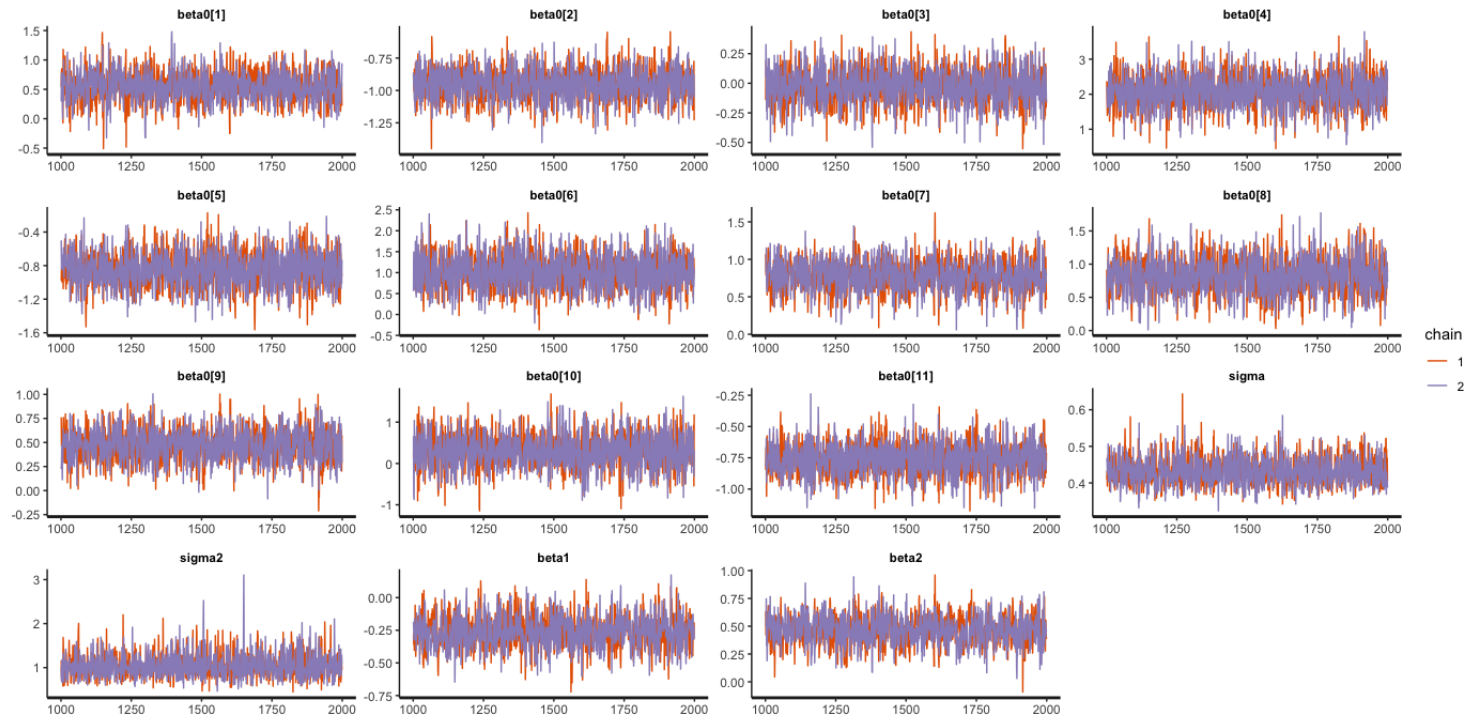predictors: state (as multi level) + foreign + unemp

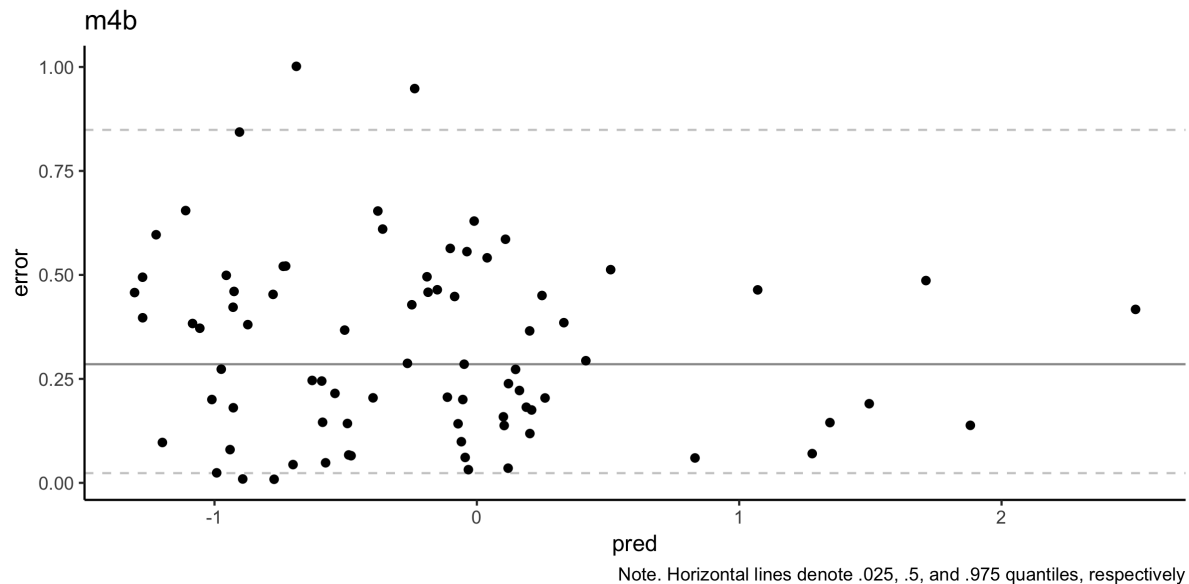# Coefficients of the most favorable model

predictors: state (as multi level) + foreign + unemp

Traceplot of most favorable model

predictors: state (as multi level) + foreign + unemp

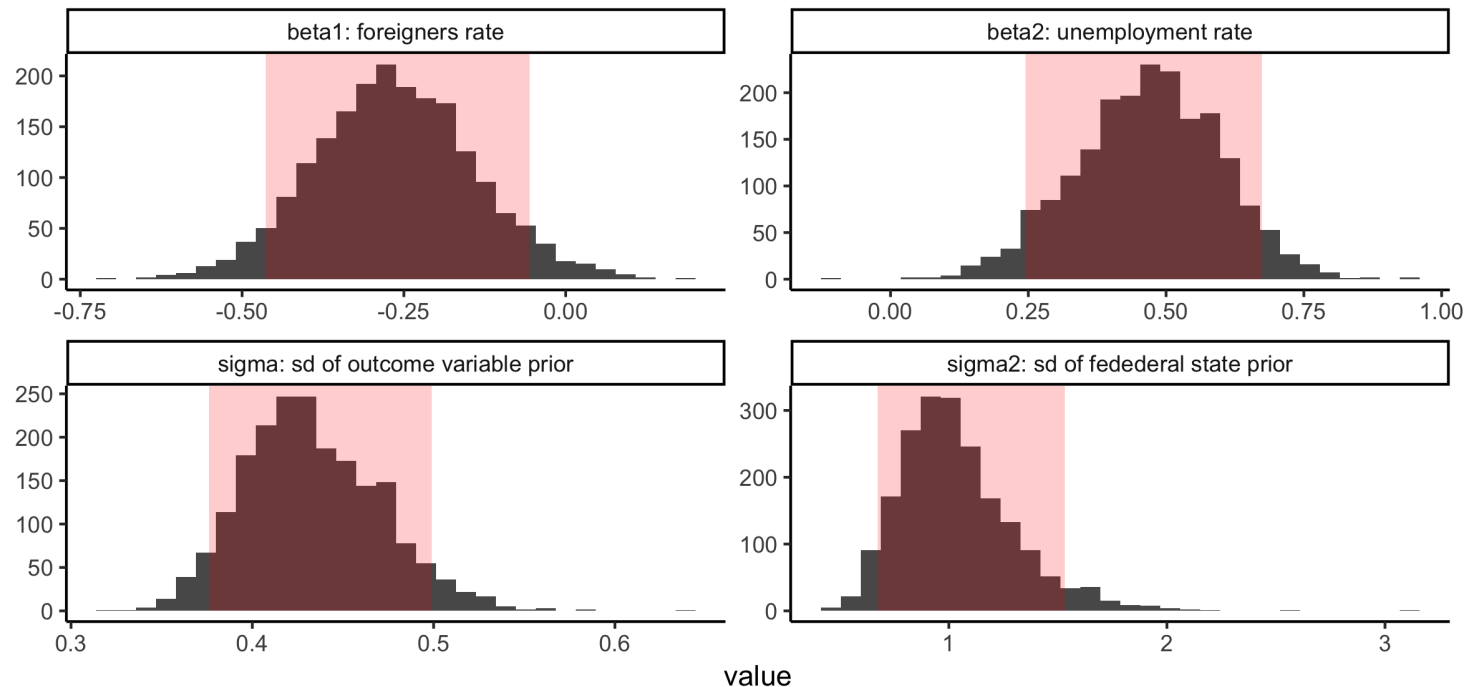# Checking model additivity assumption of best model

Note. Horizontal lines denote .025, .5, and .975 quantiles, respectively

Gelman, A., & Hill, J. (2006). Data analysis using regression and multilevel/hierarchical models. Cambridge university press.

Posterior distributions of parameters of best model
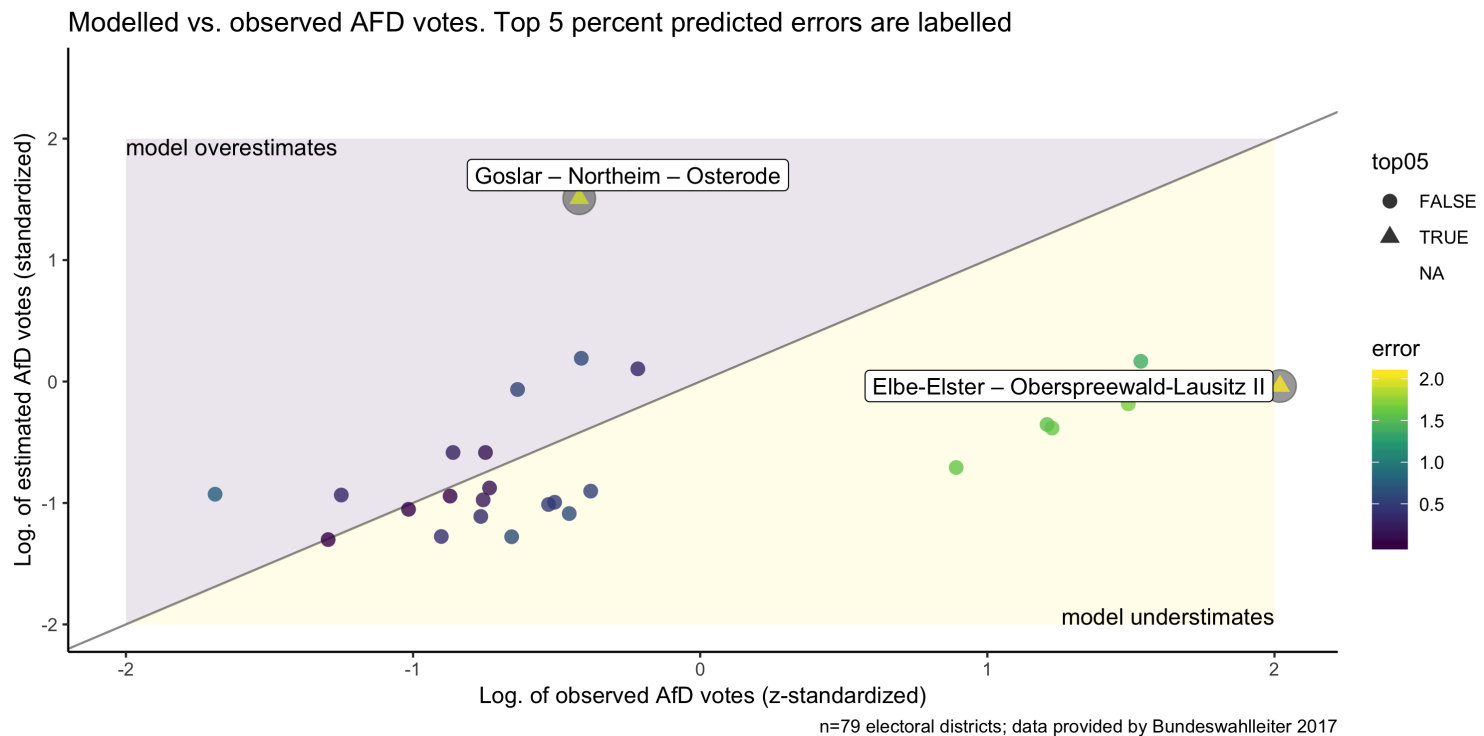
predictors: state (as multi level) + foreign + unemp
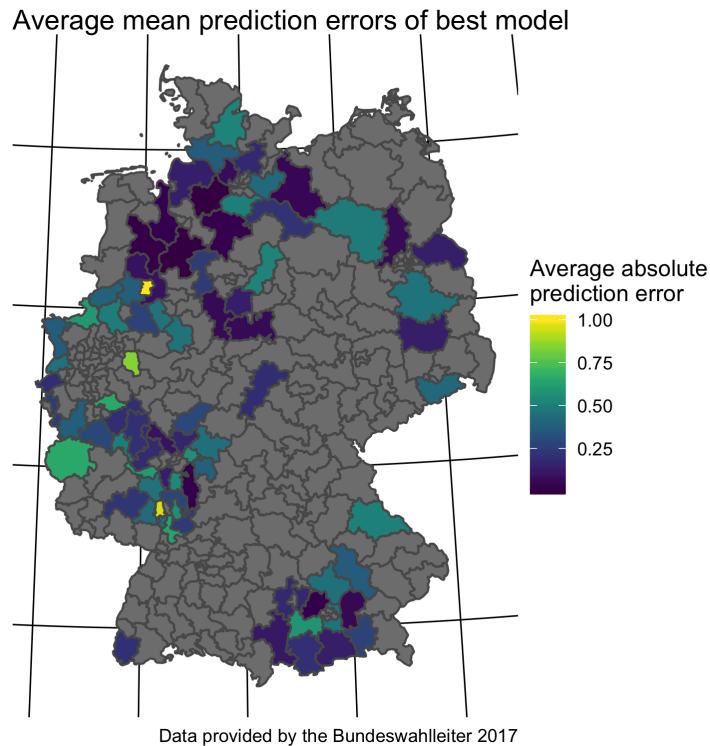

Note. Shaded areas demark 90% mass intervals

Comparing observed and estimated AfD votes (as to best model)

predictors: state (as multi level) + foreign + unemp

Modelled vs. observed AFD votes. Top 5 percent predicted errors are labelled

n=79 electoral districts; data provided by Bundeswahlleiter 2017

Regional patterns of prediction errors (as to best model)

Average mean prediction errors of best model

Average absolute prediction error

Data provided by the Bundeswahlleiter 2017

Conclusions

Theoretical implications

- *Region related patterns* appear to play an important role

    - more than unemployment rate and foreigner rate
    - not yet well understood
    - rural? aged society?

- The present model is *simplistic*

- (The proposed) personality pattern didn't show strong impact

- Personality data *representative*?

- Let's model *future elections*

- Pathways of voter behavior remains opaque

Nicole Berbuir, Marcel Lewandowsky & Jasmin Siri (2015) The AfD and its Sympathisers: Finally a Right-Wing Populist Movement in Germany?, German Politics, 24:2, 154-178, DOI: 10.1080/09644008.2014.982546

Statistical implications

- *Observational research* is a very *limited* guide for *causal* interpretations

- *Fitting issues* with *count* models warrant more investigation

- *Overfitting* may be present (and underfitting)

- *Reduced* sample size of electoral disctricts is problematic

Thank you

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