KOALA: Estimating coalition probabilities in multi-party electoral systems

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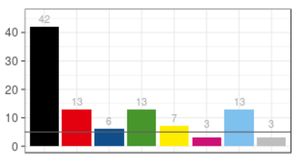
Motivation

Election poll-based reporting

What's the status quo?

Typical election poll reporting:



- ...is based on observed mean voter shares
- ...sets the focus on individual parties
- ...imparts sample uncertainty only insufficiently

Example

Reporting on Union and FDP to jointly obtain a majority before the German federal election 2013

What do we propose?

Propose:

1. Point 1
2. Point 2
3. Point 3

We want to **shift the focus** from

Incomprehensive observed party shares to Uncertainty-based event probabilities

Last pre-election opinion poll: Source: Forsa, 20.09.2013

Union	SPD	Greens	FDP	The Left	AfD	Others
40%	26%	10%	5%	9%	4%	6%

After redistribution of party votes <5%
(i.e. the minimum hurdle to pass into German parliament)
Union-FDP jointly obtain exactly 50%.

Media headline:

"Union-FDP loses its majority"

Source: FAZ.net (2017). Umfrage zur Bundestagswahl: Schwarz-Gelb verliert die Mehrheit.http://archive.is/SuXVt. Accessed 26 April 2018.

Drawbacks of this type of reporting:

Example

① Main block 1

text

② Main block 2

text

③ Implementation

KOALA

Results for selected elections are presented on koala.stat.uni-muenchen.de

The implementation is based on several points:

- Our approach is implemented in the R package coalitions
- The website is shiny-based
- The website update approach is automated
- Automatic tweets are sent in the case of new results
- For sharing our results we automatically export them to Google Sheets

④ Communicating our results

text

References

Bender, A. and Bauer, A. (2018). coalitions: Coalition probabilities in multi-party democracies. *Journal of Open Source Software*, **3(23)**, 606, https://doi.org/10.21105/joss.00606.

Gelman, A. et al. (2013). *Bayesian Data Analysis, 3rd edition*. Boca Raton, FL: CRC press.