

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 party achievements
- ... imparts sample uncertainty only insufficiently

Example

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

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.

Flaws of this type of reporting:

- Misleading conclusions are drawn
A mean share of 50% only means that it's slightly more probable that a majority is missed
- Redistribution of votes is ignored
FAZ.net bases the conclusion on the observed voter share and not on the redistributed 50% share
- FDP sample uncertainty is ignored
With a mean voter share of 5%, FDP will only pass into parliament with ~50%

What do we propose?

Good reporting should:

- ... impart findings in an easily graspable way
- ... prevent potential misunderstandings
- ... focus on the most relevant topics

We aim at **shifting the focus** from

Incomprehensive observed party shares to Uncertainty-based event probabilities

Foundations of our proposed style of reporting:

- Use event **probabilities** instead of voter shares
Probabilities comprise sample uncertainty in a natural way and are less at risk to be misinterpreted
- Use **event** probabilities instead of voter shares
Focusing on the main events allows the reader to easily grasp the big picture

Our headline:

"Union-FDP gains seat majority with 26%, FDP passes into parliament with 51%*"

* If the election was held today

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

 Shiny   

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.