

Online Appendix for “Natural Disasters and Political Participation: Evidence from the 2002 and 2013 Floods in Germany”, in: *German Politics* (2017)

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1 PLACEBO TESTS

Our estimation strategy for the Saxony federal election period 1998-2002, the Bavaria federal election period 2009-2013 and the Bavaria state election period 2008-2013 relies on the common trend assumption, which we assess with placebos from three pre-treatment periods.

In Saxony, the placebo estimation reveals that the parallel trend assumption might be violated (see Column 1 in Appendix Table A1). Analyzing the 1994-1998 turnout trend in Saxony, we find a positive and statistically significant placebo effect of 0.53 percentage points. We therefore rely on entropy weighting to ensure parallel trends. The large number of community boundary changes in 2002 and missing turnout information for absentee voters in 1994 prevents us from estimating pre-treatment trends in 2002 community boundaries. We therefore generate entropy weights based on the distribution of the 1998 treatment and control variable levels under the 2002 community boundaries.

In contrast to Saxony, the placebo analyses reveal that the assumption of a parallel trend is likely justified in Bavaria. Analyzing the 1994-1998 federal election turnout trend in Bavaria, the placebo effect of 0.09 percentage points is both substantially small and statistically insignificant. There is a caveat here, though: we were forced to choose the 1994-1998 period for the placebo test, as Bavaria experienced some flooding in 2002 and 2005 before elections which could directly or via temporal spill-overs (Bechtel and Hainmueller, 2011) be related to both turnout and our treatment indicator in placebo analyses in the immediate pre-treatment period. We nevertheless assess the parallel trend for the 2003-2008 state election and the 2005-2009 federal election periods. These tests reveal a negative pre-treatment effect (-0.80 percentage points, significant at the 5% level) for the 2005-2009 federal elections and a positive pre-treatment effect (0.61 percentage points, significant at the 5% level) for the 2003-2008 state elections. To add additional robustness to our inference, we therefore construct entropy weights in these periods such that treatment and control units are perfectly balanced on the first, second and third moments¹ of the pre-treatment and control variable distributions. Qualitatively the results of our fixed effects regressions with these weights are consistent with results using the unweighted control group.

¹For Bavaria, the treatment subgroups ‘second quartile affected’ (state election data) and ‘second and third quartile affected’ (federal election data) could only be balanced on the 2nd moment.

Table A1: Placebo Regressions on Pre-Treatment Turnout Trends (Federal Elections (FE) in Saxony and Federal and State Elections (SE) in Bavaria) for the 2002 Elbe Flood (Saxony) and the 2013 Danube Flood (Bavaria)

| | (1) | (2) | (3) | (4) |
|--------------------|----------------------------------|-------------------------|--------------------------|-------------------------|
| | Fixed Effects Regressions | | | |
| Outcome: | Saxony FE | Bavaria FE | Bavaria FE | Bavaria SE |
| Turnout (%) | 1994-98 | 1994-98 | 2005-09 | 2003-08 |
| | (mean=9.25, sd=3.26) | (mean=2.83, sd=2.15) | (mean=-6.66, sd=2.36) | (mean=0.81, sd=3.18) |
| Flood Indicator | 0.53** (0.25) | 0.09 (0.17) | -0.80*** (0.17) | 0.61** (0.25) |
| Year 1998 | 8.85*** (0.23) | 3.03*** (0.08) | | |
| Year 2009 | | | -7.63*** (0.70) | |
| Year 2008 | | | | 2.67*** (0.62) |
| Control Variables | no | no | yes | yes |
| R-squared | 0.890 | 0.674 | 0.896 | 0.134 |
| Observations | 1348 | 1938 | 1968 | 1968 |
| Clusters | 674 | 969 | 984 | 984 |

The unit of analysis is a community, the fourth and smallest administrative unit. Model 1 is estimated for Saxonian communities, models 2-4 on communities in the three south-eastern Bavarian regions with floods occurring in 2013. Models 1 and 2 are estimated in 1998 community boundaries, models 3 and 4 in 2014 community boundaries. Dependent variable is community level aggregate turnout, in model 1-2 community level aggregate turnout excluding absentee voters. All models are fixed effects regressions. The estimated constant is not shown. Models 3-4 include the following controls: logged population, p.c. community brute income, proportion of elderly citizens (i.e., age>65), proportion of employed, and the proportion of youth citizens (i.e., age<18). Estimates significant at the 0.05 (0.10, 0.01) level are marked with ** (*, ***). Columns report robust community level clustered standard errors in brackets.

2 ADDITIONAL ROBUSTNESS TESTS

To further assess the robustness of our results, we conducted a series of additional checks.

Given the indication of parallel trends through the 1994-1998 placebo, we estimated Models 2 and 3 of Table 1 and Table 2 for Bavaria with unweighted fixed-effects regressions - our main interpretation is unaffected by this modeling strategy (see Table A2). Additionally, as the Bavarian flood layer relies on satellite data that did not perfectly capture flood extent in the southernmost communities of the state, we re-estimated Models 2 and 3 of Table 1 but recoded the treatment dummy to include all communities that border an affected river within districts where disaster alarm was called. Results are unchanged with this definition of treatment (see Table A3 in the Appendix). Finally, for Bavaria, as placebo regressions give some justification for unweighted fixed-effects regressions, we estimating effects with a continuous flood indicator, which similarly leads to consistent negative effects around 0.3-0.4 percentage points for every 10 percentage points of community area flooded (see Table A4). Continuous effects have to be estimated with unweighted fixed-effects regressions as entropy weights cannot be calculated for continuous treatments (Hainmueller, 2012).

Given the community boundary changes in Saxony that required us calculate entropy weights on 1998 levels rather than 1994-1998 trends, we re-estimated the fixed effects regressions on trends (1998-2002) reported in Tables 1 and 2 without entropy weights. Moreover, we also ran a level regression for Saxony in 2002 controlling for past turnout in federal elections in 1998. The results are reported in Appendix Table A6 and are qualitatively similar to the weighted results reported in the main paper.

An additional concern relates to the voting of displaced persons: If citizens vote outside their voting district (because of flood related dislocations), this mechanically leads to an increase in turnout in unaffected (control group) communities and to a decrease in treatment group communities, which might explain our negative ATT estimates. Appendix Tables A5 and A7 provide evidence that this is unlikely to be the case. If displaced persons indeed voted outside their communities, we would expect this to occur predominately in neighbouring communities, which should result in more urn voting. For Bavaria, where we were able to gather data on community level urn voting and postal voting, urn voting turnout in communities neighbouring flooded communities is lower or equal (Appendix Table A5, column 4 and 8). For Saxony, Appendix Table A7, column 5, reports effects for an even better measure: we can assess the (cross-sectional) share of voters that voted with a ‘voting card’ that is required for out of district voting at the ballot box. Comparing Saxonian communities unaffected and those bordering affected communities, there is no evidence for an increase in ‘out of district voting’. Overall, this leads us to conclude that flood displacement did not mechanically confound our estimates. Of course, nonetheless physical dislocation might have induced stress and/or increased voting costs to an extent that explains our treatment effect.

Using the data on postal and urn voting, we can learn even more about how the floods affected participation patterns, lending additional support to our main conclusions. Appendix Table A7 reports the (cross-sectional) difference in the urn and postal voting share between flood affected and unaffected Saxonian communities: urn turnout decreases (by 1.1 percentage points), while postal turnout increases (by 0.4 percentage points). The share of postal voters increases by 0.7 percentage points (Model 4). This is an indication that large amounts of Saxonian voters stayed home, due to the disaster, and that postal voting was

used by many flood victims to cast a ballot. For Bavaria, due to the larger temporal distance between flood and election, we would not necessarily expect the same results on urn and postal voting. As indicated by Appendix Table A5, columns 1-3 (federal elections) and 5-7 (state elections), our estimations indicate that both urn voting and postal voting decreased in flood affected communities.

Finally, disruptions of electoral preparations are a potential source of our turnout effect. Were this the case, a reduction in turnout would not be due to the disaster influencing individual citizen behaviour but due to a reduction in state capacity to conduct orderly elections. We consider this unlikely. An extensive search of national and local newspapers found no reports of public discussions of electoral irregularities due to the floods. The last disaster alarms ended both in 2002 and in 2013 before the general elections,² election officers had enough time preparing polling stations. Qualitative interviews with election officials support our conclusion.³ Only in one case, an interview with an election officer from one of the most severely affected districts in Saxony 2002, it was reported that the physical process of voting was in few precincts of the districts adversely affected.⁴ On the other hand, in 2013 the time between disaster and election was sufficiently large, so that physical obstruction has not been an issue. Therefore, we deem it unlikely that the proper execution of the elections was responsible for the effects we observe. The observed negative effect is therefore likely to be behavioral rather than the result of a physical inability of flood victims to cast their ballot.

²This was in 2002 in a small part of the district Sächsische Schweiz on September 21st, 2002 (MDR, 2013) and in 2013 in the district Deggendorf in Bavaria on June 22nd, 2013 (PNP, 2013).

³Personal communication with Thomas Obst, Election Officer in the district Sächsische Schweiz-Osterzgebirge, October 13th, 2015, Berenice König, Head of the Elections Division, Statistical Office of Saxony, October 7th, 2015, with Hartwig Zorn, Department for Emergency Services and Civil Protection, Saxonian Ministry of the Interior, August 24th, 2016 and with Peter Hallermaier, Section I D 4, Bavarian Ministry of the Interior, August 24th, 2016.

⁴I.e. auxiliary polling stations had to be set up, infrastructure connecting to polling stations was still disrupted, election-related public bulletins were damaged, it cannot be ruled out that election related mailings did not reach dislocated citizens. But this concerned, at the time of the election, only small parts of affected districts. There had been no formal objections voiced.

2.1 Additional Robustness Tests for Bavaria

Table A2: Unweighted Fixed Effects Regressions for the 2013 Danube Flood

| | (1) | (2) | (3) | (4) |
|-------------------------------|----------------------|----------------------|----------------------|----------------------|
| | Bavaria FE 2009-2013 | Bavaria FE 2009-2013 | Bavaria SE 2008-2013 | Bavaria SE 2008-2013 |
| Outcome: Turnout (%) | | | | |
| Affected | -0.03 (0.16) | | -0.64*** (0.20) | |
| Area Flooded \leq 25p | | 0.22 (0.25) | | -0.40 (0.37) |
| 25p < Area Flooded \leq 50p | | 0.06 (0.30) | | -1.09*** (0.34) |
| 50p < Area Flooded \leq 75p | | 0.03 (0.43) | | -0.40 (0.43) |
| Area Flooded > 75p | | -0.42** (0.20) | | -0.66** (0.28) |
| Year 2013 | -1.20*** (0.40) | -1.18*** (0.41) | 6.06*** (0.46) | 6.06*** (0.46) |
| N | 1968 | 1968 | 1968 | 1968 |
| Clusters | 984 | 984 | 984 | 984 |
| R2 | .17 | .18 | .86 | .86 |

The unit of analysis is a community, the fourth and smallest administrative unit. The sample is restricted to the south-eastern, flood affected Bavarian districts. The regressions are estimated in the 2014 community boundaries. All models are fixed effects regressions. The estimated constant and controls are not shown. All regressions include the following controls: logged population, p.c. community brute income, proportion of elderly citizens (i.e., age>65), and the proportion of youth citizens (i.e., age<18)). Estimates significant at the 0.05 (0.10, 0.01) level are marked with ** (*, ***). Columns report robust community level clustered standard errors in brackets.

Table A3: Fixed Effects Regressions for the 2013 Danube Flood with Recoded Treatment Dummy (With Entropy Weights)

| | (1) | (2) |
|----------------------|----------------------|----------------------|
| | Bavaria FE 2009-2013 | Bavaria SE 2008-2013 |
| Outcome: Turnout (%) | | |
| Flood treatment | -0.41*** (0.15) | -0.49*** (0.18) |
| Year 2013 | -0.83 (0.65) | 6.19*** (0.64) |
| N | 1968 | 1968 |
| Clusters | 984 | 984 |
| R2 | .17 | .88 |

The treatment dummy is recoded to include all communities adjacent to a flooded river in districts with disaster alarm in 2013 additional to the flood layer communities. The unit of analysis is a community, the fourth and smallest administrative unit. The sample is restricted to the south-eastern, flood affected Bavarian districts. The regressions are estimated in the 2014 community boundaries. All models are fixed effects regressions. Models use entropy weights from 2003-2008 (SEs)/2005-2009 (FEs) placebo difference-in-difference regressions. The estimated constant and controls are not shown. All regressions include the following controls: logged population, p.c. community brute income, proportion of elderly citizens (i.e., age>65), and the proportion of youth citizens (i.e., age<18)). Estimates significant at the 0.05 (0.10, 0.01) level are marked with ** (*, ***). Columns report robust community level clustered standard errors in brackets.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A4: Fixed Effects Regressions for the 2013 Danube Flood with Continuous Treatment Indicator (Without Entropy Weights)

| | (1) | (2) |
|----------------------|----------------------|----------------------|
| | Bavaria SE 2008-2013 | Bavaria FE 2009-2013 |
| Outcome: Turnout (%) | | |
| Area Flooded | -3.28 (3.52) | -4.96*** (0.99) |
| Year 2013 | 5.94*** (0.47) | -1.15*** (0.41) |
| N | 1968 | 1968 |
| Clusters | 984 | 984 |
| R2 | .86 | .18 |

The treatment indicator is measured continuously as % of area flooded. The unit of analysis is a community, the third and smallest administrative unit. The sample is restricted to the south-eastern, flood affected Bavarian districts. The regressions are estimated in the 2014 community boundaries. All models are fixed effects regressions. All regressions include the following controls: logged population, p.c. community brute income, proportion of elderly citizens (i.e., age>65), and the proportion of youth citizens (i.e., age<18). The constant is omitted from the output. Estimates significant at the 0.05 (0.10, 0.01) level are marked with ** (*, ***). Columns report robust community level clustered standard errors in brackets.

Table A5: Regressions on the Trend in Postal Voting and Urn Voting Turnout (To) Rate and Share for the Federal and State Elections in Bavaria and the 2013 Danube Flood (With Entropy Weights)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|-----------------------|------------------------|--------------------|--------------------|----------------------|--------------------|-------------------|--------------------|--------------------|
| | Bav. Federal Elections | | | Bav. State Elections | | | | |
| | Urn To | Postal To | Postal Share | Urn To | Urn To | Postal To | Postal Share | Urn To |
| Affected community | -0.26 (0.21) | -0.10 (0.19) | 0.17 (0.25) | | -0.09 (0.21) | -0.43** (0.21) | -0.09 (0.29) | |
| Neighboring community | | | | -0.45* (0.27) | | | | 0.05 (0.30) |
| year=2013 | -5.13*** (0.78) | 4.20*** (0.58) | 6.21*** (0.77) | -4.50*** (1.42) | -3.50*** (0.83) | 9.75*** (0.58) | 11.16*** (0.87) | -3.14*** (0.98) |
| Constant | 79.77** (38.16) | 53.16** (25.31) | 89.75** (34.84) | 29.18 (34.63) | 92.72** (38.51) | -2.06 (25.08) | 9.85 (38.33) | -43.60 (34.16) |
| controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 1968 | 1968 | 1968 | 1648 | 1968 | 1968 | 1968 | 1648 |
| Clusters | 984 | 984 | 984 | 824 | 984 | 984 | 984 | 824 |
| R2 | .86 | .85 | .88 | .86 | .44 | .93 | .9 | .36 |

The unit of analysis is a community, the third and smallest administrative unit. The regressions are estimated in the 2014 community boundaries. All models are fixed effects regressions. Models include entropy weights from 2005-2009 (FE)/2003-2008 (SE) placebo difference-in-difference regressions on overall turnout. All regressions include the following controls: logged population, p.c. community brute income, proportion of elderly citizens (i.e., age>65), and the proportion of youth citizens (i.e., age<18)). Estimates significant at the 0.05 (0.10, 0.01) level are marked with ** (*, ***). Columns report robust community level clustered standard errors in brackets.

2.2 Additional Robustness Tests for Saxony

Table A6: Regressions on the 1998-2002 Federal Election Turnout Trend in Saxonia for the 2002 Elbe Flood Without Entropy Weights and on the 2002 Federal Election Turnout Controlling for 1998 Turnout Levels

| | (1) | (2) | (3) | (4) | (5) | (6) |
|-------------------------------|-------------------------------------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|
| | Turnout Trend (%) | | | | | Turnout (%) |
| | Saxony Fixed-Effects Regressions 1998-02 | | | | | Saxonia 2002 |
| | (mean=-8.47, sd=2.26) | | | | | (mean=75.04, sd=3.30) |
| Flood Indicator | -0.67*** (0.22) | | | | | -0.67*** (0.23) |
| Area Flooded \leq 25p | | -0.45 (0.33) | | | | |
| 25p < Area Flooded \leq 50p | | | -0.59* (0.32) | | | |
| 50p < Area Flooded \leq 75p | | | | -0.84** (0.33) | | |
| Area Flooded > 75p | | | | | -0.91*** (0.33) | |
| Year 2002 | -7.41*** (0.40) | -7.58*** (0.33) | -7.78*** (0.32) | -7.47*** (0.33) | -7.62*** (0.33) | |
| Turnout 1998 | | | | | | 0.85*** (0.05) |
| Control Variables | included | included | included | included | included | included |
| R-squared | 0.94 | 0.93 | 0.93 | 0.93 | 0.93 | 0.57 |
| Observations | 860 | 686 | 685 | 685 | 685 | 430 |
| Clusters | 430 | 430 | 430 | 430 | 430 | |

Note: The unit of analysis is a community, the fourth and smallest administrative unit. Columns 1-5 show results of fixed-effects regression without entropy weights with community clustered standard errors. Column 2 shows results of level regression without entropy weights controlling for turnout levels in 1998. The estimated constant and controls are not shown. All regressions include the following controls: logged population, logged brute income, logged brute tax income, proportion of elderly citizens (i.e., age>65), and the proportion of youth (i.e. aged<18). Estimates significant at the 0.05 (0.10, 0.01) level are marked with ** (*, ***).

Table A7: Regressions on Postal Voting and Urn Voting Turnout and Postal Voting Share (Federal Elections in Saxony) for the 2002 Elbe Flood (Without Weights)

| | (1) | (2) | (3) | (4) | (5) |
|---------------------------------------------|--------------------|--------------------|-------------------|---------------------------|------------------------------------|
| | Turnout(%) | Urn Turnout(%) | Postal Turnout(%) | Share of Postal Voting | Share of Out of District Voting |
| Indicator for flooded in 2002 | -0.68** (0.30) | -1.10*** (0.36) | 0.43** (0.19) | 0.66** (0.26) | |
| Indicator for neighbor of flooded community | | | | | -0.00 (0.00) |
| Constant | 75.71*** (0.22) | 68.54*** (0.26) | 7.17*** (0.14) | 9.50*** (0.19) | 0.01*** (0.00) |
| N | 535 | 535 | 535 | 535 | 250 |
| R2 | .0095 | .018 | .0096 | .012 | .0025 |

The unit of analysis is a community, the third and smallest administrative unit. The regressions are estimated in 2002 community boundaries. All models are cross-sectional OLS regressions. Estimates significant at the 0.05 (0.10, 0.01) level are marked with ** (*, ***). Columns report robust standard errors in brackets. Postal voting data is proxied by citizens applying for a ‘voting card’ necessary for postal voting and ‘out of district’ voting. ‘Out of district’ voting is measured as citizens physically voting with a voting card.

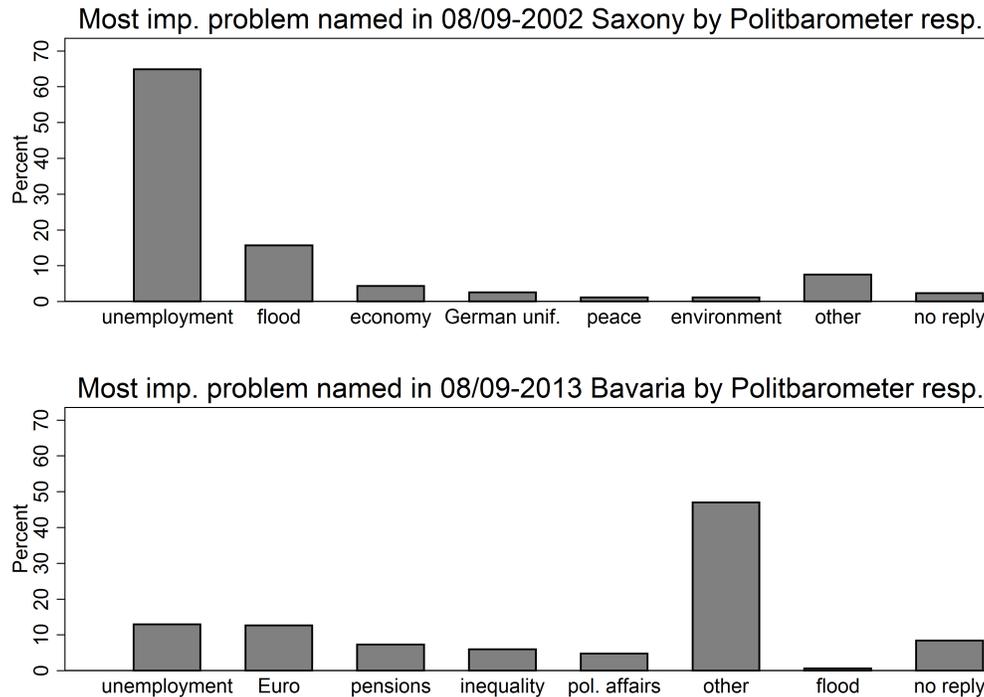
3 SUMMARY STATISTICS

Table A8: Summary Statistics of All Variables (in 2014 community boundaries)

| Variable | Median | Mean | Std. Dev. | Min | Max | N |
|-----------------------------------------------------------|--------|-------|-----------|-------|--------|------|
| Panel A: Bavaria 2008-2013 (south-eastern regions) | | | | | | |
| Area of community flooded (%) | 0 | 0.17 | 1.82 | 0 | 55.22 | 1968 |
| Flood Treatment | 0 | 0.08 | 0.27 | 0 | 1 | 1968 |
| Area Flooded \leq 25p | 0 | 0.02 | 0.14 | 0 | 1 | 1968 |
| 25p < Area Flooded \leq 50p | 0 | 0.02 | 0.14 | 0 | 1 | 1968 |
| 50p < Area Flooded \leq 75p | 0 | 0.02 | 0.14 | 0 | 1 | 1968 |
| Area Flooded > 75p | 0 | 0.02 | 0.14 | 0 | 1 | 1968 |
| Population (logged) | 8.05 | 8.15 | 0.88 | 5.47 | 14.16 | 1968 |
| Share of citizens < 18 | 21.79 | 22.47 | 5.14 | 10.50 | 34.43 | 1968 |
| Share of citizens \geq 65 | 18.29 | 18.60 | 3.27 | 8.90 | 35.79 | 1968 |
| Brute Income in Millions | 15.75 | 15.86 | 0.99 | 13.76 | 22.67 | 1968 |
| Ratio of employed to community population | 17.32 | 22.92 | 18.91 | 1.35 | 186.43 | 1968 |
| Neighboring community to flooded | 0 | 0.10 | 0.30 | 0 | 1 | 1968 |
| Panel B: Saxony 1998-2002 | | | | | | |
| Area of community flooded (%) | 0 | 1.12 | 3.94 | 0 | 37.65 | 860 |
| Flood Treatment | 0 | 0.27 | 0.44 | 0 | 1 | 860 |
| Area Flooded \leq 25p | 0 | 0.07 | 0.25 | 0 | 1 | 860 |
| 25p < Area Flooded \leq 50p | 0 | 0.07 | 0.25 | 0 | 1 | 860 |
| 50p < Area Flooded \leq 75p | 0 | 0.07 | 0.25 | 0 | 1 | 860 |
| Area Flooded > 75p | 0 | 0.07 | 0.25 | 0 | 1 | 860 |
| Population (logged) | 8.40 | 8.51 | 0.95 | 6.13 | 13.11 | 860 |
| Brute Income in Millions (logged) | 1.66 | 1.76 | 1.07 | -0.35 | 7.27 | 860 |
| Tax Income in Millions (logged) | -0.07 | 0.02 | 1.15 | -2.72 | 5.48 | 860 |
| Proportion of citizens \geq 65 | 0.18 | 0.18 | 0.03 | 0.10 | 0.27 | 860 |
| Proportion of citizens < 18 | 0.18 | 0.18 | 0.02 | 0.12 | 0.29 | 860 |
| Neighboring community to flooded | 0 | 0.10 | 0.30 | 0 | 1 | 860 |

4 ADDITIONAL DESCRIPTIVE STATISTICS ON CAMPAIGN TOPICS

Figure A1: Perceptions of most important problems in 2002 Saxony and 2013 Bavaria before the election



Note: The figure shows the distribution of replies to the question ‘What is according to your opinion currently the most important problem in Germany?’ from Politbarometer survey respondents in August and pre-election September Saxony (2002, N=844) and Bavaria (2013, N=1,252). Only the top 5 plus the flood category are displayed, the rest is accumulated to the ‘other’ category. Data is publicly available at GESIS under code ‘ZA3850’ (doi:10.4232/1.3850) for 2002 and code ‘ZA5677’ (doi:10.4232/1.12171) for 2013.

5 SUMMARY OF ALL DATA SOURCES

- Election data:
 - For the 2009-2013 Bavarian federal elections, the 2008-2013 Bavarian state elections, and the 1998-2002 Saxony federal elections our outcome measure (turnout (%)) and control variables come from the statistical offices of Bavaria⁵ and Saxony⁶, respectively.

⁵<https://www.statistikdaten.bayern.de/>

⁶<http://www.statistik.sachsen.de/>

- Data for 1994-1998 Bavaria placebo estimates come from the Federal Elections Administrator of Germany.⁷ We obtained data for 1994 and 1998 on sub-community level (polling stations). This data we aggregated to community level and, for Bavaria, connected over time with data from Destatis on community boundaries and changes therein. This was possible, as we, with few exceptions, only observe communities remaining identical or are merging in the period at hand. As in the 1990s absentee voters have only been recorded at the district level, our outcome measure for the 1994-1998 community level trend is turnout excluding absentee voters.
 - Data for 2002 urn and postal voting in Saxony was calculated from Federal Elections Administrator’s polling station data. As postal voting is only reported as aggregate for many communities and/or polling stations, we had to use voters with voting card applications (which are a prerequisite for the postal vote) as proxy for postal voting.
 - Data for 2008/9-13 urn and postal voting was provided on request from the Statistical Office of Bavaria.⁸
- Flood treatment data:
 - For Saxony 2002, we obtained the flood layer from the Saxonian State Agency for Environment, Agriculture and Geology, publicly available at <http://www.umwelt.sachsen.de/umwelt/wasser/8838.htm>.⁹
 - For the Bavarian floods in 2013, we obtained a flood layer from the company Vista Remote Sensing in Geosciences GmbH. Vista aggregated layers from several satellite pictures that captured the flood extent at the time of the flood tide.¹⁰
 - Community level shapefiles (administrative areas VG250) for different years to match flood extent and community turnout stem from the German Federal Agency for Geo-Information and Geodesy (<http://www.bkg.bund.de>).
 - Polling data:
 - Data on most important topics in Saxony/Bavaria come from Politbarometer surveys. Data is made publicly available by GESIS under code ‘ZA3850’ (doi:10.4232/1.3850) for 2002 and code ‘ZA5677’ (doi:10.4232/1.12171) for 2013.

⁷<http://www.bundeswahlleiter.de/>. The data is not publicly available but has to be purchased.

⁸<https://www.statistikdaten.bayern.de/>, many thanks to Werner Kreuzholz and Benjamin Kaiser at the agency.

⁹Many thanks to Kathrin Fischer at the agency for her support.

¹⁰We are grateful to Heike Bach from Vista for the provision of their data and to Martina Hodrius for her help in preprocessing the GIS files.

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