

## Online Appendix:

# VETOING AND INAUGURATING POLICY LIKE OTHERS DO: EVIDENCE ON SPATIAL INTERACTIONS IN VOTER INITIATIVES

Zareh Asatryan<sup>†</sup>      Annika Havlik<sup>†‡\*</sup>      Frank Streif<sup>‡</sup>

<sup>†</sup>ZEW Mannheim

<sup>‡</sup>University of Mannheim

May 23, 2017

## Appendix B: Data

- The paper uses panel data on the population of German municipalities, the sample:
  - starts in 2002 and ends in 2014
  - includes 11,000 to 13,000 municipalities every year
  - and has 155,676 observations in total
- The data includes the following sets of variables (summary statistics in the table below):
  - Town identifiers including the name and the official key (“Amtlicher Gemeindegemeinschaftsschlüssel”), and county and state identifiers
  - Data on around 3,300 initiatives and signature requirements

---

\*Corresponding author: Annika Havlik, Department for Corporate Taxation and Public Finance, ZEW Mannheim, L7 1, 68161 Mannheim, Germany, annika.havlik@gess.uni-mannheim.de.

- Fiscal data, including spending and its structure and taxes including tax rates and tax revenues
  - Socioeconomic and demographic data, including population size, population over 65 years old, unemployment, commuters, local newspaper consumption, etc.
  - Results and turnouts for federal, European and state elections
  - Other municipal characteristics, like building permits and area, including residential, industry, agriculture
- The sources of data are:
    - Statistik Lokal
    - Mehr Demokratie e.V.
    - Municipal codes
    - Arbeitsagentur
    - Falck et al. (2014)
  - The data is available for download at:  
<http://ftp.zew.de/pub/persons/ZarehAsatryan/LocalGovDataDE/>

## References

- Falck, O., Gold, R., and Heblich, S. (2014). E-lections: voting behavior and the internet. *American Economic Review*, 104(7):2238–2265.

Table: Summary statistics per variable

Variable	Label	Obs	Mean	Std.Dev.	Min	Max
year	Year	155,676	2008	3.737	2002	2014
ags	Antificher Gemeindegchlüssel (AGS), municipality ID	155,676	8.803e+06	4.364e+06	1.001e+06	1.610e+07
ags_string	Municipality ID string	—				
town	Town name	—				
state	State identifier	155,676	8.545	4.382	1	16
county_id	County ID	155,676	8803	4364	1001	16077
petitions	Amount of Bürgerbegehren	155,676	0.0212	0.161	0	6
dummy_petition	1 for at least one citizen initiative	155,676	0.0191	0.137	0	1
d_pets_traffic	dummy if at least one initiative of that topic	155,676	0.00290	0.0538	0	1
d_pets_econ	dummy if at least one initiative of that topic	155,676	0.00579	0.0759	0	1
d_pets_infra	dummy if at least one initiative of that topic	155,676	0.00859	0.0923	0	1
inh_tot	total population	155,151	6389	27939	0	1.430e+06
ln_inh_tot	Ln population size	154,922	7.450	1.500	0.693	14.17
pop_over65	Share of population over 65 years old	154,235	0.195	0.0398	0	0.800
left_share	Sum of vote shares for Gruene, SPD, Linke in federal elections	154,479	0.440	0.127	0	0.919
unempl_rate	Unemployment rate, source: Arbeitsagentur	148,252	0.0627	0.0457	0	0.476
sign_req	Signature requirement for initiating referenda in each town (% pop)	155,660	0.108	0.0228	0.00429	0.150
commuters_in	Incoming commuters	146,727	767.6	5022	0	348855
commuters_out	Outgoing commuters	148,128	761.4	2608	0	154345
circ_ph_local2008	No. local newspapers per household 2008, Source: Falck et al. 2014	136,876	32.41	14.12	0	104.4
pets_traffic	Amount of initiatives in traffic	155,630	0.00283	0.0588	0	6
pets_econ	Amount of initiatives in economy	155,630	0.00577	0.0795	0	3
pets_infra	Amount of initiatives in infrastructure	155,630	0.00886	0.1000	0	4
amount_ref_cit_lost	Amount of lost Bürgerentscheide	155,630	0.00481	0.0725	0	3
amount_ref_cit_won	Amount of won Bürgerentscheide	155,630	0.00505	0.0755	0	6
share_working_age	Share of working age population	98,106	0.626	0.0360	0.200	1
gross_revenue	in 2005 EUR	110,726	1.370e+07	9.380e+07	-1.505e+06	6.350e+09
revenue_administrative	in 2005 EUR	110,726	1.140e+07	8.090e+07	-5.267e+06	5.810e+09
revenue_admin_taxes	in 2005 EUR	110,726	5.755e+06	4.170e+07	-7.041e+06	3.420e+09
revenue_admin_transfers	in 2005 EUR	110,726	1.931e+06	1.250e+07	-388379	6.230e+08
revenue_admin_chargesfees	in 2005 EUR	110,726	1.134e+06	6.902e+06	-6.018e+06	2.810e+08
revenue_capital	in 2005 EUR	110,726	2.290e+06	1.560e+07	-1.740e+07	1.590e+09
revenue_capital_charges	in 2005 EUR	110,726	157459	835747	-1.786e+06	1.010e+08
revenue_capital_allocations	in 2005 EUR	110,726	600653	3.287e+06	-1.938e+06	2.140e+08
revenue_capital_loans	in 2005 EUR	110,725	680136	7.606e+06	-3.099e+06	8.270e+08
gross_expenditure	in 2005 EUR	110,726	1.430e+07	9.740e+07	-21564	6.350e+09

expenditure_administrative	in 2005 EUR	110,726	1.110e+07	7.710e+07	-52989	4.780e+09
expenditure_admin_personel	in 2005 EUR	110,726	3.069e+06	2.290e+07	-822898	1.720e+09
expenditure_adminoperating	in 2005 EUR	110,726	2.348e+06	1.650e+07	-164593	1.630e+09
expenditure_capital	in 2005 EUR	110,726	3.136e+06	2.290e+07	-2.387e+06	2.250e+09
expenditure_capital_loans	in 2005 EUR	110,726	708685	8.326e+06	-5.009e+06	8.270e+08
expenditure_capital_prop_inv	in 2005 EUR	110,726	1.717e+06	8.080e+06	-759519	6.820e+08
net_expenditure	in 2005 EUR	110,726	1.060e+07	7.640e+07	-8.150e+06	5.240e+09
tax_prop_a_revenue	in 2005 thousand EUR	155,462	29.58	41.51	-242.0	2206
tax_prop_b_revenue	in 2005 thousand EUR	155,462	787.0	5212	-272.4	314294
tax_business_revenue	in 2005 thousand EUR	155,462	2731	25693	-12053	2.329e+06
tax_prop_a_grundbetrag	in 2005 thousand EUR	155,462	9.892	14.01	-92.87	735.0
tax_prop_b_grundbetrag	in 2005 thousand EUR	155,462	202.7	1075	-85.66	58747
tax_business_grundbetrag	in 2005 thousand EUR	155,462	706.3	5659	-6026	475311
tax_prop_a_mult	Multiplier, %	155,159	295.6	67.60	0	1800
tax_prop_b_mult	Multiplier, %	155,150	328.4	51.43	0	900
tax_business_mult	Multiplier, %	155,117	335.7	39.97	0	900
income_tax_share	in 2005 thousand EUR	155,462	1949	10620	0	956606
sales_tax_share	in 2005 thousand EUR	155,462	259.1	2211	-321.8	144628
tax_business_revenue_transfers	in 2005 thousand EUR	155,462	511.4	4226	-4427	330025
tax_business_revenue_net	in 2005 thousand EUR	155,462	2219	21562	-10124	1.999e+06
total_taxpayers	Number of taxpayers	69,969	2670	12348	0	772222
total_income	in 2005 thousand EUR	69,961	84352	426061	0	3.250e+07
wage_income_tax_revenue	in 2005 thousand EUR	69,942	14380	84301	0	6.871e+06
permits_residential_buildings	New permits residential buildings	155,588	9.997	30.91	0	1875
permits_residential_apartments	New permits residential apartments	154,601	16.53	87.54	0	7719
permits_residential_m2	New permits residential area in 1000 square meters	148,589	1.965	8.211	0	632.8
permits_non_res_building	New permits non-residential buildings	155,562	2.428	5.943	0	491
permits_non_residential_m2	New permits non-residential area in 1000 square meters	147,435	2.409	11.62	0	984.3
completion_non_res_build	Amount of completed non-residential buildings	155,414	2.297	5.786	0	842
completion_non_residential_m2	Area of completed non-residential buildings in 1000 square meters	147,449	2.267	11.85	0	2018
completion_res_build	Amount of completed residential buildings	155,470	9.848	30.49	0	3313
completion_res_apart	Amount of completed residential apartments	154,489	15.74	83.11	0	14536
completion_residential_m2	Area of completed residential buildings in 1000 square meters	92,851	1.973	7.665	0	1083
residential_buildings	Amount of residential buildings	155,652	1451	4123	0	138692
agricultural_farms	Residential area in 1000 square meters	155,652	269.7	1090	0	54297
agricultural_area_ha	Amount of agricultural farms	72,024	41.97	56.53	0	2540
total_area_km2	Agricultural area in ha	68,042	1453	2061	0	146563
total_births	Total area in square km	155,634	29.42	35.51	0.310	632.4
	Amount of births	155,602	53.34	266.4	0	16694

births_male	Amount of male births	155,589	27.37	136.8	0	8623
births_female	Amount of female births	155,579	25.98	129.8	0	8071
total_deaths	Amount of deaths	155,601	66.77	284.5	0	11456
deaths_male	Amount of male deaths	155,574	31.66	132.6	0	5273
deaths_female	Amount of female deaths	155,576	35.12	152.1	0	6211
total_voters	Number of voters federal elections	108,371	4867	20023	0	909641
turnout	Federal elections	108,371	5.679	16.81	0	100
valid_votes	Federal elections	108,371	3475	14990	0	1.116e+06
votes_cdu_csu_share	Federal elections	99,266	0.397	0.130	0	0.957
votes_spd_share	Federal elections	99,266	0.318	0.112	0	0.880
votes_gruene_share	Federal elections	99,266	0.0597	0.0338	0	0.500
votes_fdp_share	Federal elections	99,266	0.0942	0.0417	0	0.516
votes_linke_share	Federal elections	99,266	0.0886	0.0936	0	0.564
votes_other_share	Federal elections	99,266	0.0418	0.0244	0	0.318
total_accidents	Number of accidents	141,309	33.90	154.6	0	7122
road_accidents_killed	Number of killed people in road accidents	141,592	0.373	1.028	0	40
road_accidents_injured	Number of injured people in road accidents	140,975	32.50	147.9	0	7480
total_area_ha	Total area in ha	153,890	2927	3529	31	63243
area_settlement_transport	Area used for settlement and transport in ha	153,890	380.5	808.9	0	24712
area_buildings	Area used for buildings in ha	153,890	197.0	469.7	0	14215
area_buildings_residential	Area used for residential buildings in ha	150,680	95.49	234.5	0	8487
area_buildings_firms_industry	Area used for industry buildings in ha	150,493	26.32	85.68	0	2628
area_recreational_total	Area used for recreation in ha	153,713	28.88	104.3	0	4299
area_recreational_green	Green recreational area in ha	149,688	18.59	83.54	0	3514
area_cemetery	Area used for cemeteries in ha	153,344	2.823	12.37	0	497
area_traffic	Area used for traffic in ha	153,890	145.0	234.6	0	6567
area_agricultural	Area used for agriculture in ha	153,890	1558	1906	0	34352
area_forest	Forest area in ha	153,856	864.9	1416	0	35565
area_water	Water area in ha	153,859	66.35	209.3	0	13716
area_mining	Mining area in ha	152,779	13.79	101.6	0	4819
voters_europe	Number of voters European elections	88,754	5249	20992	0	924005
turnout_europe	European elections	88,754	48.73	13.26	0	114.3
valid_votes_europe	European elections	88,754	2160	8688	0	421793
votes_cdu_csu_europe_sh	European elections	77,684	0.486	0.135	0	1
votes_spd_europe_sh	European elections	77,684	0.197	0.0955	0	0.750
votes_gruene_europe_sh	European elections	77,684	0.0803	0.0473	0	0.579
votes_fdp_europe_sh	European elections	77,684	0.0688	0.0387	0	0.435
votes_pds_europe_sh	European elections	77,684	0.0591	0.0881	0	0.510
votes_other_europe_sh	European elections	77,684	0.109	0.0500	0	0.875

tourism_facilities	Number of tourism facilities	153,112	4.395	13.83	0	431
tourism_beds	Number of beds for tourists	108,948	290.5	1146	0	58174
tourism_guest_nights	Sum of nights for all tourists	106,174	38024	192870	0	1.240e+07
tourism_guest_arrivals	Number of tourist arrivals	106,316	13451	90823	0	6.133e+06
voters.state	Number of voters state elections	101,895	4763	19480	0	917148
turnout.state	State elections	101,895	62.16	9.882	0	100
valid_votes.state	State elections	145,970	3003	12897	0	1.116e+06
votes_cdu_state_sh	State elections	90,486	0.437	0.143	0	1
votes_spd_state_sh	State elections	90,486	0.286	0.143	0	0.933
votes_gruene_state_sh	State elections	90,486	0.0561	0.0433	0	0.533
votes_fdp_state_sh	State elections	90,486	0.0700	0.0436	0	0.657
votes_pds_state_sh	State elections	78,502	0.0726	0.0957	0	0.482
votes_other_state_sh	State elections	90,486	0.0888	0.0583	0	0.613

Notes: The data is taken from the Federal Statistical Office (“Regionaldatenbank”) except for the following variables: The data on observed initiatives is available at <http://www.mehr-demokratie.de/bb-datenbank.html>. The data on the signature requirement is collected from the municipal codes. The data on unemployment is taken from the Bundesagentur für Arbeit.