Codebook: How technological change affects regional voting patterns

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Main data set: `sample.RDS`

This data set is used for the main analysis. It is structured as a panel for West German counties with yearly information between 1994 and 2017.

Variable description in detail:

Variable name	Description
`region`	County in West Germany (Kreise und kreisfreie Städte, NUTS-3). N = 324
`region_code`	Statistical identifier for each region
`state`	Bundesland
`year`	Year of observation between 1994 and 2017
`election`	Indicates which election was used for the party vote shares. This differs from years in case of state election where different election can be hold in the same year.
`election_type`	Type of election: national, European or state elections
`robot_count`	Estimated number of robots per region. Calculated as a shift-share instrument using information on industry-level information on robot adoption from IFR and regional employment shares from the IAB. See data section for more information.
`log_robots`	Measure of regional robot intensity, calculated as: log(`robot_count` / `emp.siab` * 1000)
`robots`	Non-logged measure of robot intensity, calculated as: `robot_count` / `emp.siab` * 1000
`log_robots_eu`	Estimated regional robot intensity, using industry-level robot adoption in other European country. Used for IV-regressions.
`ICT`	Estimated regional ICT capital stock per worker in 1000 euros. Calculated as a shift-share instrument using information on industry-level information on ICT capital stocks from EUKLEMS and regional employment shares from the IAB. Calculated as: ICT capital stock in region / total employment in region / 1000 See data section for more information.
`ICT_eu`	Analog to `ICT` using industry level information on ICT capital stocks from other European countries.
`greens`	Regional party vote of the green party (Bündnis 90/Die Grünen) in in percentage point
`linke`	Regional party vote of Die Linke in in percentage point
`spd`	Regional party vote of the SPD in in percentage point
`fdp`	Regional party vote of the FDP in in percentage point
`cdu_csu`	Regional party vote of the conservatives (CDU, CSU) in percentage point

Variable name	Description
greens	Regional party vote of authoritarian righ parties (AFD, DVU, Republikaner) in in percentage point
emp.siab	Total employment in the county. Estimated using IAB data: SIAB offers 2% of the universe of workers in Germany. This number is multiplied by 50.
emp.siab_manufacturing	Manufacturing employment in the county. Estimated using IAB data: SIAB offers 2% of the universe of workers in Germany. This number is multiplied by 50.
individuals.siab	Individuals from IAB data in region/year
emp_foreign	Share of foreign workers
emp_female	Share of female workers
emp_above50	Share of workers aged above 50
emp_lq	Share of workers classified as low qualified
emp_mq	Share of workers classified as mid qualified
emp_hq	Share of workers classified as high qualified
emp_edu_no	Share of workers with no formal degree
emp_edu_low	Share of workers with basic degree (Hauptschule or Realschule)
emp_edu_high	Share of workers with high degree (Abitur)

Sample for extended mechanisms section: `sample_mechanisms.RDS`

This dataset is used for Figure A.3 in the Appendix. All values are normalized to have mean 0 and a standard deviation of 1.

Variable name	Description
region	County in West Germany (Kreise und kreisfreie Städte, NUTS-3). N = 324
region_code	Statistical identifier for each region
year	Year of observation between 1994 and 2017
log_robots	Measure of regional robot intensity, calculated as: log(robot_count / emp.siab * 1000)
ICT	Estimated regional ICT capital stock per worker in 1000 euros. Calculated as a shift-share instrument using information on industry-level information on ICT capital stocks from EUKLEMS and regional employment shares from the IAB. Calculated as: ICT capital stock in region / total employment in region / 1000 See data section for more information.
population_16_64	Population between 16 and 64 years old
log_population_16_64	Log population between 16 and 64 years old
emp_rate_55_64	employment rate for population between 55 and 64
training	Share of workers in training
reintegration	Share of workers in reintegration schemes
highskill_share	Share of workers classified as high-skilled.
abitur_share	Share of population with at least university entry-level education.
average_age	Average age
median_age	Median age
birth_rate	Birth rate
share19-24	Share of workers between 19 and 24
share25_44	Share of workers between 25 and 44
share45-64	Share of workers between 45 and 64
net_inmove_total	Regional immigration - emigration

Variable name	Description
net_inmove_18-24	Regional immigration - emigration for people between 16 and 24
net_inmove_0_17_30_49	Regional immigration - emigration for people below 17 or between 30 and 49

CHES data set: sample_CHES.RDS

Data set from Chapel Hill Expert Surveys on party manifestos of German parties between 1999 and 2019, on a left vs. right dimension (lr), and a Green-Alternative-Libertarian vs. Traditional-Authoritarian-Nationalist dimension (galtan).

Variable name	Description
party	Party Name
year	Year
dim_lr	party positioning on the lr dimension
dim_galtan	party positioning on galtan dimension
dim_lr_mean	average positioning across all parties / years, weighted by seats in parliament
dim_galtan_mean	average positioning across all parties / years, weighted by seats in parliament
partycolor	Color coding of each party
label	Combined text of party + year

Individual level data from SOEP: sample_SOEP.RDS

The data consists of individal-level survey responses from respondents living in West Germany.

Variable name	Description
party	Indicates which political party is supported by respondent
sector	Indicates if respondent is employed in the “manufacturing” or “non-manufacturing” sector
year_bin	4 year bins to aggregate data
main_task	Main task of workes. Categories are “cognitive non-routine”, “cognitive routine”, “manual routine”, “manual non-routine”.
edu	Education level of respondent, based on SOEP item pgpsbil Differentiates between “high” (no degree / Hauptschule), “middle” (Realschule) and “high” (Fachhochschulreife, Abitur)