

## **Online Appendix**

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under Cooperative Federalism.**

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## Appendix A Information about the data

### Information about the investment database

Fiscal data on district-level budgets is derived from official reporting by districts to the statistical authorities in their states. The statistical offices assembled the data series used for our analysis at our request. The lowest level at which data was available was Germany's 294 *Landkreise* and 194 *Kreisfreie Städte*. As shown in Table A.1, some statistical offices were able to deliver data from 1991 to 2018; others were only able to deliver data starting in the mid-1990s. Moreover, gaps in the data series may derive from incomplete reporting by districts to statistical offices or states' failures to maintain or provide comprehensive data for their districts.

Table A.1 Coverage of our data for municipal-level investment by state

| State                  | Data coverage          | Note   |
|------------------------|------------------------|--|
| Baden-Württemberg      | 1991–2018              |  |
| Bavaria                | 1991–2018              |  |
| Brandenburg            | 1993–2006<br>2012–2018 | Data for 2007–2011 could not be delivered due to changes in the accounting system. |
| Hesse                  | 1991–2018              |  |
| Mecklenburg-Vorpommern | 1996–2018              |  |
| Lower Saxony           | 1991–2018              |  |
| North Rhine-Westphalia | 1991–2018              |  |
| Rhineland-Palatinate   | 1991–2018              |  |
| Saarland               | 1992–2006<br>2012–2018 | Data for 2007–2011 could not be delivered due to changes in the accounting system. |
| Saxony                 | 1992–2018              |  |
| Saxony-Anhalt          | 1995–2018              |  |
| Schleswig-Holstein     | 1992–2018              |  |
| Thuringia              | 1995–2018              |  |

We made two adjustments to the fiscal data: First, since many states changed the prescribed accounting systems from cameralism to double-entry bookkeeping (usually in the late 2000s), we had to deal with different ways in which districts report their budgets. While these changes led to gaps in our data, we worked with the statistical agencies and carefully merged the different categories to create continuous time series for the most important variables. Secondly, we had to account for district reforms, which usually involved mergers between previously separated districts. These district reforms were especially prominent in Eastern Germany in the late 1990s and mid-2000s after reunification. To maintain continuity in our units of observation, we took the most recent list of districts from 2018 and applied this list to all previous years for which we collected data.

Our data only contains information on the districts' core budgets. We could not account for public investments by publicly owned entities with independent legal status that report separate budgets.

## Information about the political database

The election data was coded based on the *Kommunales Wahlllexikon*, a local election encyclopedia issued annually by the Konrad-Adenauer-Stiftung. Table 1 includes a detailed list of all the states and number of districts included in the study. In general, the name, the year of election, the party affiliation, the term of office, and the number of needed ballots were coded. Regarding the party affiliation, voter associations that compete in state-level and local elections are subsumed under “regional voter associations.”

The number of elections under consideration in the study is affected by changes in the procedural rules for the election of local administrators. Mecklenburg-Vorpommern, Lower Saxony, Rhineland-Palatinate, and Schleswig-Holstein switched during or shortly before the period from indirect elections (local district council elects head of administration) to direct elections. Therefore, the election year is not uniform but may vary within these states. In Baden-Württemberg and Brandenburg, the local administrator is not elected directly. Hence, only information about name, party affiliation, and election year is available for districts in these two states. Generally, years for which no investment data is available were excluded from coding (see Table 1).

A special case is district reforms that affect the population eligible to vote. Major district reforms took place in Saxony-Anhalt 2007, Saxony 2008, and Mecklenburg-Vorpommern 2011. There are three possible scenarios: dissolution into several other districts, inclusion in one other district, and merging into a new one. First, districts that were dissolved and divided into more than one other district are not coded. However, the districts that absorbed small parts of dissolved districts are included. Second, wherever one district became entirely part of an existing district, both the included and the existing district are not coded. Finally, wherever two districts were merged into a completely new one, only the new district is coded from the year of its formation onwards. The two original districts that were merged are not coded.

Table A.2 Coverage of our data for local executive elections by state

| State                  | N     | Number of districts | Data coverage          | Note  |
|------------------------|-------|---------------------|------------------------|---|
| Baden-Württemberg      | 873   | 44                  | 1999–2018              |   |
| Bavaria                | 1,914 | 99                  | 1999–2018              |   |
| Brandenburg            | 249   | 18                  | 1999–2006<br>2013–2018 | Elections not coded from 2007 to 2012 as no investment data available |
| Hesse                  | 519   | 26                  | 1999–2018              |   |
| Mecklenburg-Vorpommern | 81    | 8                   | 1999–2009<br>2011–2018 | District reform in 2011   |
| Lower Saxony           | 887   | 45                  | 1999–2018              |   |
| North Rhine-Westphalia | 1,034 | 53                  | 1999–2018              |   |
| Rhineland-Palatinate   | 697   | 36                  | 1999–2018              |   |
| Saarland               | 83    | 6                   | 1999–2006<br>2013–2018 | Elections not coded from 2007 to 2012 as no investment data available |
| Saxony                 | 170   | 13                  | 1999–2018              |   |
| Saxony-Anhalt          | 216   | 14                  | 1999–2018              |   |
| Schleswig-Holstein     | 298   | 15                  | 1999–2018              |   |
| Thuringia              | 459   | 23                  | 1999–2018              |   |

Table A.3 List of key variables used in the regression analysis

| Variable  | Coding   | Source                        |
|---|--|-------------------------------|
| Dependent variable                                |  |                               |
| 1 Investment (pc)                                 | Sum of all investment purposes in EUR, divided by population   | State statistical agencies    |
| Independent variables                             |  |                               |
| 1 lag(Investment (pc))                            | Lagged version of Investment (pc)  | State statistical agencies    |
| 2 Business tax revenue (pc)                       | Revenues from the local business tax in EUR, divided by population   | State statistical agencies    |
| 3 Liquidity loans (pc)                            | Liquidity loans in EUR, divided by population  | State statistical agencies    |
| 4 Administrative capacity (per 1,000 capita)      | Number of technical personnel employed in local administration, divided by population times 1,000                                  | State statistical agencies    |
| 5 Party: Left (ref.: Right)                       | 0 = district administrator belonging to a right-wing party<br>1 = district administrator belonging to a left-wing party            | <i>Kommunales Wahllexikon</i> |
| 6 Party: Regional voter association (ref.: Right) | 0 = district administrator belonging to a right-wing party<br>1 = district administrator belonging to a regional voter association | <i>Kommunales Wahllexikon</i> |
| Control variables                                 |  |                               |
| 1 Investment subsidies (pc)                       | Federal and state investment subsidies in EUR, divided by population   | Local statistical agencies    |
| 2 Social security exp. (pc)                       | Social security expenditures in EUR, divided by population   | Local statistical agencies    |
| 3 Unemployment (change)                           | Annual change in the unemployment rate as share of the labor force   | Federal Statistical Office    |
| 4 GDP (pc)  | Gross domestic product in Thousand EUR, divided by population  | Federal Statistical Office    |
| 5 Net migration (per 1,000 capita)                | Out-migration subtracted from in-migration, divided by population times 1,000  | <i>INKAR online</i>           |

Table A.4 Summary statistics

| Statistic                                  | N     | Mean    | St. Dev. | Min     | Max       |
|--|-------|---------|----------|---------|-----------|
| Investment (pc)                            | 7,784 | 321.998 | 153.187  | 0.000   | 2,243.076 |
| Business tax rev. (pc)                     | 7,784 | 315.951 | 224.790  | -64.243 | 2,985.287 |
| Liquidity loans (pc)                       | 7,373 | 404.307 | 875.424  | 0.000   | 8,363.025 |
| Admin. capacity (per 1,000 capita)         | 7,352 | 1.308   | 0.498    | 0.000   | 5.083     |
| Party: Left (ref.: right)                  | 7,544 | 0.327   | 0.469    | 0.000   | 1.000     |
| Party: Regional voter assoc. (ref.: right) | 7,544 | 0.140   | 0.347    | 0.000   | 1.000     |
| Investment subsidies (pc)                  | 7,784 | 123.304 | 76.199   | -5.511  | 754.429   |
| Social security exp. (pc)                  | 7,762 | 368.154 | 259.171  | 0.003   | 1,799.417 |
| GDP (pc)                                   | 7,763 | 29.290  | 13.630   | 8.442   | 182.128   |
| Unemployment (change)                      | 7,749 | -0.066  | 3.022    | -16.687 | 14.506    |
| Net migration (per 1,000 capita)           | 7,369 | 2.718   | 6.285    | -40.600 | 59.300    |

## Appendix B Additional results

Figure B.1 Investment by year

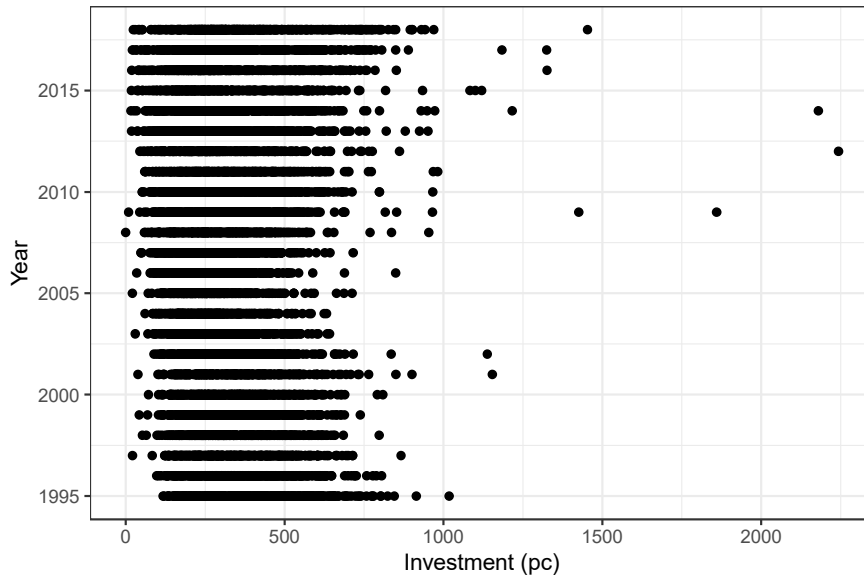


Figure B.2 Investment by state

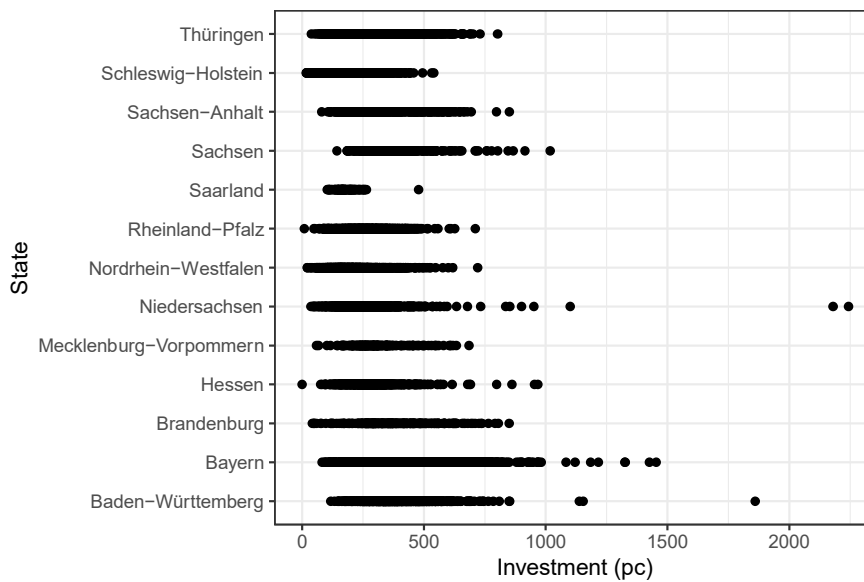


Figure B.3 Interaction effect of liquidity loans and left party

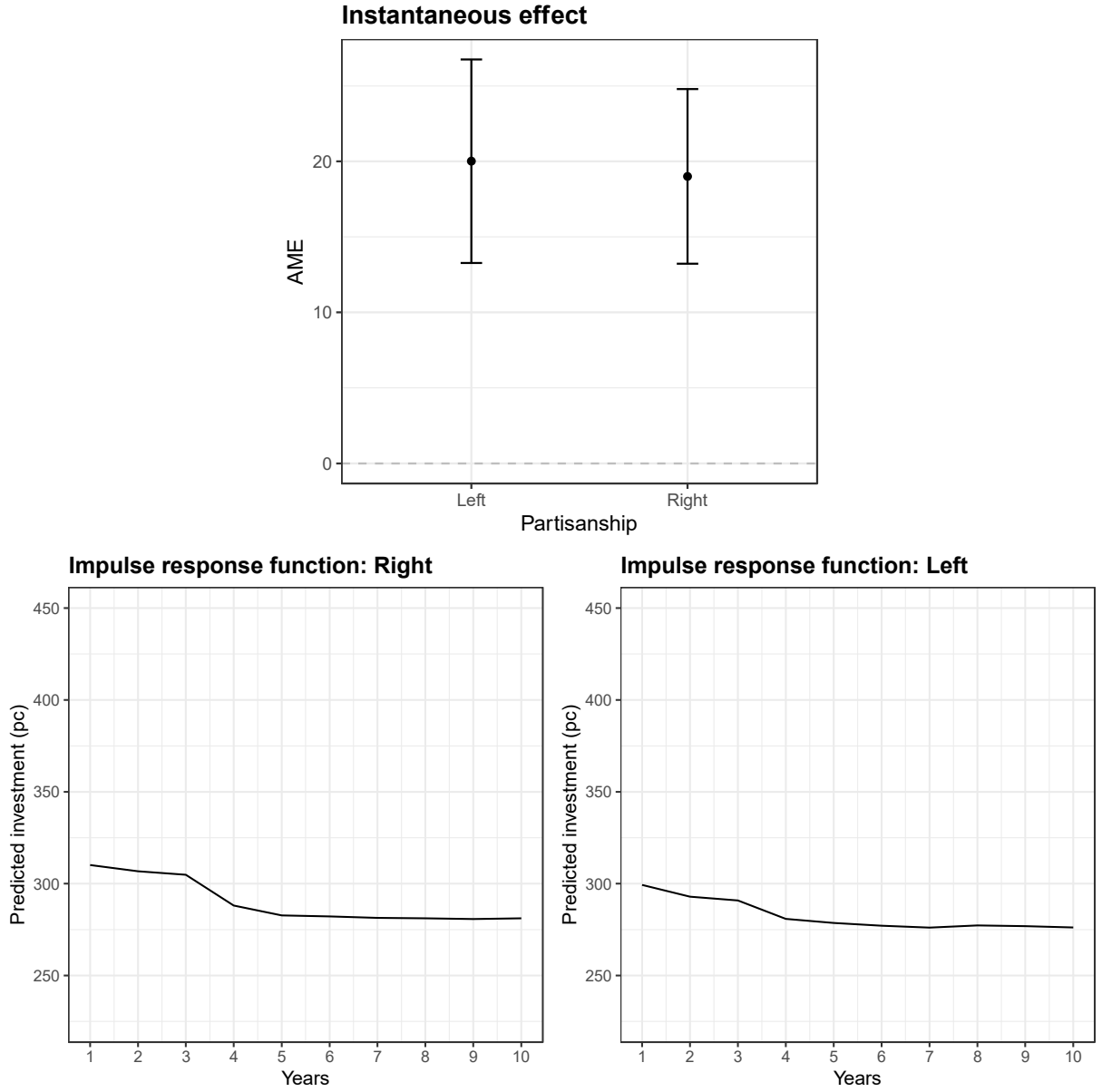




Figure B.4 Interaction effect of administrative capacity and left party

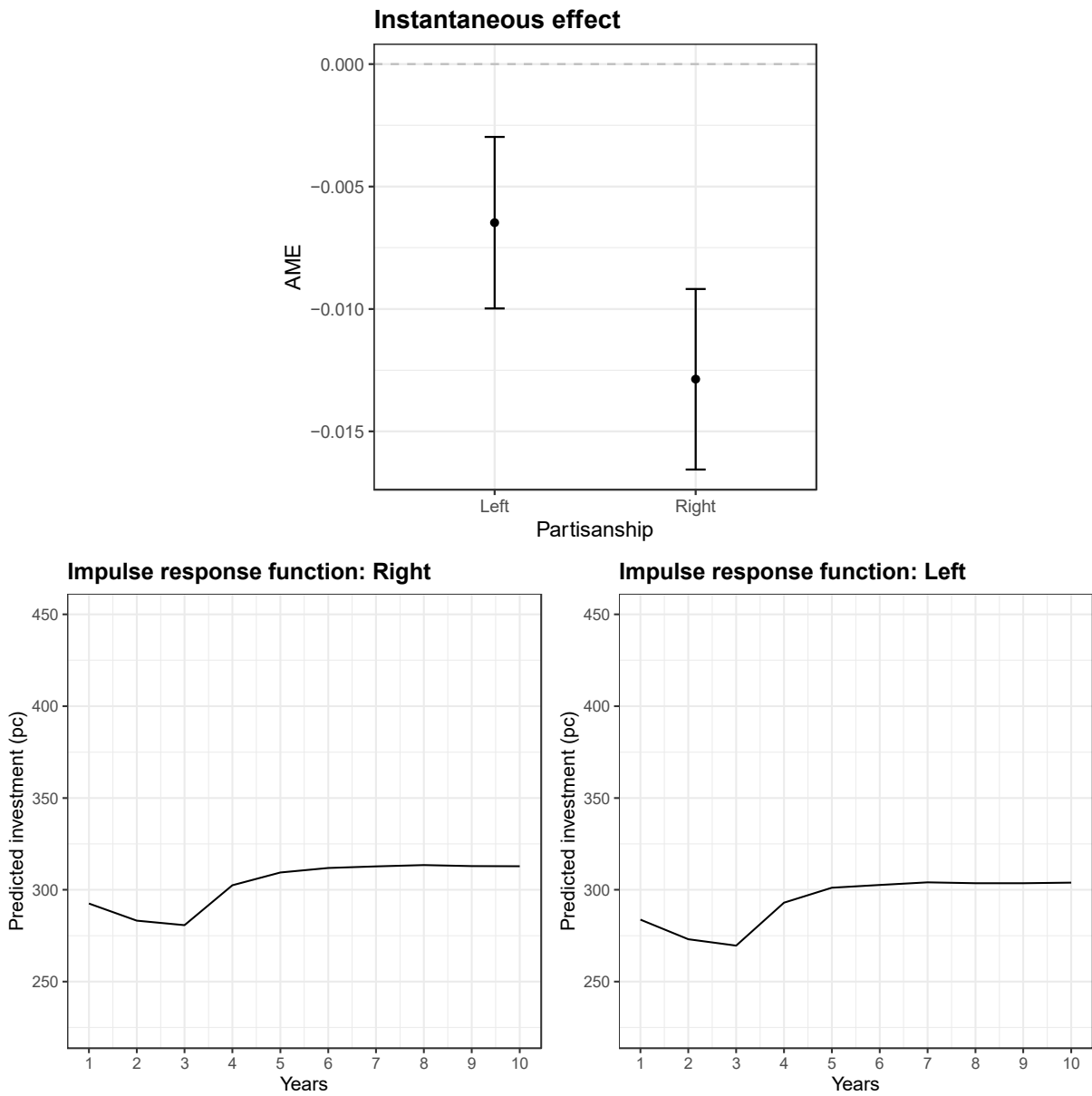
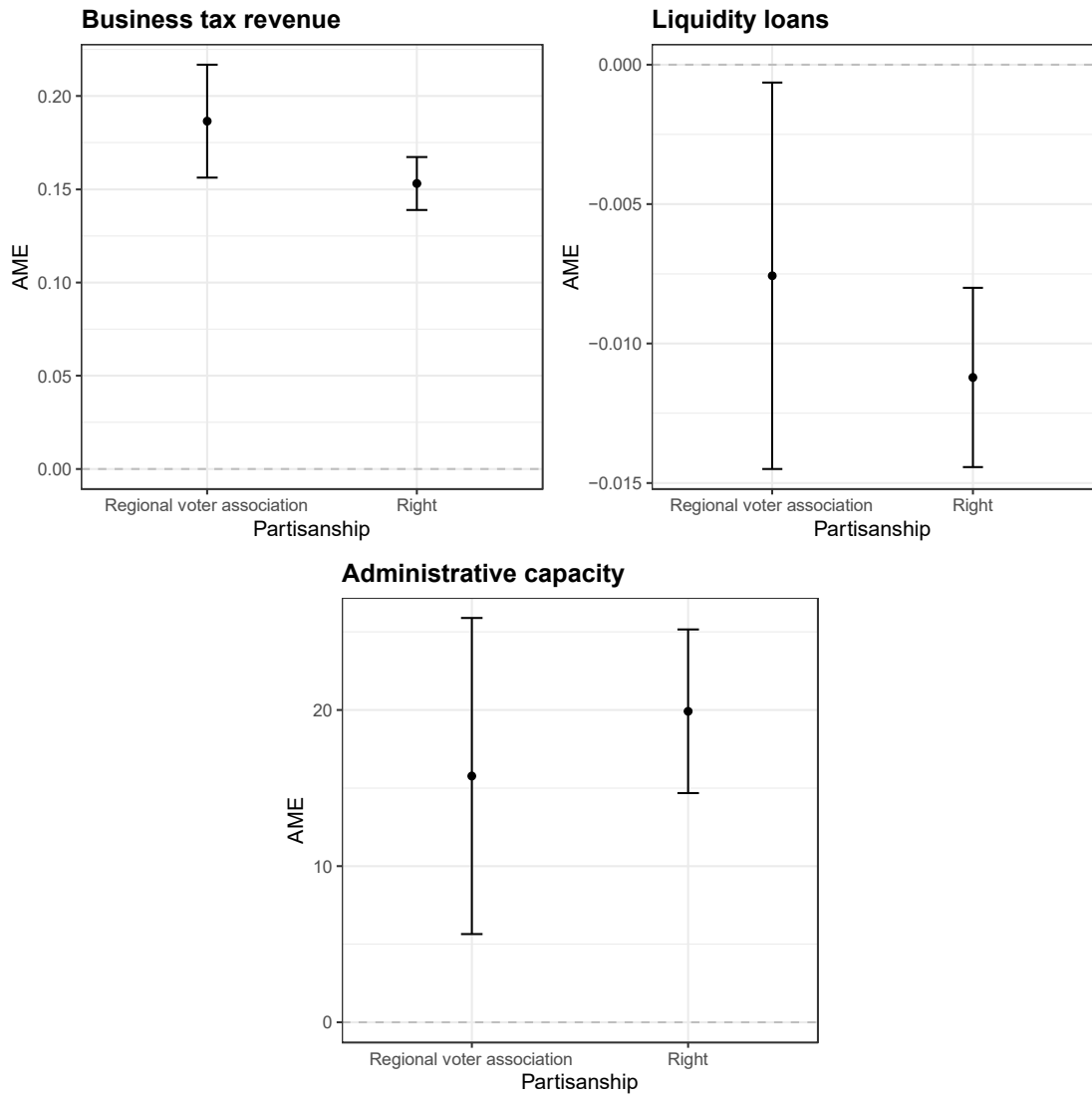


Figure B.5 Instantaneous interaction effects for regional voter association



## Appendix C Robustness tests

Table C.1 Replicating Table 1 with pooled OLS models (i.e., no fixed-effects)

|  | <i>Dependent variable: Investment (per capita)</i> |                                 |                                 |
|--|--|---------------------------------|---------------------------------|
|  | (1)  | (2)                             | (3)                             |
| lag(Investment (per capita))                 | 0.732***<br>(0.008)                                | 0.722***<br>(0.009)             | 0.715***<br>(0.009)             |
| Business tax revenue (per capita)            | 0.113***<br>(0.008)                                | 0.119***<br>(0.008)             | 0.091***<br>(0.010)             |
| Liquidity loans (per capita)                 | -0.009***<br>(0.001)                               | -0.008***<br>(0.001)            | -0.008***<br>(0.001)            |
| Admin. capacity (per 1,000 capita)           | -5.453**<br>(1.951)                                | -3.479<br>(2.207)               | -3.879<br>(2.203)               |
| Party: Left (ref.: right)                    |  | -12.230***<br>(2.370)           | -26.031***<br>(3.920)           |
| Party: Regional voter assoc. (ref.: right)   |  | 2.753<br>(3.148)                | -22.834***<br>(6.201)           |
| Investment subsidies (per capita)            | 0.290***<br>(0.016)                                | 0.304***<br>(0.017)             | 0.310***<br>(0.017)             |
| Social security expenditure (per capita)     | -0.059***<br>(0.005)                               | -0.053***<br>(0.005)            | -0.055***<br>(0.005)            |
| GDP (per capita)                             | -0.192<br>(0.126)                                  | -0.253<br>(0.135)               | -0.182<br>(0.136)               |
| Unemployment (change)                        | 0.799*<br>(0.346)                                  | 0.766*<br>(0.370)               | 0.740*<br>(0.369)               |
| Net migration (per 1,000 capita)             | 0.947***<br>(0.163)                                | 0.820***<br>(0.183)             | 0.804***<br>(0.183)             |
| Business tax revenue x left                  |  |                                 | 0.042***<br>(0.009)             |
| Business tax revenue x regional voter assoc. |  |                                 | 0.088***<br>(0.019)             |
| Constant                                     | 50.172***<br>(4.210)                               | 51.797***<br>(4.618)            | 61.058***<br>(4.914)            |
| Observations                                 | 7,263  | 6,394                           | 6,394                           |
| R <sup>2</sup>                               | 0.719  | 0.707                           | 0.709                           |
| Adjusted R <sup>2</sup>                      | 0.719  | 0.707                           | 0.708                           |
| Residual Std. Error                          | 80.675 (df = 7253)                                 | 82.866 (df = 6382)              | 82.669 (df = 6380)              |
| F Statistic                                  | 2,065.226***<br>(df = 9; 7253)                     | 1,402.793***<br>(df = 11; 6382) | 1,195.171***<br>(df = 13; 6380) |

Note: \*p<0.05; \*\*p<0.01; \*\*\*p<0.001.

Table C.2 Replicating Table 1 with models that only include unit-fixed effects

|  | <i>Dependent variable: Investment (per capita)</i> |                               |                               |
|--|--|-------------------------------|-------------------------------|
|  | (1)  | (2)                           | (3)                           |
| lag(Investment (per capita))               | 0.392***<br>(0.010)                                | 0.354***<br>(0.011)           | 0.353***<br>(0.011)           |
| Business tax revenue (per capita)          | 0.140***<br>(0.009)                                | 0.143***<br>(0.010)           | 0.115***<br>(0.011)           |
| Liquidity loans (per capita)               | -0.012***<br>(0.002)                               | -0.014***<br>(0.002)          | -0.014***<br>(0.002)          |
| Admin. capacity (per 1,000 capita)         | 19.711***<br>(3.178)                               | 21.530***<br>(3.644)          | 21.003***<br>(3.643)          |
| Party: Left (ref.: right)                  |  | -6.541<br>(3.501)             | -21.828***<br>(5.017)         |
| Party: Regional voter assoc. (ref.: right) |  | -2.647<br>(4.440)             | -13.266<br>(7.539)            |
| Investment subsidies (per capita)          | 0.711***<br>(0.021)                                | 0.747***<br>(0.023)           | 0.754***<br>(0.024)           |
| Social security expenditure (per capita)   | 0.020**<br>(0.007)                                 | 0.022**<br>(0.007)            | 0.021**<br>(0.007)            |
| GDP (per capita)                           | -0.108<br>(0.213)                                  | 0.379<br>(0.248)              | 0.397<br>(0.247)              |
| Unemployment (change)                      | 0.573<br>(0.305)                                   | 0.606<br>(0.326)              | 0.594<br>(0.325)              |
| Net migration (per 1,000 capita)           | 0.512**<br>(0.177)                                 | 0.402*<br>(0.200)             | 0.395*<br>(0.199)             |
| Business tax revenue x left                |  |                               | 0.045***<br>(0.011)           |
| Business tax rev. x regional voter assoc.  |  |                               | 0.037<br>(0.022)              |
| Constant                                   | -11.050<br>(18.528)                                | -22.257<br>(19.474)           | -15.452<br>(19.514)           |
| Observations                               | 7,263  | 6,394                         | 6,394                         |
| R <sup>2</sup>                             | 0.794  | 0.789                         | 0.789                         |
| Adjusted R <sup>2</sup>                    | 0.782  | 0.775                         | 0.776                         |
| Residual Std. Error                        | 71.030 (df = 6871)                                 | 72.614 (df = 6000)            | 72.514 (df = 5998)            |
| F Statistic                                | 67.680***<br>(df = 391; 6871)                      | 57.016***<br>(df = 393; 6000) | 56.930***<br>(df = 395; 5998) |

Note: All models include unit-fixed effects, which are omitted from the table; \*p<0.05; \*\*p<0.01; \*\*\*p<0.001.

Table C.3 Replicating Table 1 with GMM models (Arellano–Bond estimator)

|  | <i>Dependent variable: Investment (per capita)</i> |                     |                       |
|--|--|---------------------|-----------------------|
|  | (1)  | (2)                 | (3)                   |
| lag(Investment (per capita)                  | 0.221***<br>(0.004)                                | 0.224***<br>(0.004) | 0.224***<br>(0.004)   |
| Business tax revenue (per capita)            | 0.169***<br>(0.002)                                | 0.171***<br>(0.002) | 0.123***<br>(0.003)   |
| Liquidity loans (per capita)                 | 0.023***<br>(0.001)                                | 0.023***<br>(0.001) | 0.022***<br>(0.001)   |
| Admin. capacity (per 1,000 capita)           | 10.663***<br>(2.942)                               | 7.743*<br>(3.023)   | 7.784**<br>(3.002)    |
| Party: Left (ref.: right)                    |  | -6.651**<br>(2.250) | -35.778***<br>(3.513) |
| Party: Regional voter assoc (ref.:right)     |  | 1.042<br>(3.063)    | -7.075<br>(4.924)     |
| Investment subsidies (per capita)            | 0.818***<br>(0.004)                                | 0.814***<br>(0.004) | 0.816***<br>(0.004)   |
| Social security expenditure (per capita)     | -0.005<br>(0.004)                                  | -0.007<br>(0.004)   | -0.016***<br>(0.003)  |
| GDP (per capita)                             | 0.655***<br>(0.084)                                | 0.856***<br>(0.092) | 0.893***<br>(0.092)   |
| Unemployment (change)                        | -0.775**<br>(0.269)                                | -0.839**<br>(0.273) | -1.035***<br>(0.275)  |
| Business tax revenue x left                  |  |                     | 0.081***<br>(0.005)   |
| Business tax revenue x regional voter assoc. |  |                     | 0.023*<br>(0.011)     |
| Observations                                 | 397  | 397                 | 397                   |

Note: \*p<0.05; \*\*p<0.01; \*\*\*p<0.001.

## Appendix D Sensitivity analyses

Table D.1 Replicating Table 1 for Western Germany only

|  | <i>Dependent variable: Investment (per capita)</i> |                               |                               |
|--|--|-------------------------------|-------------------------------|
|  | (1)  | (2)                           | (3)                           |
| lag(Investment (per capita))               | 0.344***<br>(0.011)                                | 0.310***<br>(0.012)           | 0.310***<br>(0.012)           |
| Business tax revenue (per capita)          | 0.164***<br>(0.010)                                | 0.165***<br>(0.010)           | 0.144***<br>(0.013)           |
| Liquidity loans (per capita)               | -0.007**<br>(0.002)                                | -0.008***<br>(0.002)          | -0.009***<br>(0.002)          |
| Admin. capacity (per 1,000 capita)         | 14.882***<br>(3.541)                               | 20.829***<br>(4.040)          | 20.940***<br>(4.041)          |
| Party: Left (ref.: right)                  |  | -5.222<br>(3.920)             | -18.230**<br>(5.766)          |
| Party: Regional voter assoc. (ref.: right) |  | 1.539<br>(4.922)              | -3.468<br>(8.517)             |
| Investment subsidies (per capita)          | 0.755***<br>(0.028)                                | 0.800***<br>(0.030)           | 0.804***<br>(0.030)           |
| Social security expenditure (per capita)   | 0.001<br>(0.009)                                   | 0.002<br>(0.009)              | 0.001<br>(0.009)              |
| GDP (per capita)                           | 0.331<br>(0.275)                                   | 0.337<br>(0.312)              | 0.276<br>(0.313)              |
| Unemployment (change)                      | 0.675<br>(0.504)                                   | 0.629<br>(0.517)              | 0.625<br>(0.517)              |
| Net migration (per 1,000 capita)           | 0.069<br>(0.259)                                   | -0.084<br>(0.301)             | -0.087<br>(0.301)             |
| Business tax rev. x left                   |  |                               | 0.034**<br>(0.011)            |
| Business tax rev. x regional voter assoc.  |  |                               | 0.016<br>(0.024)              |
| Constant                                   | 42.542*<br>(20.638)                                | 19.635<br>(21.645)            | 27.384<br>(21.783)            |
| Observations                               | 6,180  | 5,469                         | 5,469                         |
| R <sup>2</sup>                             | 0.808  | 0.803                         | 0.803                         |
| Adjusted R <sup>2</sup>                    | 0.796  | 0.790                         | 0.790                         |
| Residual Std. Error                        | 70.936 (df = 5829)                                 | 72.469 (df = 5120)            | 72.417 (df = 5118)            |
| F Statistic                                | 70.013***<br>(df = 350; 5829)                      | 59.987***<br>(df = 348; 5120) | 59.759***<br>(df = 350; 5118) |

Note: All models include district- and year-fixed effects, which are omitted from the table; \*p<0.05; \*\*p<0.01; \*\*\*p<0.001.

Table D.2 Replicating Table 1 for Eastern Germany only

|  | <i>Dependent variable: Investment (per capita)</i> |                             |                             |
|--|--|-----------------------------|-----------------------------|
|  | (1)  | (2)                         | (3)                         |
| lag(Investment (per capita))               | 0.300***<br>(0.024)                                | 0.299***<br>(0.027)         | 0.294***<br>(0.027)         |
| Business tax revenue (per capita)          | 0.115***<br>(0.031)                                | 0.143***<br>(0.034)         | 0.089*<br>(0.045)           |
| Liquidity loans (per capita)               | -0.024**<br>(0.008)                                | -0.025**<br>(0.008)         | -0.024**<br>(0.008)         |
| Admin. capacity (per 1,000 capita)         | 3.924<br>(7.334)                                   | -0.142<br>(8.370)           | 1.552<br>(8.380)            |
| Party: Left (ref.: right)                  |  | -13.984*<br>(6.018)         | -29.481**<br>(10.434)       |
| Party: Regional voter assoc. (ref.: right) |  | -4.353<br>(8.163)           | -43.273**<br>(15.965)       |
| Investment subsidies (per capita)          | 0.661***<br>(0.032)                                | 0.696***<br>(0.036)         | 0.715***<br>(0.037)         |
| Social security expenditure (per capita)   | 0.034**<br>(0.012)                                 | 0.029*<br>(0.014)           | 0.030*<br>(0.014)           |
| GDP (per capita)                           | 0.306<br>(1.331)                                   | -1.709<br>(1.564)           | -2.252<br>(1.572)           |
| Unemployment (change)                      | 0.284<br>(0.658)                                   | 0.010<br>(0.781)            | 0.031<br>(0.779)            |
| Net migration (per 1,000 capita)           | -1.246***<br>(0.355)                               | -1.388***<br>(0.414)        | -1.458***<br>(0.417)        |
| Business tax rev. x left                   |  |                             | 0.080<br>(0.045)            |
| Business tax rev. x regional voter assoc.  |  |                             | 0.206**<br>(0.074)          |
| Constant                                   | 42.876<br>(32.936)                                 | 66.558<br>(38.275)          | 78.650*<br>(38.512)         |
| Observations                               | 1,083  | 925                         | 925                         |
| R <sup>2</sup>                             | 0.829  | 0.823                       | 0.825                       |
| Adjusted R <sup>2</sup>                    | 0.813  | 0.804                       | 0.805                       |
| Residual Std. Error                        | 51.596 (df = 992)                                  | 52.726 (df = 833)           | 52.519 (df = 831)           |
| F Statistic                                | 53.411***<br>(df = 90; 992)                        | 42.594***<br>(df = 91; 833) | 42.099***<br>(df = 93; 831) |

Note: All models include district- and year-fixed effects, which are omitted from the table; \*p<0.05; \*\*p<0.01; \*\*\*p<0.001.

Table D.3 Replicating model 2 and 3 from Table 1 without Bavaria and Baden-Württemberg

|   | <i>Dependent variable: Investment (per capita)</i> |                               |   |   |
|---|--|-------------------------------|---|---|
|   | (1)<br>Without<br>Bavaria                          | (2)<br>Without<br>Bavaria     | (3)<br>Without<br>Bavaria and<br>Baden-Württem-<br>berg | (4)<br>Without<br>Bavaria and<br>Baden-Württem-<br>berg |
| lag(Investment (per capita))                  | 0.287***<br>(0.013)                                | 0.287***<br>(0.013)           | 0.318***<br>(0.014)                                     | 0.332***<br>(0.014)                                     |
| Business tax revenue (per capita)             | 0.196***<br>(0.012)                                | 0.172***<br>(0.014)           | 0.188***<br>(0.012)                                     | 0.144***<br>(0.013)                                     |
| Liquidity debt (per capita)                   | -0.004*<br>(0.002)                                 | -0.004*<br>(0.002)            | -0.004*<br>(0.002)                                      | -0.007**<br>(0.002)                                     |
| Admin. capacity (per 1,000 capita)            | 25.191***<br>(4.412)                               | 24.739***<br>(4.414)          | 22.231***<br>(4.309)                                    | 20.995***<br>(4.565)                                    |
| Party: Left (ref.: right)                     | -10.874**<br>(3.811)                               | -22.641***<br>(5.475)         | -8.590*<br>(3.676)                                      | -24.333***<br>(5.915)                                   |
| Party: Regional voter assoc.<br>(ref.: right) | -2.599<br>(5.086)                                  | -10.851<br>(8.461)            | -0.293<br>(5.153)                                       | -10.968<br>(9.864)                                      |
| Investment subsidies (per capita)             | 0.639***<br>(0.027)                                | 0.643***<br>(0.027)           | 0.618***<br>(0.026)                                     | 0.756***<br>(0.031)                                     |
| Social security expenditure<br>(per capita)   | 0.026**<br>(0.008)                                 | 0.025**<br>(0.008)            | 0.035***<br>(0.008)                                     | 0.008<br>(0.009)  |
| GDP (per capita)                              | 0.413<br>(0.401)                                   | 0.251<br>(0.405)              | 0.581<br>(0.388)  | 0.456<br>(0.347)  |
| Unemployment (change)                         | 0.413<br>(0.397)                                   | 0.414<br>(0.397)              | 0.502<br>(0.377)  | 0.597<br>(0.507)  |
| Net migration (per 1,000 capita)              | -0.421<br>(0.270)                                  | -0.406<br>(0.270)             | -0.358<br>(0.263)                                       | 0.179<br>(0.318)  |
| Business tax rev. x left                      |  | 0.036**<br>(0.012)            |   | 0.055***<br>(0.011)                                     |
| Business tax rev. x reg. voter assoc.         |  | 0.029<br>(0.026)              |   | 0.066*<br>(0.031)                                       |
| Constant                                      | 14.997<br>(21.798)                                 | 25.882<br>(22.084)            | 1.281<br>(20.827)                                       | 4.965<br>(21.927)                                       |
| Observations                                  | 4,573  | 4,573                         | 4,089   | 4,173   |
| R <sup>2</sup>                                | 0.742  | 0.743                         | 0.723   | 0.809   |
| Adjusted R <sup>2</sup>                       | 0.723  | 0.724                         | 0.703   | 0.796   |
| Residual Std. Error                           | 67.585 (df = 4257)                                 | 67.530 (df = 4255)            | 63.915 (df = 3817)                                      | 69.390 (df = 3912)                                      |
| F Statistic                                   | 38.908***<br>(df = 315; 4257)                      | 38.754***<br>(df = 317; 4255) | 36.775***<br>(df = 271; 3817)                           | 63.762***<br>(df = 260; 3912)                           |

Note: All models include district- and year-fixed effects, which are omitted from the table; \*p<0.05; \*\*p<0.01; \*\*\*p<0.001.



Table D.4 Re-estimating coefficients of interest from Table 1 with a Jackknife approach

|  | <i>Dependent variable: Investment (per capita)</i> |                      |                       |
|--|--|----------------------|-----------------------|
|  | (1)  | (2)                  | (3)                   |
| Business tax revenue (per capita)          | 0.162***<br>(0.001)                                | 0.165***<br>(0.010)  | 0.141***<br>(0.012)   |
| Liquidity loans (per capita)               | -0.007***<br>(0.002)                               | -0.009***<br>(0.002) | -0.009***<br>(0.002)  |
| Admin. capacity (per 1,000 capita)         | 15.442***<br>(3.346)                               | 19.455***<br>(3.815) | 19.460***<br>(3.814)  |
| Party: Left (ref.: right)                  |  | -6.742<br>(3.528)    | -19.010***<br>(5.080) |
| Party: Regional voter assoc. (ref.: right) |  | -0.646<br>(4.494)    | -9.912<br>(7.650)     |
| Business tax rev. x left                   |  |                      | 0.036***<br>(0.001)   |
| Business tax rev. x regional voter assoc.  |  |                      | 0.032<br>(0.023)      |

Note: The table shows results from a Jackknife resampling approach. All models from Table 1 were re-estimated 13 times, each time dropping all observations from one state from the analysis. The average of the coefficients and standard errors across these 13 models was then calculated. The results for all variables of interest are shown above. All models include control variables and district- and year-fixed effects, which are omitted from the table; \*p<0.05; \*\*p<0.01; \*\*\*p<0.001.