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*Mona Foertsch, Felix Roesel*

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The international platform of Ludwigs-Maximilians University's Center for Economic Studies and the ifo Institute

Poschingerstr. 5, 81679 Munich, Germany

Telephone +49 (0)89 2180-2740, Telefax +49 (0)89 2180-17845, email [office@cesifo.de](mailto:office@cesifo.de)

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# Sports Clubs and Populism: Quasi-Experimental Evidence from German Cities

## Abstract

Does social capital always promote solidarity and democracy, or are social networks such as sports clubs also vulnerable to populism? We exploit quasi-experimental variation in sports club membership in German cities. Sports clubs are booming in cities with successful soccer teams which pass the promotion threshold for a higher division, but not where teams marginally missed on promotion. Difference-in-differences estimations show that far-right populists enjoy more support in cities with higher sports club membership rates in the wake of marginally promoted soccer teams. The populist momentum is however rather short-living, indicating that sports clubs intensify group polarization but are not a spot of permanent radicalization.

JEL-Codes: D710, D720, Z200.

Keywords: social capital, sports clubs, populism, Germany.

*Mona Foertsch\**  
*ifo Institute Dresden*  
*Einsteinstrasse 3*  
*Germany – 01069 Dresden*  
*foertsch@ifo.de*

*Felix Roesel*  
*TU Braunschweig*  
*Spielmanstrasse 9*  
*Germany – 38106 Braunschweig*  
*f.roesel@tu-braunschweig*

\*corresponding author

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*‘If I were a far-right extremist, I would know what to do: I would join a sports club.’*

Theo Zwanziger, President of the German Soccer Association 2006–2012

# 1 Introduction

Clubs and civic organizations have massively faded away since the 1960s. Millions have quit their membership with local clubs and associations for their more individual goals and liberties. Sports is a prime example. Putnam (2000) has shown how bowling has turned from league sports into family leisure within a few decades. Mass society theory has described the consequences of weakened civil societies: dispersing social networks result in isolation, uprooted identities, broken personal connections, and—as already argued by Alexis de Tocqueville two centuries ago—vulnerable democracies (Brehm and Rahn, 1997). Where sports clubs close down, training sites for both sports and for the democratic discourse disappear.<sup>1</sup>

Fading social contacts may have also paved the way for political polarization and radicalization: Alienated individuals might be more susceptible to modern populists from the far-right, promising to bring back community, solidarity, and identity. Accordingly, studies have shown that populist voters are more socially isolated, have little social trust or are less likely to be members of clubs and associations (Coffé *et al.*, 2007; Jesuit *et al.*, 2009; Vanhoutte and Hooghe, 2013; Berning and Ziller, 2017; Giuliano and Wacziarg, 2020; Boeri *et al.*, 2021). Others have argued, however, that vibrant and active civil societies do not *per se* promote liberal democracies; sometimes networks may even act as multipliers of radical values. Berman (1997) argues that the strong German civil society accelerated the rise of Nazi ideology and Hitler. Some empirical studies have shown that populists can benefit from dense social networks (Fitzgerald and Lawrence, 2011; Veugelers *et al.*, 2015; Satyanath *et al.*, 2017; Rodríguez-Pose *et al.*, 2021; Potrafke and Roesel, 2022).<sup>2</sup> Gambetta (1988), Fukuyama (1995), and Chambers and Kopstein (2001) provide more examples of well-organized networks which act as social multipliers for extremism and

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<sup>1</sup>Schüttoff *et al.* (2018) show that sports club members are more active in the civil society.

<sup>2</sup>A number of studies did not detect any correlation between social capital and populism (Rydgren, 2009, 2011; Zhirkov, 2014).

crime.<sup>3</sup> Whether social networks encourage tolerance or breed chauvinism and radical views is still empirically unresolved.

In this paper, we focus on a specific but substantial part of the civil society: sports clubs. Sports clubs are famous for promoting social ties and team spirit, but might also be breeding grounds of ‘contagious’ populism. Four different mechanisms connect sports and populism. First, sports has an inherent and pronounced in-group-out-group dimension: we against the others (see, the pioneering work by Tajfel *et al.*, 1971; Tajfel, 1974). Populists operate on similar narratives as they benefit from group polarization. Second, overshooting in-group emotions, created by banners, flags, shirts and colors, may easily turn into out-group hostility, chauvinism and violence. Studies have shown that sports clubs can breed social exclusion, inequalities, business corruption, and down-leveiling conformity (for an overview, see, Numerato and Baglioni, 2012). Third, political extremists have started infiltrating sports clubs to spread their views. Respect and trust of teammates on the field might be used when talking about politics on a drink afterwards. Fourth, exercise and physical activity has always been a part of far-right ideology. Trained individuals might be more prone to physical confrontation—a consequence of aggressive populist narratives.

We are the first to estimate causal relationships between sports clubs and populism, and we discuss potential mechanisms based on data for around 1,500 German cities. Sports is an essential part of social life in Germany: 27 out of 83 million Germans are registered members of sports clubs, with soccer being the leading sports.<sup>4</sup> We exploit a feature of German soccer which results in quasi-experimental variation in sports club membership: the promotion threshold.<sup>5</sup> Soccer in Germany has a round-robin tournament in all divisions: each club meets all other contestants twice a season. Usually the best three teams in the final table are promoted to a higher division, but not teams ranked fourth, fifth, and sixth. Empirical and anecdotal evidence shows that thousands of enthusiastic fans start joining soccer and other sports clubs in cities with promoted soccer teams, but *not* in cities where

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<sup>3</sup>See, Glaeser *et al.* (2003) and Madestam *et al.* (2013) for studies on social multipliers. Wintrobe (2006) provides a theoretical framework of the ‘deep connections between social capital or solidarity and all of the manifestations of extremism’.

<sup>4</sup>This is the result of the survey conducted by the German Olympic Sports Confederation in 2021. [https://cdn.dosb.de/user\\_upload/www.dosb.de/uber\\_uns/Bestandserhebung/BE-Heft\\_2021.pdf](https://cdn.dosb.de/user_upload/www.dosb.de/uber_uns/Bestandserhebung/BE-Heft_2021.pdf).

<sup>5</sup>To the best of our knowledge, only Brachert (2021) has exploited thresholds for promotion and relegation in European soccer.

the local soccer team marginally missed on promotion (for an example, see Table 2 later). We can use the latter as ideal counterfactuals to cities with promoted teams because only few games and goals determine the final ranking. We contrast far-right populist vote shares in German cities with soccer teams closely above and below the promotion threshold using difference-in-differences estimations.

Our results show that far-right populists enjoy *more* support in cities where sports club membership increases. However, the effects are rather short-living, limited to soccer, and limited to regions with already pronounced support for far-right populists. These findings speak to both the channels of group polarization and overshooting positive emotions, but do not support the theory of infiltration by extremists. Group polarization, however, is the most likely mechanism for two reasons. First, promotion of local soccer clubs immediately stimulates club membership, but it takes about one year to materialize in far-right votes. This sequence is more in line with group polarization rather than with short-living emotions. Second, vote shares of center-right parties decrease as far-right parties benefit which signals polarization. Finally, we find no evidence that physical activity per se promotes populism, and we do not find symmetrical effects of relegation.

Our paper is among the first studies documenting ‘dark sides’ of social capital in modern times, and the first focusing on sports clubs in particular.<sup>6</sup> The results challenge the popular Tocquevillean nexus of active civil societies and liberal democracies and complements the literature on the rise of modern far-right populism which has mainly focused on immigration (e.g., Otto and Steinhardt, 2014; Halla *et al.*, 2017; Dustmann *et al.*, 2019; Edo *et al.*, 2019; Steinmayr, 2021), globalization and trade shocks (Norris and Inglehart, 2019; Autor *et al.*, 2020; Dippel *et al.*, 2021), austerity and crises (Funke *et al.*, 2016; Becker *et al.*, 2017; Galofré-Vilà *et al.*, 2021), or historical roots (Voigtländer and Voth, 2012; Ochsner and Roesel, 2017, 2020).

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<sup>6</sup>A closely related study on interwar Germany by Satyanath *et al.* (2017) has shown that Nazi party membership and votes increased more in cities with a higher density of local clubs and associations. Previous studies have emphasized the merits of social capital, for example in containing the spread of the Covid-19 pandemic (Bartscher *et al.*, 2021). The study by Numerato and Baglioni (2012) surveys sociological case studies on ‘bad social capital’ in sports. Randomized experiments have shown that sports team membership can have adverse effects on tolerance (Lowe, 2021).

We also add observational evidence to the literature on group behavior. The behavior of fans of rivaling sports teams is a prime example of group identity. Individuals behave generally more altruistically towards members of their own group (Chen and Li, 2009). Sports fans also often display an in-group bias by valuing fans in their own group more positively than fans in the rival group (Platow *et al.*, 1999; Wann and Grieve, 2005). Especially the sense of belonging or connectedness builds team identity (Wann, 2006). Our paper suggests that group polarization is another mechanism which is active in sports. We find that individuals may radicalize in sports clubs, but only in the short run.

Finally, we also contribute to the literature in sports sociology and sports economics. We corroborate that professional sports can motivate amateur sports (Mutter and Pawlowski, 2014), creates group and national identity (Pawlowski *et al.*, 2014; Depetris-Chauvin *et al.*, 2020), and can influence election outcomes (Healy *et al.*, 2010; Busby *et al.*, 2017). We show that professional sports can spill over to other parts of the society. A big victory of local professional sports teams such as the promotion to a higher division last up to one year, but effects vanish soon afterwards.

## 2 Methods

### 2.1 Data

Sports is an essential part of social life in Germany: 27 out of 83 million Germans are registered members of sports clubs. Millions follow big sports events in stadiums, pubs, or at home. Supporting sports clubs and athletes was a key substitute for the broken national identity after World War Two which makes Germany an ideal study site to examine the links between sports clubs and group polarization.

Micro data including information on sports club membership and political preferences are not available. We therefore went to the city level and collected yet unexplored data on local sports club members for 1,500 German cities with a population of 10,000 and more over the years 2001 to 2012 (for a detailed description of our data, see Online Appendix B). Our data cover some 70% of the German population and were hand-collected from

publications of the Association of German Cities (*Deutscher Städtetag*).<sup>7</sup> Table 1 shows the descriptive statistics of our dataset. Around one in four German city residents (26%) is a member of a local sports club.<sup>8</sup>

[Table 1 about here]

We complement sports clubs data with city-level data on populist voting, local soccer clubs, and further control variables. We use vote shares cast for far-right populist parties in German national elections between 1990 and 2017 at the level of German cities.<sup>9</sup> Populist parties gain an average of 4.1% of all valid votes in our sample period; vote shares were rather low before the *Alternative für Deutschland (AfD)* entered the political stage in 2013 (see, Figure 1). Data on promoted and relegated local soccer teams are self-compiled from the final tables of the first, second, third, and fourth divisions of the German male soccer league. The Online Appendix reports the number of divisions per observation year (see, Table A1). We code whether a city hosts a promoted (usually ranks 1, 2 or 3) or almost promoted (ranks 4, 5 and 6) soccer team. Our data include 487 city-year observations with a promoted soccer team (1.1% of our sample), and 873 with almost promoted soccer teams (2.0% of our sample). Both groups overlap to some extent as few cities host both a promoted and an almost promoted team at the same time. We have also information on relegated teams. Finally, we collect some socio-demographic and labor market control variables which may influence populist votes such as city size, the share of female, unemployment, local jobs, and commuters.

[Figure 1 about here]

## 2.2 Identification

A naive two-way fixed effects panel regression is an intuitive starting point to examine the links between sports club membership and populist voting. We regress far-right populist

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<sup>7</sup>Unfortunately, there is neither more recent data nor sports club membership by individual sports available at the city level. We can also not account for membership in multiple sports clubs.

<sup>8</sup>The data are self-reported by German cities and include a number of obvious mistakes which leads to extreme outliers. We therefore exclude the top 1% in the distribution of sports club membership rates.

<sup>9</sup>Far-right populist parties are *DVU*, *NPD*, *REP* and the *Alternative für Deutschland (AfD)*. Inferences do not change when we include further fringe far-right parties. See, Table A4 in the Online Appendix.



vote shares in German cities on the share of the city population enrolled in sports clubs using the following OLS specification:

$$Populist_{i,t} = \beta Members_{i,t-1} + X'_{i,t}\gamma + \alpha_i + \delta_t + \epsilon_{i,t} \quad (1)$$

with  $Populist_{i,t}$  being the far-right populist vote share in city  $i$  in election  $t$  and  $Members_{i,t-1}$  measuring sports club members per 100 capita in the year before. We lag sports club members by one year because they refer to December 31, but elections are usually held in autumn. Time-fixed effects  $\delta_t$  eliminate temporal shocks, city-fixed effects  $\alpha_i$  account for time-invariant unobservable differences across cities.  $X_{i,t}$  is a vector of relevant control variables including socio-demographics, local labor markets, and income proxies. Standard errors are clustered at the city level.

Estimates from regressing populist votes on sports club membership as described by equation (1) are very likely to suffer from endogeneity. First, populists may join sports clubs for strategic reasons which raise concerns about reverse causality. Second, underlying trends may well influence both sports and politics. Sports clubs and nationalism evolve simultaneously in the course of first attempts to unify fragmented Germany in the early 19th century. At this time, the *Turnvereine* movement by Friedrich Ludwig Jahn proposed educating bodies as part of its nationalist agenda. In the German Empire, millions were members of sports clubs founded by left-wing or right-wing parties. After Hitler seized power in 1933, the Nazi party controlled all sports clubs. After World War Two, sports became somewhat less ideological but public funding by state authorities plays a key role in German sports. Thus, sports and politics were always closely tied.

We are well aware of such endogeneity concerns and propose an arguably exogenous source of variation in sports club membership: promoted local soccer teams. Soccer is by far the most popular sports in Germany. The surprising victory of the World Cup in 1954 finally initiated a soccer boom in Germany which somewhat substituted the broken German national identity for decades. Today, the German Soccer Association (*DFB*) counts 25,000 registered soccer clubs with more than 160,000 teams and 7 million players. Therefore, one out of twelve Germans is a registered member of a soccer club. Professional soccer is

also very popular in Germany. Some 45 out of 83 million Germans report to be at least somewhat interested in soccer, 24 million are very interested. On average, more than 40,000 fans cheer for their teams in games of the first division of the German soccer league (*Bundesliga*); tickets are usually sold out. Travel guides to Germany report as their first advise: ‘soccer is a religion’<sup>10</sup>.

The popularity of soccer in Germany and the institutional contest mode in professional soccer leagues are an arguably source of quasi-experimental variation in sports club membership. German soccer has a round-robin tournament in all divisions: each club meets all other contestants twice a season. Seasons usually start in autumn and end in late spring/early summer. Only the best three teams in the final table are promoted to the next division, the bottom three teams are relegated to the lower division.<sup>11</sup> Victories of local soccer clubs gain a lot of public attention, but enthusiasm skyrockets when local soccer teams are promoted to a higher division. Cheering and celebrating fans crowd the streets for hours and days. Successful professional teams encourage citizens to join sports clubs. For example, when the Bavarian team of FC Augsburg was promoted to the *Bundesliga* in 2011, a newspaper report that the number of club members doubled afterwards.<sup>12</sup>

But also other soccer clubs and even other sports than soccer seem to benefit from promotion-induced enthusiasm for sports. Figure 2 provides some case study evidence for two cities in West Germany (Osnabrueck and Freiburg im Breisgau) and two cities in East Germany (Magdeburg and Jena). Red vertical lines represent years when the local soccer club was promoted to a higher division. In years following the promotion of a local soccer club, the number of sports club members increases substantially. Table 2 shows an example from the 2006/2007 season of the 3rd German soccer division. Sports club membership in cities with promoted teams increase by 1.87%. However, cities with soccer teams that marginally missed on promotion do not experience such a surge in local sports club membership. In our example of the 2006/2007 season, cities with almost promoted soccer

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<sup>10</sup>See, ‘10 things only those who lived in Germany understand’, <https://www.ef.com/wwen/blog/language/10-things-only-those-who-lived-in-germany-understand/>.

<sup>11</sup>There are differences across divisions and also relegation games.

<sup>12</sup>See, Schwäbisches Tagblatt, 17.06.2011, Aufstieg des FC Augsburg in die Bundesliga löst Boom aus.

teams experience even a decrease in sports club membership of -3.67%. We later show that this example is representative for our full sample of German cities. Often only few victories or even goals decide on the ranking in the final table and therefore on promotion. Both promoted and almost promoted teams have almost equally performed during the tournament and cities do not differ in their characteristics prior to promotion (see, Table A2 and A3 in the Online Appendix). The promotion threshold induces quasi-experimental variation in sports club membership in almost similar cities with comparable soccer teams. Only very few goals pushed teams above or below the promotion threshold. We consider cities with almost promoted soccer teams ideal counterfactuals for cities with promoted soccer teams and a boom in club membership.

[Figure 2 about here]

[Table 2 about here]

We estimate the following difference-in-differences specifications with OLS:

$$\begin{aligned} Members_{i,t} = & \beta_1 Promotion_{i,t-1} + \beta_2 Missed\ on\ promotion_{i,t-1} \\ & + X'_{i,t}\gamma + \alpha_i + \delta_t + \epsilon_{i,t} \end{aligned} \quad (2)$$

and:

$$\begin{aligned} Populist_{i,t} = & \beta_1 Promotion_{i,t-1} + \beta_2 Missed\ on\ promotion_{i,t-1} \\ & + X'_{i,t}\gamma + \alpha_i + \delta_t + \epsilon_{i,t} \end{aligned} \quad (3)$$

with  $Members_{i,t}$  defining sports club members per 100 capita and  $Populist_{i,t}$  the far-right populist vote share in city  $i$  in election  $t$ . The dummy variable  $Promotion_{i,t-1}$  takes on the value of one if a German city hosts at least one team promoted to the first, second or third division of the German soccer league in the year before an election, and zero otherwise. Usually, those teams have ranked first, second or third in the final table.  $Missed\ on\ promotion_{i,t-1}$  is a dummy variable taking on the value of one for cities with at least one soccer team marginally ranking below the promotion threshold (usually ranks four, five, six in the final table) in the year before an election. Both dummies measure

whether cities with well-performing soccer teams differ in local sports club membership or far-right populist votes, compared to all other cities. To estimate the difference between cities with promoted soccer teams and the best available counterfactuals, we perform t-tests whether the estimates for the variables  $Promotion_{i,t-1}$  and  $Missed\ on\ promotion_{i,t-1}$  differ significantly. The difference between both estimates describes the *additional* mark-up in local sports club members or far-right populist votes for a marginally promoted soccer team—compared to teams that marginally missed on promotion. This should give us causal effects as the selection into promotion is as good as random around the promotion threshold.

We include time-fixed effects  $\delta_t$  and city-fixed effects  $\alpha_i$ . We add only few control variables ( $X_{i,t}$ ) that are available for the full time span; we later show in the robustness tests that including or excluding controls do not change our results. We also test an alternative way to estimate the additional mark-up in sports club members or far-right populist vote shares in cities with a promoted local soccer club compared to cities where the local soccer club marginally missed on promotion in one regression without post-estimation t-tests. However, this strategy strongly reduces our sample and should be considered only as supportive evidence.<sup>13</sup>

We also extend our regression equations 2 and 3 to event studies where we substitute the dummy for promotions ( $Promotion_{i,t-1}$ ) by a vector of dummies measuring promotions in a window of three years before and six years after promotions. We do not include a similar set of variables for the dummy variable  $Missed\ on\ promotion_{i,t-1}$  for almost promoted teams. This allows us to trace the effects over time and to evaluate whether cities with promoted and all other teams follow parallel trends prior to promotion and how effects evolve one, two and more years after promotion. We bin the endpoints of the effect window meaning that the last lag or lead contains all events outside the effect window

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<sup>13</sup>We estimate equations of the following type:  $Members_{i,t} = \beta_1 Promotion_{i,t-1} + \beta_2 (Promotion_{i,t-1} + Missed\ on\ promotion_{i,t-1}) + \alpha_i + \delta_t + \epsilon_{i,t}$  (similar for far-right vote shares). Here, we restrict the sample only to cities with promoted and almost promoted local soccer teams to make the treatment and control group more comparable. We include the sum ( $Promotion_{i,t-1} + Missed\ on\ promotion_{i,t-1}$ ) in our estimations to account for the fact that cities with multiple local soccer teams may have both a promoted and an almost promoted local soccer team in a given year. The coefficient  $\beta_1$  describes the effect of a promoted local soccer team on sports club members or far-right votes in city  $i$  compared to cities with almost promoted local soccer teams.

that occurred in the past or will occur in the future. Additionally, we normalize the effect at the year before an promotion to zero (see, Schmidheiny and Siegloch, 2020).

We should note that a number of related estimation strategies are *not* applicable to our data. First, new difference-in-differences estimators which account for staggered treatment timing and heterogeneity in treatment timing (e.g., Roth *et al.*, 2022) are not suitable for our setting. The assumption that units are treated at one point in time and stay treated for the remaining time does not hold in our context. Second, our approach of comparing cities below and above a specific threshold is somewhat comparable to a regression discontinuity design (RDD). The promotion threshold quasi-randomly assigns into treatment and control group, at least for a small bandwidth around the threshold. However, conventional RDD require a sufficient number of observations above and below the cut-off point. We have only few observations above the threshold and cannot apply conventional RDD techniques. Our estimation strategy is however a specific form of a RDD as we compare observations closely around a threshold (we vary the bandwidth later in the robustness checks). Finally, one may propose instrumenting sports club membership by promoted soccer teams in an instrumental variable (IV) setting. IV estimations, however, are not feasible as we observe sports club membership only for a very small sub-sample of our full period of observation (see Figure 1). However, our strategy is somewhat connected with IV. We present evidence for a first-stage when we regress sports club membership on soccer team promotion. Regressing far-right votes on soccer team promotion can then be considered a reduced form estimate.

## 3 Results

### 3.1 Fixed-effects regressions

We start with simple correlation analyses where we regress populist vote shares in national elections on local sports club membership density. Table 3 shows positive and significant coefficients for the naive fixed effects specifications: more members in local sports clubs go hand in hand with higher vote shares for far-right populists, controlling for time-invariant differences across cities. We also include control variables for demography and

labor markets but neither point estimates nor significance levels change. The effects are also quantitatively important. Switching from zero to the average in local sports club membership rates (from 0 to 26 members per 100 capita) implies an increase in far-right vote shares of 0.09 to 0.10 percentage points. This is a substantial relative effect given the average far-right vote share in this sub-sample period of around 2.8%.<sup>14</sup>

[Table 3 about here]

### 3.2 Difference-in-differences

We control for a number of socio-demographic and economic factors in Table 3, but our results in Table 3 do not necessarily allow a causal interpretation, we discussed the reasons in section 2.2. Therefore, we now move to specifications where we exploit quasi-experimental variation in sports club membership, induced by promoted local soccer clubs. Our assumption of a sports club member boom after promotion is confirmed by the data: Table 4 shows that 8 out of 1,000 inhabitants join a sports club in the year following the promotion of their local soccer team (column (1)). The effect is statistically significant at the 5% level. There is no such effect for cities with soccer teams that marginally missed on promotion (column (2)). Column (3) combines both dummy variables in one regression. We still only find effects for promoted teams. The difference between cities with promoted teams and almost promoted teams closely below the promotion threshold is marginally statistically significant ( $p = 0.116$ ). The effect is also economically substantial: The promotion of a local soccer team increases local sports club membership in German cities by some 3.5% on average (0.9/25.7).

[Table 4 about here]

We now turn to the effects of shocks in local sports club membership on populist voting. We regress far-right populist vote shares on the promotion dummies which predict local sports club membership as shown above. Columns (4) to (6) in Table 4 present the results of this estimation. Vote shares for far-right populist parties increase by some 0.4 percentage points in cities with a promoted soccer team in the year following promotion. This is an

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<sup>14</sup>Note that we only observe membership data for the period 2001 to 2012 before the far-right *AfD* was founded.

economically substantial effect given the average far-right vote share of 4.1% in our main sample period 1990 to 2017. By contrast, we do not find statistically significant effects when we compare cities with almost promoted teams ranking just below the promotion threshold to all other cities (column (5)). In column (6), we include both dummy variables. Inferences hardly change. Both coefficients are statistically different from each other (lower panel in column (6)).

We also use our alternative estimation approach and keep only cities with promoted and almost promoted local soccer clubs (see Table 5). Both sports club membership and far-right populist vote shares are significantly higher in cities with a promoted local soccer team compared to cities where the local soccer team marginally missed on promotion. We conclude that cities with promoted soccer teams—which generated new sports club members—drift apart from cities with almost promoted soccer teams where sports club membership stagnates. This confirms our findings in Table 3, and it implies also causation: far-right populist votes increase where more people come together in sports clubs, exogenously triggered by promoted soccer teams.

[Table 5 about here]

We submit our results to a number of robustness tests (Tables A4 and A5 in the Online Appendix). First, we add fringe far-right parties beyond the main populist parties to the far-right populist vote share. Inferences do not change (column (2)). Second, we exclude our control variables, and the results hold (column (3)). Third, we include further controls which are not available for the full time span and therefore reduce the number of observations. Again, results hold quantitatively and qualitatively (column (4)). Fourth, we exclude the first promoted team (usually ranks first) and the last almost promoted team (usually ranks sixth) and therefore reduce the bandwidth around the promotion threshold to two promoted and almost promoted teams. The point estimate increases slightly but does not change qualitatively (column (5)). In column (6), we reduce our period of observation to the years 2002 to 2017 when far-right populism became more important but all effects are robust. In column (7), we restrict our sample to the 422 cities which had at least one soccer team in the first four divisions of the German soccer league. Our sample shrinks to some 10% of the original data but the promotion effects are still

statistically significant the 10% significance level. All results are very similar in Table A5 where we use another technique to obtain the difference between cities with promoted and almost promoted soccer teams. The models in columns (5) and (6) are exceptions; when we use a small bandwidth or only a small time window we dramatically reduce our data set and the estimation power; the coefficients are not statistically significant in these specifications ( $p = 0.193$  and  $p = 0.100$ ).

### 3.3 Event studies

Event studies allow to evaluate the effects over time and to inspect parallel trends before the promotion of a local soccer team. We replace the dummies as described by equations 2 and 3 by a set of dummy variables capturing the window of three years before and six years after promotion. We use specifications with and without control variables. Table 6 shows that we have good reasons to believe in parallel trends before promotion. We find no statistically significant difference in sports club membership and far-right voting in years prior to promotion (columns (1) to (4)). However, sports club membership increases in the year of promotion and in the year after promotion—compared to all other cities. The effects die out after two years (columns (1) and (2)).

[Table 6 about here]

Columns (3) and (4) report the results when using far-right populist vote shares as dependent variable. Only in the year following promotion, far-right vote differ in cities with promoted teams (column (3)). The coefficient in column (4) marginally lacks statistical significance. Quantitatively, far-right vote shares increase by some 0.5 percentage points which means 2 to 3 out of 1,000 citizens, given that around half of the population votes in national elections.<sup>15</sup> Thus, on average, the promotion of a local soccer club generates 18 to 19 new sports club members per 1,000 capita (columns (1) and (2)) and 2–3 new voters for far-right populist parties per 1,000 capita; the ratio is to 0.11 to 0.17 (2/19 to 3/18).

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<sup>15</sup>In our period of observation, some 40 out of some 80 million Germans cast their vote in national elections. 20 million abstain from voting, and another 20 million are children and foreigners not eligible to vote.



### 3.4 Relegation, other sports/clubs, and other periods

We investigate whether mirrored effects of promotions are visible for cities with relegated teams. We find no such effect (Table A12 in the Online Appendix). One explanation is an asymmetrical lock-in effect of club membership. A promoting local soccer club may well encourage citizens to participate in sports. However, once enrolled, there are little reasons to leave their teammates and social networks because a local soccer club has been relegated to a lower division. We discuss the mechanisms in detail in section 4.

Another intriguing question is whether our effects are unique to sports clubs, and soccer in particular. Our city-level data do not allow to distinguish soccer club members and members in other sports clubs. Therefore, we collect data on soccer club members and members of other sports clubs at the level of the 16 German federal states. Table A7 in the Online Appendix shows that more soccer club members come with higher vote shares of populist parties. We do not find a significant effect for members of other sports clubs, for example gymnastics, tennis or swimming. Effects are limited to soccer. We also test effects of clubs and associations beyond sports—for example, choirs, charity or folklore clubs. We use data for 107 large German cities on the number of sports clubs per 1,000 capita and other clubs per 1,000 capita (Franzen and Botzen, 2011). Table A6 in the Online Appendix shows that only sports clubs are correlated with far-right vote shares; all other clubs come with negative and insignificant correlations. Thus, we conclude that sports clubs, and soccer clubs in particular, differ from other associations in channeling populist views. Soccer cultivates a pronounced in-group and out-group perspective which may serve as a blueprint for political beliefs. This is consistent with group polarization as a driver of the results (section 4).

Finally, our findings hold for different time periods. We observe very similar correlations in the period of political radicalization in Germany before World War Two (Table A8 in the Online Appendix). In the 1928 election, the Nazi party (*NSDAP*) gained some 2 to 3% of the votes. We combine election outcomes in 1928 with historical data on sports club members for all 536 counties in the former German state of Prussia and for 81 German cities in the year 1927. Table A8 shows that more sports club members come along with higher vote shares for the Nazi party in 1928. This corroborates the study

by Satyanath *et al.* (2017) showing that the Nazi party grew faster where many local clubs and associations existed. Similar findings for pre-war and post-war Germany imply very persistent institutional mechanisms: German clubs and associations which already bred and spread totalitarianism in Weimar Germany also seem to be active multipliers of modern populism today. The effect size for 1928 also well resembles our findings from present-day data. In Prussian counties in Weimar Germany, one additional sports club member per 100 capita comes along with 0.29 to 0.30 higher vote shares for the Nazi party in 1928 (see, Table A8). Given that around 31 out of 63 million citizens voted in the 1928 election, one sports club member goes hand in hand with  $0.29 \times (31/63) = 0.14$  Nazi votes. This effect is substantial and very similar to our estimate for modern Germany of 0.11 to 0.17: there is one additional populist voter per six to seven new sports club members.

## 4 Mechanisms

We have hypothesized that four different mechanisms may translate sports club membership into populism: group polarization, overshooting emotions, infiltration by extremists, and physical exercise. The following sections show that group polarization—grouping individuals with similar beliefs intensifies their values and attitudes—is the most likely transmission channel.

### 4.1 Group polarization

Group polarization is a prime candidate to explain radicalization via sports clubs. Groups of people sharing similar thoughts tend to more extreme decisions than the same persons individually. We have already shown that our effects are limited to sports—and to soccer clubs in particular—where group polarization is strong. Asymmetrical effects for promotion and relegation also speak to the channel of club membership as a driver for polarization.

Findings for other political camps corroborate the mechanism of group polarization. We find that far-right parties mainly benefit at the cost of center-right parties. Increasing vote shares for populists must correspond with decreasing shares for other parties. Table A9 in the Online Appendix shows that the increase in far-right vote shares comes with a

one-to-one decrease in moderate center-right vote shares. We find no statistically significant effect on votes shares for far-left or center-left parties and no effect on voter turnout. Therefore, we conclude that group polarization pushes already right-leaning voters towards the even more radical right, but only in the short run. Our event study results show lagged and short-living effects on vote shares, which further supports the polarization of groups as a mechanism (see, Table 6). Club membership increases immediately after the promotion of a local soccer club, while far-right populist vote shares react one year later. Polarization may take some time to grow and materialize in elections.

## 4.2 Emotions/Euphoria

Our event study specifications have shown that the effect of promoting local soccer teams on sports club membership and far-right populist votes are rather short-living. Overshooting emotions are therefore a potential mechanism to explain surging far-right votes. Euphoria caused by successful soccer teams may reinforce in-group identity which in turn can promote parties using similar populist narratives. The timing of the effects however speaks against this channel. We have shown that club membership immediately increases after promotion but it takes up to one year for far-right populist votes to follow (Table 6). Thus, the effects on clubs and votes are not fully synchronized and seem to build on each other. As euphoria does not materialize immediately, we do not believe that emotions are a driver of the results.

## 4.3 Infiltration

Infiltration by extremists is also not a likely mechanism—for two reasons. First, membership and populist votes increase in the first year following promotion, but effects vanish soon afterwards (Table 6). The results do not suggest that sports clubs are a spot of permanent and ever-accelerating radicalization which extremists may create. Second, strategic infiltration by individual extremists that are spread across the country should affect all cities. In Table A10, we split the sample of cities into a group of low and high levels of far-right populist vote shares.<sup>16</sup> The results show that effects are large and

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<sup>16</sup>We standardize far-right populist vote shares by the national average separately for all elections and average over all elections. We then split at the median.

statistically significant at the 5% level in cities with an already high share of far-right votes. By contrast, we do not observe effects in the city group with comparably low levels of far-right votes. Thus, spill-over from sports club membership to populism are conditional on existing political polarization of the society. This heterogeneity is again more in line with group polarization.

#### 4.4 Exercise

If physical activities and exercise increase the likelihood to use and accept violence, this could also increase the popularity of radical parties. Micro level data from the German Socio-Economic Panel, however, shows no correlation between far-right populist party preferences and the active participation in Germany (see Table A11). Thus, physical activity itself does not seem to influence the attitude towards far-right populist parties.

## 5 Conclusion

We have investigated the connections between sports club membership and political radicalization. Far-right populist votes increase in German cities where more citizens are organized in sports clubs. Quasi-experimental variation in sports club membership comes from the promotion threshold of the German soccer league. We find a significant short-term increase in sports club membership rates and—delayed by one year—far-right vote shares in cities with promoted teams compared to cities with almost promoted teams. The effects, however, vanish soon and we find no evidence of a permanent radicalization in sports clubs. The key mechanism behind the effects seems to be group polarization: already right-leaning individuals radicalize in sports clubs.

Our main conclusion is that parts of the existing literature were probably too optimistic about the nature of social capital. Sports clubs may well transmit democratic values, but sports—and European soccer in particular—can also reinforce group polarization. Putnam (2000) already acknowledged that social capital has bright but also ‘dark sides’. Social networks can easily convey both democratic values and tolerance but also populism and

radical views. Future studies may collect and elaborate on more detailed micro-data to improve our understanding on the mechanisms within clubs.

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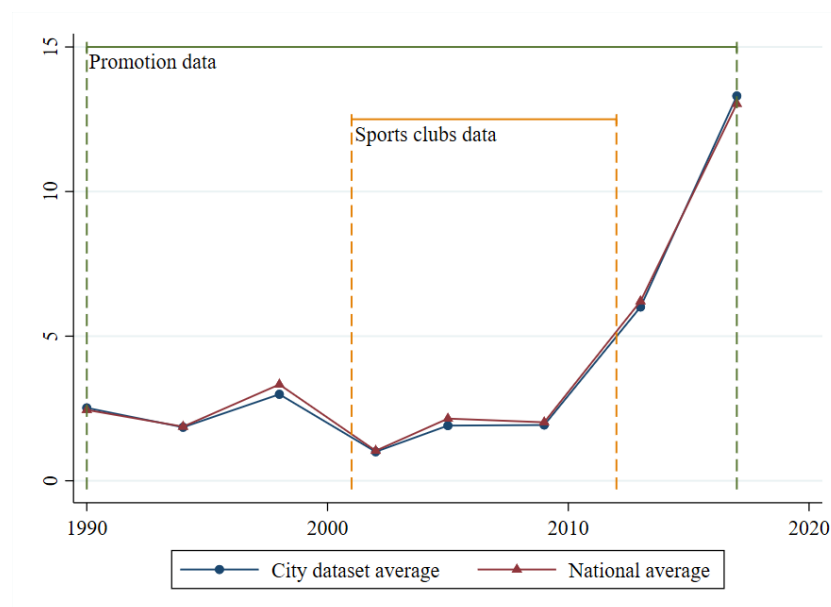
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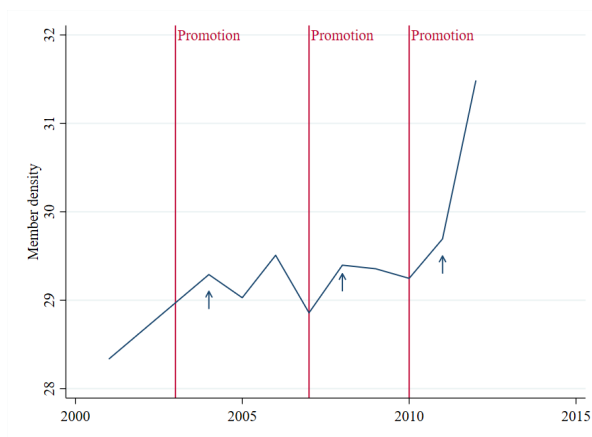
Figure 1: Far-right populist vote shares in German national elections



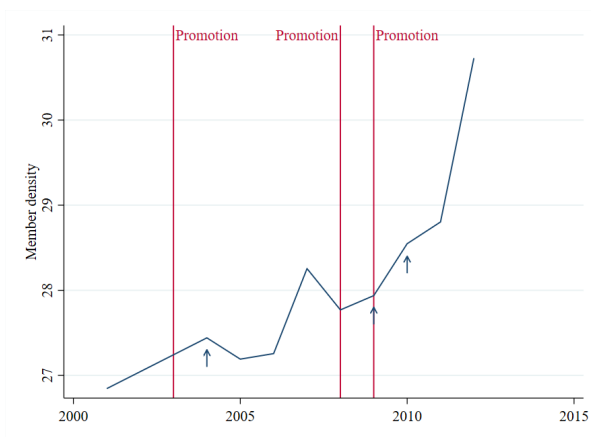
*Notes:* The graph shows the average vote shares for far-right populist parties in German national elections 1990, 1994, 1998, 2002, 2005, 2009, 2013 and 2017 in our 1,500 sample cities with a population of 10,000 and more, and the full national election average. Far-right populist parties include *DVU*, *NPD*, *REP* and the *Alternative für Deutschland (AfD)*. The figure also reports data availability: we have election data for all elections between 1990 and 2017, sports clubs data are available between 2001 and 2012.

Figure 2: Sports club members and promotions of local soccer teams

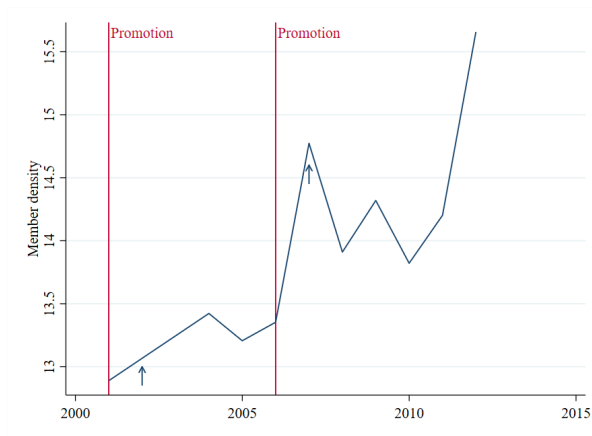
(a) Osnabrueck



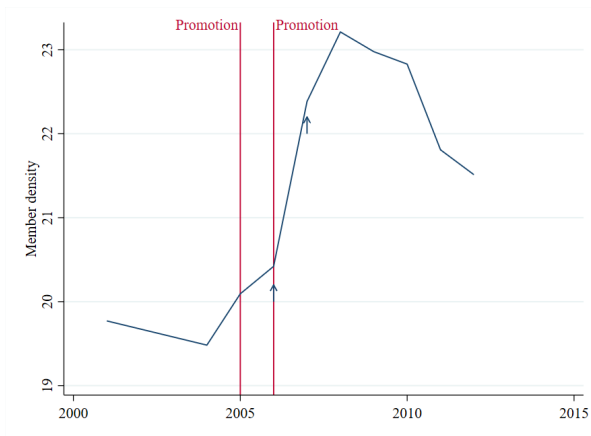
(b) Freiburg im Breisgau



(c) Magdeburg



(d) Jena



*Notes:* The graphs show sports club members (per 100 capita) in four German cities between 2001 and 2012 (West Germany: Osnabrueck and Freiburg im Breisgau, East Germany: Magdeburg and Jena). Red vertical lines indicate the year when a local soccer team was promoted to a higher division of the German (male) soccer league.

Table 1: Descriptive statistics

	Obs.	Mean	SD	Min	Max	Obs. Period
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Main variables</i>						
Far-right populist vote share	12,530	4.054	4.531	0.182	38.511	1990-2017 <sup>a</sup>
Sports club members	12,871	25.662	15.705	0	61.932	2001-2012 <sup>b</sup>
Promotion	44,332	0.011	0.104	0	1	1990-2017
Missed on promotion	44,332	0.020	0.139	0	1	1990-2017
<i>Controls</i>						
Population (log)	44,024	10.011	0.767	9.210	15.100	1990-2017
Population share of women	44,024	51.123	1.072	34.673	57.028	1990-2017
Local jobs per capita	38,613	32.694	14.989	0.228	208.119	1993-2017
Inward commuters per capita	38,613	59.660	16.264	0	438.524	1993-2017
Unemployed per capita	31,889	4.042	2.672	0	22.210	1998-2017

*Notes:* The table reports the descriptive statistics of our main dataset. German cities with a population of 10,000 and more are the unit of observation. Sports club members are per 100 capita. <sup>a</sup>Elections are usually held only every four years which reduces the number of observations. <sup>b</sup>The observation period is shorter, which is why fewer observations are reported. Online Appendix B reports the data sources.

Table 2: Final table of Regionalliga Nord 2006/2007

Rank	Team	Matches	Wins	Draws	Losses	Scored Goals	Received Goals	Goal Diff.	Points	City	Sports club members 2007-2008	Promotion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	FC St. Pauli	36	17	12	7	52	32	20	63	Hamburg	1.87%	Promoted
2	VfL Osnabrück	36	17	10	9	59	43	16	61	Osnabrück	1.87%	Promoted
3	1. FC Magdeburg	36	16	12	8	52	41	11	60	Magdeburg	-5.84%	Almost Promoted
4	Kickers Emden	36	16	11	9	50	51	9	59	Emden	-4.72%	Almost Promoted
5	Wuppertaler SV	36	16	9	11	59	49	10	57	Wuppertal	-0.45%	Almost Promoted
6	Hamburger SV II	36	15	11	10	56	46	10	56	Hamburg	1.87%	
7	Dynamo Dresden	36	16	7	13	54	45	9	55	Dresden	2.17%	
8	Werder Bremen II	36	15	7	14	53	47	6	52	Bremen	-0.67%	
9	VfB Lübeck	36	15	6	15	53	43	10	51	Lübeck	0.31%	
10	Fortuna Düsseldorf	36	13	12	11	50	47	3	51	Düsseldorf	-1.41%	
11	Rot-Weiß Erfurt	36	13	11	12	41	44	-3	50	Erfurt	-0.20%	
12	1. FC Union Berlin	36	13	9	14	45	39	6	48	Berlin	3.76%	
13	Rot Weiss Ahlen	36	13	9	14	48	52	-4	48	Ahlen	0.86%	
14	Borussia Dortmund II	36	14	6	16	42	47	-5	48	Dortmund	1.82%	
15	Holstein Kiel	36	13	9	14	42	52	-10	48	Kiel	-0.28%	
16	Bor. Mönchengladbach II	36	9	8	19	45	62	-17	35	Mönchengladb.	7.54%	
17	Bayer Leverkusen II	36	8	10	18	40	58	-18	34	Leverkusen	0.01%	
18	Hertha BSC II	36	8	8	20	31	55	-24	32	Berlin	3.76%	
19	SV Wilhelmshaven	36	7	9	20	40	69	-29	30	Wilhelmshaven	-3.43%	

Notes: The table shows the results of the final table of the German Regionalliga Nord (3rd soccer division) at the end of the season 2006/2007. The last column shows the percentage change of sports club members in the respective city from 2007 to 2008. The mean of the sports club member growth of cities with promoted teams is 1.87%, of cities with almost promoted teams -3.67% and of all other cities in the table 1.15%.

Table 3: Sport clubs and far-right populist voting in German cities

	<i>Far-right populist vote share</i>		
	(1)	(2)	(3)
Sports club members <sub><i>t</i>-1</sub>	0.0035*** (0.0012)	0.0031*** (0.0012)	0.0032*** (0.0012)
Mean dep. var.	2.826	2.826	2.826
Years	2001-2012	2001-2012	2001-2012
Cities	1,554	1,554	1,554
Obs.	5,060	5,060	5,060
Year fixed effects	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes
Demography controls	No	Yes	Yes
Labor market controls	No	No	Yes
Within R <sup>2</sup>	0.910	0.912	0.913

*Notes:* The table shows the results of fixed effects OLS regressions with far-right populist vote shares in German national elections as dependent variable. The main explanatory variable are sports club members (per 100 capita). German cities with a population of 10,000 and more are the unit of observation. We add control variables in columns (2) and (3). Demography controls are total population (log) and the population share of women, labor market controls are local jobs per capita, inward commuters per capita and unemployed per capita. Significance levels (standard errors clustered at the city level in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.

Table 4: Effects of promoted local soccer teams

	<i>Sports club members</i>			<i>Far-right populist vote share</i>		
	(1)	(2)	(3)	(4)	(5)	(6)
Promotion <sub><i>t</i>-1</sub>	0.828** (0.400)		0.811* (0.420)	0.395** (0.190)		0.390** (0.190)
Missed on promotion <sub><i>t</i>-1</sub>		-0.198 (0.556)	-0.097 (0.571)		-0.075 (0.111)	-0.051 (0.111)
<i>t</i> -test						
(Promotion <sub><i>t</i>-1</sub>			0.908			0.441**
– Missed on promotion <sub><i>t</i>-1</sub> )			(0.591)			(0.214)
Mean dep. var.	25.662	25.662	25.662	4.054	4.054	4.054
Years	2001-2012	2001-2012	2001-2012	1990-2017	1990-2017	1990-2017
Cities	1,582	1,582	1,582	1,974	1,974	1,974
Obs.	12,871	12,871	12,871	12,530	12,530	12,530
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Within R <sup>2</sup>	0.003	0.003	0.003	0.831	0.830	0.831

*Notes:* The table shows the results of fixed effects OLS regressions with sports club members (per 100 capita) and far-right populist vote shares in German national elections as dependent variables. The main explanatory variable is a dummy variable  $Promotion_{t-1}$  taking on the value of 1 in the year after a local soccer team was promoted to a higher division (zero otherwise). The variable  $Missed\ on\ promotion_{t-1}$  takes on the value of 1 in the year after a local soccer team marginally missed on promotion (zero otherwise). German cities with a population of 10,000 and more are the unit of observation. Controls are total population (log) and the population share of women. Significance levels (standard errors clustered at the city level in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.



Table 5: Effects of promoted local soccer teams

	<i>Sports club members</i>	<i>Far-right populist vote share</i>
	(1)	(2)
Promotion <sub>t-1</sub>	1.418* (0.738)	0.499* (0.278)
Mean dep. var.	25.157	2.958
Years	2001-2012	1990-2017
Cities	106	167
Obs.	345	331
Controls	Yes	Yes
Within R <sup>2</sup>	0.056	0.838

*Notes:* The table shows the results of fixed effects OLS regressions with sports club members (per 100 capita) and far-right populist vote shares in German national elections as dependent variables. The main explanatory variable is a dummy variable  $Promotion_{t-1}$  taking on the value of 1 in the year after a local soccer team was promoted to a higher division (zero otherwise). German cities with a population of 10,000 and more are the unit of observation. Controls are total population (log) and the population share of women. Significance levels (standard errors clustered at the city level in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.

Table 6: Event studies around promotion

	<i>Sports club members</i>		<i>Far-right populist vote share</i>	
	(1)	(2)	(3)	(4)
Promotion <sub>t+3</sub>	0.398 (0.735)	0.333 (0.733)	0.164 (0.192)	0.088 (0.167)
Promotion <sub>t+2</sub>	0.759 (0.825)	0.736 (0.823)	0.099 (0.224)	0.069 (0.209)
Promotion <sub>t+1</sub>	– –	– –	– –	– –
Promotion <sub>t</sub>	1.898** (0.887)	1.901** (0.890)	0.144 (0.214)	0.075 (0.192)
Promotion <sub>t-1</sub>	1.773** (0.731)	1.775** (0.734)	0.534* (0.298)	0.439 (0.278)
Promotion <sub>t-2</sub>	1.145 (0.847)	1.176 (0.848)	0.167 (0.241)	0.105 (0.223)
Promotion <sub>t-3</sub>	1.047 (0.777)	1.062 (0.782)	-0.111 (0.189)	-0.147 (0.181)
Promotion <sub>t-4</sub>	0.977 (1.007)	1.024 (1.014)	0.204 (0.202)	0.054 (0.188)
Promotion <sub>t-5</sub>	0.841 (0.940)	0.915 (0.943)	0.092 (0.251)	0.039 (0.230)
Promotion <sub>t-6</sub>	0.738 (0.781)	0.790 (0.783)	0.035 (0.183)	-0.053 (0.159)
Mean dep. var.	25.662	25.662	4.054	4.054
Years	2001-2012	2001-2012	1990-2017	1990-2017
Cities	1,582	1,582	1,974	1,974
Obs.	12,871	12,871	12,530	12,530
Year fixed effects	Yes	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes
Within R <sup>2</sup>	0.003	0.004	0.821	0.831

*Notes:* The table shows the results of fixed effects OLS regressions with sports club members (per 100 capita) and far-right populist vote shares in German national elections as dependent variables. The main explanatory variables are a dummy variables  $Promotion_{t+T}$  taking on the value of 1 in year  $T = +3, \dots, -6$  before/after a local soccer team was promoted to a higher division (zero otherwise). German cities with a population of 10,000 and more are the unit of observation. Controls are total population (log) and the population share of women. Significance levels (standard errors clustered at the city level in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.

## A Online Appendix: Supplementary material

Table A1: Number of German soccer divisions and teams by division

	Divisions				Teams			
	1	2	3	4	1	2	3	4
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1990	1	1	8	21	18	20	139	348
1991	1	1	8	36	18	20	138	564
1992	1	1	10	27	20	24	175	443
1993	1	1	10	26	18	24	171	430
1994	1	1	10	26	18	20	166	432
1995	1	1	4	10	18	18	72	165
1996	1	1	4	10	18	18	73	168
1997	1	1	4	10	18	18	72	164
1998	1	1	4	10	18	18	72	165
1999	1	1	4	10	18	18	71	166
2000	1	1	4	10	18	18	74	169
2001	1	1	2	10	18	18	37	186
2002	1	1	2	10	18	18	36	181
2003	1	1	2	10	18	18	37	182
2004	1	1	2	10	18	18	36	182
2005	1	1	2	9	18	18	37	163
2006	1	1	2	9	18	18	37	158
2007	1	1	2	9	18	18	37	159
2008	1	1	2	9	18	18	37	158
2009	1	1	1	3	18	18	20	54
2010	1	1	1	3	18	18	20	54
2011	1	1	1	3	18	18	20	54
2012	1	1	1	3	18	18	20	55
2013	1	1	1	5	18	18	20	93
2014	1	1	1	5	18	18	20	90
2015	1	1	1	5	18	18	20	88
2016	1	1	1	5	18	18	20	91
2017	1	1	1	5	18	18	20	91

*Notes:* The table shows the number of divisions and teams in the top four divisions of the German (male) soccer league between 1990 and 2017. The first division is the *Bundesliga*.

Table A2: Characteristics of promoted and not promoted soccer teams

	Mean			Obs. Period
	Promotion	Missed on promotion	All others	
	(1)	(2)	(3)	
Position	1.646	3.563	10.775	1990-2017
Matches	32.594	32.443	32.564	1990-2017
Wins	20.076	16.786	10.813	1990-2017
Draws	7.659	8.271	8.497	1990-2017
Losses	5.176	7.609	13.512	1990-2017
Goals scored	67.466	60.083	45.251	1990-2017
Goals received	30.552	37.400	52.255	1990-2017
Goal difference	37.124	22.933	-6.832	1990-2017
Points	58.791	51.086	36.070	1990-2017
Promotion game	0.180	0.063	0.029	1990-2017
Flight	3.559	3.662	3.427	1990-2017
Obs.	556	1,035	6,386	1990-2017

*Notes:* The table reports the mean team statistics for German soccer teams promoted to a higher division (column (1)), teams which marginally missed on promotion (column (2)), and all other teams (column (3)).

Table A3: Characteristics of cities with and without a promoted local soccer team

	Mean				Obs. Period
	Promotion	Missed on promotion	All others	No team	
	(1)	(2)	(3)	(4)	
<i>Main variables</i>					
Far-right populist vote share	2.557	2.863	3.363	4.159	1990-2017
Sports club members	25.022	25.150	25.304	25.702	2001-2012
Promotion	1	0.081	0	0	1990-2017
Missed on promotion	0.146	1	0	0	1990-2017
<i>Control variables</i>					
Population (log)	11.917	11.585	10.991	9.876	1990-2017
Population share of women	51.574	51.561	51.461	51.080	1990-2017
Local jobs per capita	37.475	34.472	32.776	28.107	1993-2017
Inward commuters per capita	49.752	48.814	52.041	60.524	1993-2017
Unemployed per capita	2.686	2.571	2.897	2.941	1998-2017
Obs.	487	873	3,591	39,452	1990-2017

*Notes:* The table reports the mean statistics for cities with a local soccer team promoted to a higher division (column (1)), cities with a local soccer team which marginally missed on promotion (column (2)), cities with all other teams (column (3)), and cities without a soccer team in one of the four top divisions of the German (male) soccer league (column (4)). If cities have several local soccer team, one team could have been promoted to a higher division in one year while another team marginally missed on promotion in the same year. Therefore, the mean of *Missed on promotion* in column (1) and of *Promotion* in column (2) are not exactly 0.

Table A4: Robustness tests

<i>Far-right populist vote share</i>							
Base	More far-right	No controls	More controls	+/-2	2002-2017	Cities with teams	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Promotion <sub>t-1</sub>	0.390** (0.190)	0.408** (0.189)	0.409** (0.197)	0.344 (0.214)	0.435** (0.211)	0.599** (0.296)	0.419* (0.225)
Missed on promotion <sub>t-1</sub>	-0.051 (0.111)	-0.019 (0.114)	-0.079 (0.112)	-0.098 (0.155)	-0.023 (0.133)	-0.085 (0.192)	-0.019 (0.111)
<i>t-test</i>							
(Promotion <sub>t-1</sub>	0.441**	0.427**	0.488**	0.442*	0.458*	0.684**	0.438*
- Missed on promotion <sub>t-1</sub> )	(0.215)	(0.210)	(0.227)	(0.241)	(0.245)	(0.329)	(0.234)
Mean dep. var.	4.054	4.289	4.054	4.651	4.054	4.924	3.115
Years	1990-2017	1990-2017	1990-2017	1998-2017	1990-2017	2002-2017	1990-2017
Cities	1,974	1,974	1,974	1,697	1,974	1,672	422
Obs.	12,530	12,530	12,530	9,571	12,530	7,966	1,274
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	No	Yes	Yes	Yes	Yes
Within R <sup>2</sup>	0.831	0.824	0.821	0.870	0.831	0.847	0.837

*Notes:* The table shows the results of fixed effects OLS regressions with far-right populist vote shares in German national elections as dependent variable. The main explanatory variable is a dummy variable  $Promotion_{t-1}$  taking on the value of 1 in the year after a local soccer team was promoted to a higher division (zero otherwise). The variable  $Missed\ on\ promotion_{t-1}$  takes on the value of 1 in the year after a local soccer team marginally missed on promotion (zero otherwise). German cities with a population of 10,000 and more are the unit of observation. Column (1) reproduces our baseline findings in column (6) in Table 4. Column (2) includes fringe far-right populist parties. We exclude controls in column (3) and add more controls in column (4). Column (5) uses only the two teams closest to promotion. We use subsamples for the years 2002 to 2017 in column (6) and only cities with a local soccer team in column (7). Significance levels (standard errors clustered at the city level in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.

Table A5: Robustness tests

	<i>Far-right populist vote share</i>						
	Base	More far-right	No controls	More controls	+/-2	2002-2017	Cities with teams
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Promotion <sub>t-1</sub>	0.499* (0.278)	0.466* (0.266)	0.561* (0.328)	0.544* (0.286)	0.393 (0.301)	0.706 (0.425)	0.499* (0.278)
Mean dep. var.	2.958	3.209	2.958	3.371	3.115	3.430	2.958
Years	1990-2017	1990-2017	1990-2017	1998-2017	1990-2017	2002-2017	1990-2017
Cities	167	167	167	114	142	98	167
Obs.	331	331	331	234	245	181	331
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	No	Yes	Yes	Yes	Yes
Within R <sup>2</sup>	0.838	0.825	0.812	0.883	0.852	0.883	0.838

*Notes:* The table shows the results of fixed effects OLS regressions with far-right populist vote shares in German national elections as dependent variable. The main explanatory variable is a dummy variable  $Promotion_{t-1}$  taking on the value of 1 in the year after a local soccer team was promoted to a higher division (zero otherwise). German cities with a population of 10,000 and more are the unit of observation. Column (1) reproduces our baseline findings in column (6) in Table 4. Column (2) includes fringe far-right populist parties. We exclude controls in column (3) and add more controls in column (4). Column (5) uses only the two teams closest to promotion. We use subsamples for the years 2002 to 2017 in column (6) and only cities with a local soccer team in column (7). Significance levels (standard errors clustered at the city level in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.



Table A6: Sports clubs vs. other clubs

	<i>Far-right populist vote share</i>			
	(1)	(2)	(3)	(4)
Sports clubs	1.112*** (0.309)	1.050** (0.400)		
Other clubs			-0.049 (0.070)	-0.042 (0.070)
Mean dep. var.	6.146	6.146	6.146	6.146
Years	2013	2013	2013	2013
Cities	107	107	107	107
Obs.	107	107	107	107
Controls	No	Yes	No	Yes
R <sup>2</sup>	0.088	0.088	0.005	0.049

*Notes:* The table shows the results of OLS regressions with far-right populist vote shares in the German national election 2013 as dependent variable. The main explanatory variables are sports clubs and other clubs and associations (per 1,000 capita, one-year lag). 107 large German cities (*Kreisfreie Städte*) are the unit of observation. We add control variables in columns (2) and (4). Controls are total population (log). Significance levels (robust standard errors in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.

Table A7: Soccer club members vs. other sports club members

	<i>Far-right populist vote share</i>			
	(1)	(2)	(3)	(4)
Soccer club members	0.690*	1.116**		
	(0.366)	(0.450)		
Other sports club members			0.848	0.632
			(0.769)	(0.584)
Mean dep. var.	7.821	7.821	7.821	7.821
Years	2005-2017	2005-2017	2005-2017	2005-2017
States	16	16	16	16
Obs.	48	48	48	48
Year fixed effects	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes
Within R <sup>2</sup>	0.839	0.897	0.858	0.898

*Notes:* The table shows the results of fixed effects OLS regressions with far-right populist vote shares in German national elections as dependent variable. The main explanatory variables are sports club members (per 100 capita, one-year lag) in soccer clubs and in other sports clubs. The 16 German federal states are the unit of observation. We add control variables in columns (2) and (4). Controls are total population (log). Significance levels (standard errors clustered at the state level in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.

Table A8: Evidence from Weimar Germany

	<i>Nazi party vote share</i>			
	Prussian Counties		German cities	
	(1)	(2)	(3)	(4)
Sports club members	0.296*	0.289**	0.045*	0.055**
	(0.178)	(0.174)	(0.025)	(0.025)
Mean dep. var.	3.004	3.004	2.768	2.768
Years	1928	1928	1928	1928
Counties/Cities	536	536	81	81
Obs.	536	536	81	81
Controls	No	Yes	No	Yes
R <sup>2</sup>	0.013	0.015	0.124	0.147

*Notes:* The table shows the results of OLS regressions with the vote share for the Nazi party (*NSDAP*) in the German national election in 1928 as dependent variable. The main explanatory variable are sports club members (per 100 capita, one-year lag). Counties of the former German state of Prussia are the unit of observation in columns (1) and (2), large cities are the unit of observation in columns (3) and (4). Controls are total population (log). Significance levels (robust standard errors in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.

Table A9: Other parties

	<i>Vote share for</i>				<i>Turnout</i>
	Far-right populist	Far-left populist	Center- right	Center- left	
	(1)	(2)	(3)	(4)	(5)
Promotion <sub>t-1</sub>	0.390** (0.190)	-0.158 (0.227)	-0.447 (0.276)	0.160 (0.266)	0.040 (0.206)
Missed on promotion <sub>t-1</sub>	-0.051 (0.111)	0.117 (0.168)	-0.027 (0.180)	-0.106 (0.206)	-0.056 (0.165)
<i>t-test</i>					
(Promotion <sub>t-1</sub> – Missed on promotion <sub>t-1</sub> )	0.441* (0.215)	-0.275 (0.263)	-0.420 (0.289)	0.266 (0.335)	0.096 (0.237)
Mean dep. var.	4.054	6.245	48.177	38.785	76.427
Years	1990-2017	1990-2017	1990-2017	1990-2017	1990-2017
Cities	1,974	1,974	1,974	1,974	1,974
Obs.	12,530	12,530	12,530	12,530	12,530
Year fixed effects	Yes	Yes	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Within R <sup>2</sup>	0.831	0.709	0.594	0.856	0.749

*Notes:* The table shows the results of fixed effects OLS regressions with vote shares for different parties or voter turnout in German national elections as dependent variable. The main explanatory variable is a dummy variable  $Promotion_{t-1}$  taking on the value of 1 in the year after a local soccer team was promoted to a higher division (zero otherwise). The variable  $Missed\ on\ promotion_{t-1}$  takes on the value of 1 in the year after a local soccer team marginally missed on promotion (zero otherwise). German cities with a population of 10,000 and more are the unit of observation. Controls are total population (log) and the population share of women. Significance levels (standard errors clustered at the city level in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.

Table A10: Sample split

	<i>Far-right populist vote share</i>					
	< Median			≥ Median		
	(1)	(2)	(3)	(4)	(5)	(6)
Promotion <sub><i>t</i>-1</sub>	-0.100 (0.082)		-0.101 (0.082)	0.947*** (0.294)		0.947*** (0.295)
Missed on promotion <sub><i>t</i>-1</sub>		0.000 (0.094)	-0.006 (0.096)		-0.059 (0.207)	-0.006 (0.210)
<i>t-test</i>						
(Promotion <sub><i>t</i>-1</sub>			-0.094 (0.117)			0.953*** (0.344)
- Missed on promotion <sub><i>t</i>-1</sub> )						
Mean dep. var.	2.764	2.764	2.764	5.365	5.365	5.365
Years	1990-2017	1990-2017	1990-2017	1990-2017	1990-2017	1990-2017
Cities	1,035	1,035	1,035	939	939	939
Obs.	6,316	6,316	6,316	6,214	6,214	6,214
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Within R <sup>2</sup>	0.942	0.942	0.942	0.866	0.866	0.866

*Notes:* The table shows the results of fixed effects OLS regressions with far-right populist vote shares in German national elections as dependent variable. The main explanatory variable is a dummy variable  $Promotion_{t-1}$  taking on the value of 1 in the year after a local soccer team was promoted to a higher division (zero otherwise). The variable  $Missed\ on\ promotion_{t-1}$  takes on the value of 1 in the year after a local soccer team marginally missed on promotion (zero otherwise). German cities with a population of 10,000 and more are the unit of observation. Controls are total population (log) and the population share of women. We split the sample into cities below and above median far-right populist vote shares (normalized by national vote share, average over 1990–2017). Significance levels (standard errors clustered at the city level in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.

Table A11: SOEP microdata

	<i>Far-right populist party preference</i>	
	(1)	(2)
Active in sports	0.0009 (0.0012)	-0.0002 (0.0004)
Mean dep. var.	0.0062	0.0063
Years	1984-2018	1984-2018
Individuals	9,609	76,392
Obs.	22,379	371,891
Year fixed effects	Yes	Yes
Individual fixed effects	No	Yes
(Within-) R <sup>2</sup>	0.0023	0.0047

*Notes:* The table shows the results of pooled OLS (column (1)) and fixed effects OLS (column (2)) regressions with far-right populist party affiliation as dependent variables. The main explanatory variables is a dummy variable *Active in sports* taking on the value of 1 if somebody actively participated in sports. Significance levels (standard errors clustered at the city level in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.

Table A12: Effects of relegated local soccer teams

	<i>Sports club members</i>			<i>Far-right populist vote share</i>		
	(1)	(2)	(3)	(4)	(5)	(6)
Relegation <sub><i>t</i>-1</sub>	-0.235 (0.398)		-0.238 (0.406)	0.093 (0.081)		0.098 (0.081)
Missed on relegation <sub><i>t</i>-1</sub>		-0.024 (0.439)	-0.049 (0.449)		0.099 (0.115)	0.105 (0.115)
<i>t-test</i>						
(Relegation <sub><i>t</i>-1</sub>			-0.189 (0.516)			-0.008 (0.139)
- Missed on relegation <sub><i>t</i>-1</sub> )						
Mean dep. var.	25.662	25.662	25.662	4.054	4.054	4.054
Years	2001-2012	2001-2012	2001-2012	1990-2017	1990-2017	1990-2017
Cities	1,582	1,582	1,582	1,974	1,974	1,974
Obs.	12,871	12,871	12,871	12,530	12,530	12,530
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Within R <sup>2</sup>	0.003	0.003	0.003	0.830	0.830	0.830

*Notes:* The table shows the results of fixed effects OLS regressions with sports club members (per 100 capita) and far-right populist vote shares in German national elections as dependent variables. The main explanatory variable is a dummy variable *Relegation<sub>*t*-1</sub>* taking on the value of 1 in the year after a local soccer team was relegated to a lower division (zero otherwise). The variable *Missed on relegation<sub>*t*-1</sub>* takes on the value of 1 in the year after a local soccer team marginally missed on relegation (zero otherwise). German cities with a population of 10,000 and more are the unit of observation. Controls are total population (log) and the population share of women. Significance levels (standard errors clustered at the city level in brackets): \*\*\* 0.01, \*\* 0.05, \* 0.1.

## B Online Appendix: Data description and sources

We compile a new dataset at the level of German cities with a population of 10,000 and more. We track all local government mergers as best as possible to reproduce a consistent territorial status as of 2017 for all years.

### B.1 Election data

**National elections 1990, 1994, 1998, 2002, 2005, 2009, 2013, 2017:** We retrieved data at the city level from the website of the Federal Returning Officer (*Bundeswahlleiter*): <http://www.bundeswahlleiter.de>. The 1990 election was in December, all other elections took place in late September or October. We compute far-right vote shares as total sum of votes (*Zweitstimmen*) for *DVU*, *NPD*, *REP* and the *AfD* (*Alternative für Deutschland*) over all valid votes.

**National election 1928:** We use election data for the 1928 national election at the level of German cities. Data are from *Statistik des Deutschen Reichs (1930), Band 372/II, Die Wahlen zum Reichstag am 20. Mai 1928 (Vierte Wahlperiode), Heft II, Berlin: Reimar Hobbing*. We also collect county-level data for the state of Prussia from the same publication. We compute vote shares of the Nazi party (*NSDAP*) as votes over total valid votes.

### B.2 Sports club member data

**Sports club members 2001–2012:** We use data on the total number of sports club members and clubs by 31st December for cities with a population of 10,000 and more. We take data from the 1st of January of the following year (e.g., data as of 1 January 2002 for 31 December 2001). Data are from the Annual Statistical Yearbook (*Statistisches Jahrbuch Deutscher Gemeinden*) published by the Association of German Cities (*Deutscher Städtetag*). Volumes 89 (2002) to 100 (2013) include city data on sports club members. We exclude the top 1% in the distribution of sports club membership rates.

**Sports club members 1927:** We use data on the total number of sports club members on 1st April 1928 at the level of German cities with a population of 50,000 and more. Data are



from volume 24 (1929) of the Annual Statistical Yearbook (*Statistisches Jahrbuch Deutscher Gemeinden*) published by the Association of German Cities (*Deutscher Städtetag*). We also collect county-level data for the state of Prussia for 1st January 1928 from *Mallwitz, A. (1928), Quellenwerk zur I. amtlichen Statistik des Freistaates Preußen über Turnen, Sport, Wandern, Kassel: Rudolph'sche Verlagsanstalt*. Both statistics come with population data.

**Soccer and other sports club members 2004–2017:** We obtain data on members of German soccer clubs and other sports clubs at the level of German states from the German Olympic Sports Confederation (*DOSB*). We are highly indebted to Sandra Bösel for sharing the data.

**Others clubs:** We use data on the number of all registered clubs in large German cities (*Kreisfreie Städte*) provided by Axel Franzen (University of Bern). We subtract the number of sports clubs (see above) to derive the number of other clubs.

### B.3 Soccer league data

**Final soccer division tables 1990–2019:** We collect and digitize the final tables for the first, second, third and fourth division of the German soccer league from various online sources. Table A1 provide an overview. Tables are finalized after the last game played, usually in May. In some years, there were multiple divisions per division. We also code which teams were promoted and relegated to other divisions. Teams promoted to the next division were coded as ‘promoted’, teams missing promotion by one, two, or three ranks are coded as ‘almost promoted’. We count whether and how many teams per city were promoted and relegated.

### B.4 Controls

**Population 1990–2017:** Total and female city population for 31st December is collected from the annual directory of German municipalities (*Gemeindeverzeichnis*) published by the Federal Statistical Office of Germany.

**Jobs per capita 1994–2017:** We compute the total number of jobs per capita and for all cities. Data are from annual publications of the Federal Employment Agency (*Sozialversicherungspflichtig Beschäftigte am Stichtag 30. Juni*).

**Share of in-commuters 1994–2017:** We compute the share of in-commuting workers per capita. Data are from annual publications of the Federal Employment Agency (*Sozialversicherungspflichtig Beschäftigte am Stichtag 30. Juni*).

**Unemployed per capita 1998–2017:** We use the total number of unemployed per capita. Data are from annual publications of the Federal Employment Agency (*Arbeitslose nach Gemeinden*).

## B.5 SOEP micro data

We have used the 2020 data update of the SOEP Socio-Economic Panel survey in Germany Table A11 (*Socio-Economic Panel (SOEP), data for years 1984-2020, SOEP-Core v37, EU Edition, 2022, doi:10.5684/soep.core.v37eu. Goebel, Jan, Markus M. Grabka, Stefan Liebig, Martin Kroh, David Richter, Carsten Schröder, and Jürgen Schupp. 2019. The German Socio-Economic Panel (SOEP). Jahrbücher für Nationalökonomie und Statistik (Journal of Economics and Statistics) 239 (2), 345-360. (<https://doi.org/10.1515/jbnst-2018-0022>)*).