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289 Report by Christian Franz, Marcel Fratzscher, and Alexander S. Kritikos

At opposite poles: how the success of the Green Party and AfD reflects the geographical and social cleavages in Germany

- At 2019 European election, Green Party gathered many votes in economically sound districts and those with a young population
- AfD was successful in districts where the economy fares less well, many old people live and jobs are at risk
- Cleavage was more pronounced than at 2017 parliamentary election

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AT A GLANCE

At opposite poles: how the success of the Green Party and AfD reflects the geographical and social cleavages in Germany

By Christian Franz, Marcel Fratzscher, and Alexander S. Kritikos

- Study examines which structural factors explain the district-level performance of the Green Party and AfD in the 2019 European election
- Higher approval for Green Party in economically strong, demographically younger districts with solid economic structures
- AfD's vote share higher where the economic situation is less favourable, the population has been decreasing, and threat of job loss due to automation trends is higher
- Comparison with 2017 German parliamentary election confirms increasing polarization
- Inequality in living conditions reinforces the pressure of political parties to act

Different living conditions among districts in Germany strongly reflected in 2019 European election results for Green Party and AfD

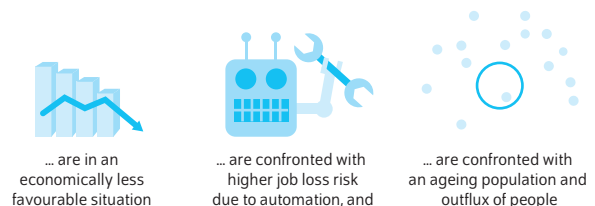
Green Party

Districts with high vote shares for Greens ...



AfD

Districts with high vote shares for AfD ...



Sources: own depiction.

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FROM THE AUTHORS

"The European election revealed the shift in Germany's political landscape: voters are turning away from the grand coalition and towards the Green Party, while the AfD is consolidating its strength. Our analysis finds that those two parties are successful in different regions with opposing economic, structural, and demographic characteristics."

— Alexander S. Kritikos, author —

MEDIA



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At opposite poles: how the success of the Green Party and AfD reflects the geographical and social cleavages in Germany

By Christian Franz, Marcel Fratzscher, and Alexander S. Kritikos

ABSTRACT

German voters in the 2019 European election showed remarkable regional differences in their voting behavior. The Green Party surged in West German districts, while the AfD further consolidated its successes in East Germany. Investigating structural differences at the district level reveals that the Green party is particularly popular in economically strong, demographically young, and dynamic districts with solid economic structures. The AfD receives more support in economically weaker, vulnerable districts where demographics skew toward the older population because younger people have moved away. The strength of both the Green Party and the AfD is less due to current economic growth, but rather structural and demographic factors. Thus, the Green Party and the AfD reflect polarities not only in the political arena, but also in Germany's new social divide at the district level.

Since 2005, Germany has basically been governed by a so-called grand coalition of the Christian Democratic Union/Christian Social Union parties (CDU/CSU) and the Social Democratic Party (SPD) – with one four-year interruption. While many voters most likely view the situation as very consensus-oriented, new lines of conflict, ranging from immigration to climate change, emerged, and have come to dominate the political agenda. Simultaneously, diverging economic living conditions in German regions are an increasingly important issue in Germany, as confirmed by a recent report.¹ With all this in mind, the key question is to what extent the German political parties have been successful at addressing the disparate voters who reflect Germany's growing divide in living conditions.

In the European elections on May 26, 2019, two parties had a decisive influence on the issues of the electoral campaign: the Green Party (*Bündnis90/Die Grünen*) and AfD (*Alternative für Deutschland*). In the federal parliament (*Bundestag*), both parties are currently in opposition. However they stand for completely opposite policy positions regarding globalization, migration, and the climate. With 20.5 percent of the vote, The Green Party became the second strongest German party in the European parliament, more than doubling their 2017 vote share (see Figure 1).² At 22.2 percent, their results in western Germany were particularly outstanding, but, at 10.3 percent in the eastern part, they were only the fifth strongest party. The AfD earned 11 percent of the votes nationally, but 22 percent of the vote in eastern Germany and 8.8 percent in the western part of the country. This result puts the AfD almost neck-and-neck with the CDU in the eastern part.

Earlier studies at the German Institute for Economic Research (DIW Berlin)³ show that the majority of Green Party voters live in major cities, are well educated (most have a university

¹ See Federal Ministry of the Interior, Building, and Community, "Unser Plan für Deutschland – Gleichwertige Lebensverhältnisse überall" (2019) (in German; available online, accessed July 23, 2019; this applies to all other online sources in this report unless stated otherwise).

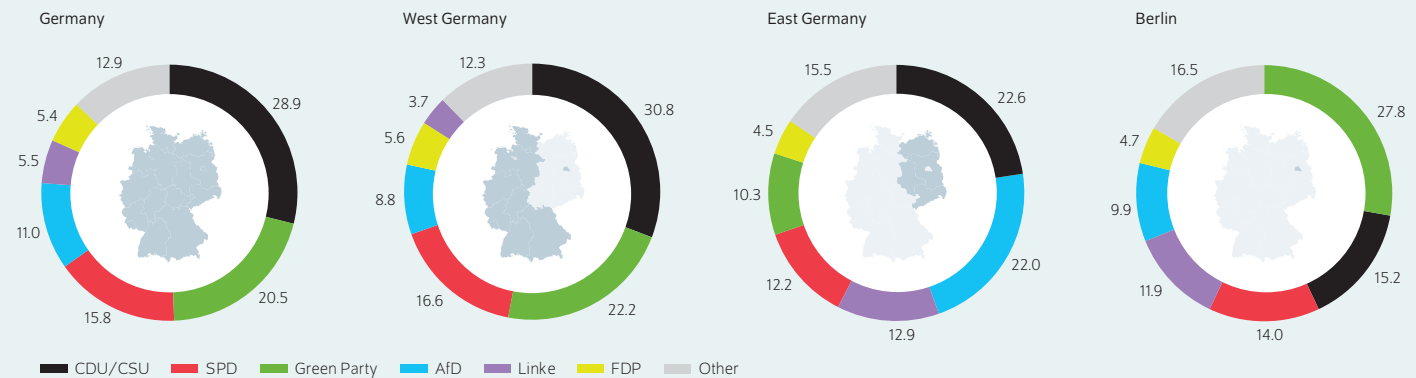
² Also see Martin Kroh and Jürgen Schupp, "Alliance '90/The Greens at the Crossroads: on their way to becoming a mainstream party?" *DIW Economic Bulletin* no. 3 (2011): 25–32 (available online). As early as 2011, the authors pointed out that the Green Party had the potential to become a mainstream party.

³ See Karl Brenke and Alexander Kritikos, "Wählerstruktur im Wandel," *DIW Wochenbericht*, no. 29 (2017): 595–606 (in German; available online).

Figure 1

Results of the European Election 2019 in Germany

Vote shares in percent



Source: Federal Returning Officer; indicators and maps of the Federal Office for Building and Regional Planning (INIKAR); authors' own calculations.

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The Greens won large vote shares particularly in western Germany and Berlin.

degree), and are younger. The proportion of salaried employees and civil servants is also high. Typically, the Green Party has been relatively unsuccessful in addressing laborers and salaried employees with jobs requiring less skills, the two groups that make up a disproportionately high percentage of AfD voters. At the same time, the AfD predominates in smaller communities as well as among persons who graduated from middle school in tenth grade. In comparison to population averages, the AfD's constituency contains a disproportionately high number of self-employed persons along with fewer salaried employees and university graduates.⁴

This weekly report examines the extent to which the social polarity resulting from different life circumstances is reflected in the vote shares of those two parties,⁵ analyzing three dimensions to do so. First, the economic situation, or strength of specific districts, is measured based on people's participation in income growth, the level of disposable income, and local unemployment rates.⁶ The second dimension is the economy's structural vulnerability: the automation of many processes (due to digitalization, for example) has created "winners" who have found new professional opportunities. At the same time, there are also many potential losers, such as workers who fear losing their job or those

who have already become unemployed.⁷ Third, we analyzed demographic trends. The population in some of Germany's regions is growing, including an influx of people from other parts of the country, while others are confronted with population loss. In the long term, this will have enormous effects on the regions' economic and social prospects; it is likely to have already impacted election results.⁸

This weekly report discusses the context that links these economic, structural, and demographic characteristics of individual rural and urban districts (called districts in the following) to the election success of the Green Party and the AfD. The decisions of individual voters are not part of the analysis. Instead the study examines the influence of a district's structural characteristics on the election results in the overall district. In addition to the election results in the country's 401 districts, the study is based on relevant structural data on the district level. These data are available for almost all districts and the analysis is carried out on the basis of 398 districts (see box). At first, the inequality in life circumstances among Germany's districts is illustrated.

⁴ For more on the AfD voters' profile, see Martin Kroh and Karolina Fetz, "Das Profil der AfD-AnhängerInnen hat sich seit Gründung der Partei deutlich verändert," *DIW Wochenbericht*, no. 34 (2017): 595–606 (in German; available online).

⁵ The influence of social change on changing party preference has already been discussed for Germany. See Rainer Schnell and Ulrich Kohler, "Empirische Untersuchung einer Individualisierungstheorie am Beispiel der Parteipräferenz von 1953–1992," *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 47 (1995): 634–657; and Walter Müller, "Klassenstruktur und Parteiensystem. Zum Wandel der Klassenspaltung im Wahlverhalten," *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 50 (1998): 3–46.

⁶ For information on the influence of economic variables on voting behavior, see Anthony Downs, *An Economic Theory of Democracy*, (New York: Harper & Row, 1957).

⁷ The observations on the rise of right-wing populist parties in Europe, the electoral victory of Donald Trump in the U.S., and the success of the Leave campaign in the United Kingdom gave renewed rise to the question of whether or not these developments are correlated to a new policy-oriented and normative cleavage. For a discussion of the cleavage theory, see Liesbet Hooghe and Gary Marks, "Cleavage theory meets Europe's crises: Lipset, Rokkan, and the transnational cleavage," *Journal of European Public Policy*, 25(1) (2018): 109–135. Around the issue of the winners and losers of globalization in Germany, Michael Zürn identified the Greens as the ideal, typical representatives of cosmopolitanism and the AfD as the representatives of communitarianism. For more information on the concept, see Michael Zürn and Pieter de Wilde, "Debating globalization: cosmopolitanism and communitarianism as political ideologies," *Journal of Political Ideologies*, 21:3 (2016): 280–301.

⁸ There are doubtless other influences on voter behavior alongside these three dimensions: socio-psychological, historical, and politico-cultural, for example. For more information based on the existing East-West German differences, see Felix Arnold, Ronny Freier, and Martin Kroh, "Political Culture Still Divided 25 Years after Reunification?" *DIW Economic Bulletin*, no. 37 (2015): 481–491 (available online).

Box

Data and methodology

Database

The present analysis connects the final results of the 2019 European Parliament and the 2017 German Bundestag (parliament) elections to structural data on the level of the 401 districts in Germany. The structural data of the districts used encompass a total of eight variables (see Table 1).

The 401 districts are divided into 324 districts in western Germany and 76 in eastern Germany. Berlin was excluded from the analyses because there is no disaggregated data for the former eastern and western part of the city. On December 31, 2017, an average of 207,000 people lived in each district (minimum: 34,300; maximum: 3.6 million), of whom on average 154,000 were eligible to vote (minimum: 26,396; maximum: 2.5 million).

The main analysis uses parties' vote shares in the European election. For the analysis of the German parliamentary election in 2017, the results of the "second votes" (*Zweitstimmen*) were analyzed.¹

¹ German voters elect the members of the federal parliament, the Bundestag, according to the principle of *personalized proportional representation*. Eligible voters elect at least 598 representatives, 299 of whom are directly elected in Germany's 299 voting districts. The other half receive their seats in the Bundestag via the parties' state candidate lists. Accordingly, each voter has two votes. The second vote determines which party or coalition of parties has the majority in the Bundestag.

The results obtained by the respective parties are calculated on the basis of the absolute number of votes cast for them:

$$\text{Voting shares of the respective party} = \frac{\text{Valid votes for respective party}}{\text{Total number of valid votes}}$$

The structural variables used for the analysis are available for almost all districts for the specified point in time or periods of time. Since the values for the proportion of high school graduates qualified to attend university were not available for Bamberg and Schweinfurt, these two districts were excluded from the analysis. The respective last available observations were used for each of the structural variables included. Plausible time horizons were selected for "average migration balance" and "average change in disposable household income," the variables that represent changes.

Methodology

In the present analysis, the eight structural variables were divided into three categories as follows.

Economic situation: (a) Disposable household income in 2016, (b) Average annual change in disposable household income since 2005, and (c) Unemployment in January 2019.

Table 1

Used variables

Name	Description	Source
Economic situation		
Unemployment	Unemployment rate, January 2019	Federal Returning Officer, raw data from Federal Employment Agency
Disposable income	Disposable income of private households 2016 (Euro per inhabitant)	Federal Returning Officer, raw data from Regional Database Germany
Trend of disposable income	Average annual change of disposable income of private households 2005-2016	Working Group on National Accounting by the German States (Arbeitskreis "Volkswirtschaftliche Gesamtrechnung der Länder")
Structural vulnerability of the economy		
Density of craft businesses	Number of craft businesses per 1,000 inhabitants in 2016	Regional Database Germany
Substitutability potential	Share of employees subject to social insurance requirements in occupations with a high substitutability potential in 2016 (in percent)	Dengler, Matthes and Wydra-Somaggio (2018) (online available)
Demographic trend		
High school graduates qualified to attend university	Share of high school graduates qualified to attend university in all graduates in 2017	Federal Returning Officer, raw data from Regional Database Germany
Average net migration	Average outflux (-) or influx (+) per 1000 inhabitants (averaged over 2000 to 2017)	INKAR data base, Regional Database Germany for 2016 (online available)
Share of people aged 60+	Share of population aged 60 years and older in the total district population (31.12.2017)	Federal Returning Officer, Regional Database Germany

Source: Authors' own compilation.

Structural vulnerability of the economy: (a) Concentration of craft businesses in 2016, and (b) Substitution potential of employees who contribute to the social insurance system.²

Demographic trend: (a) Share of people aged 60 and over in the population in 2017, (b) Average net migration between 2000 and 2017, and (c) Proportion of high school graduates qualified to attend university in 2017.

The structural variables used were aggregated to three factors using principal component analysis. This method allows to extract the statistical variance common to the selected variables and produces components that reflect the total variance. For the purpose of the analysis in this report, it was assumed that the respective first principal component captured the main part of the variance and represents therefore a suitable representation of the underlying variables.

Standardizing the variables

The continuous variables were standardized according to the following scheme in order to achieve a consistent interpretation of the variables: $\hat{x}_i = \frac{x_i - \bar{x}}{\sigma_x}$. The transformed value $\hat{x}_i$ corresponds to the original value x_i minus the arithmetic mean of the variable across all electoral districts divided by the standard deviation of the variable in the data set σ_x . The dependent variables in the regression (each party's vote share) as well as the dummy variable were not transformed. While the value and the interpretation of the estimated coefficients are changed by the transformation, the confidence interval is not.

² Katharina Dengler and Britta Matthes, "The impacts of digital transformation on the labour market: Substitution potentials of occupations in Germany," *Technological Forecasting and Social Change*, Volume 137 (2018): 306–314.

Multivariate regression

After the initial principal components were determined using the methodology described above, the components were used in a multivariate regression analysis (OLS). Alongside an east-west dummy variable, the three variables were used to estimate how strongly they affected the election results in the districts. The model followed the function:

$$Party_i^p = \beta_0 + \beta_1 Economic\ strength_i + \beta_2 Economic\ structure/vulnerability_i + \beta_3 Demographic\ trend_i + \beta_4 DummyEW + \epsilon_i$$

The dependent variable of the voting share of the relevant party p in the voting district i in the 2019 European election is shown as a percentage. The explanatory variables are: (1) *Economic situation* [higher value = more economically attractive, lower value = less economically attractive], (2) *Structural vulnerability* [higher value = more economically vulnerable, lower value = less economically vulnerable], (3) *Demographic trend* [higher value = more demographically attractive, lower value = less demographically attractive], and (4) a dummy variable that differentiated between the eastern and western German voting districts (East = 1). The error term ϵ expresses measurement errors and influences from third variables that were not considered.

Descriptive statistics for the dataset

Table 2 shows descriptive statistics for the variables used here. Unweighted averages are used, meaning differences in the population were not taken into consideration—every electoral district counts as an equivalent observation. This approach explains the deviations from the official statistics.

Table 2

Descriptive statistics

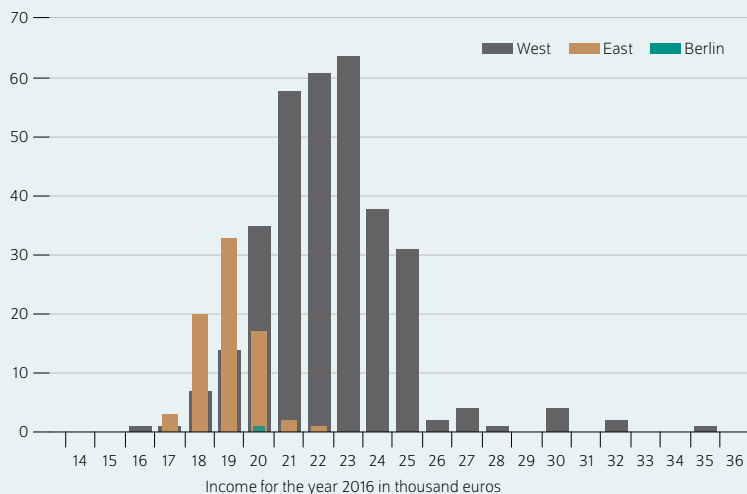
Variable	Mean	Standard deviation	Minimum	Maximum	Units
Disposable income	21,717.5	2,494.1	16,203.0	34,987.0	Euro / year
Trend of disposable income	2.0	0.5	−0.1	3.3	Average y-o-y percentage change
Unemployment	5.1	2.2	1.5	12.8	Percent
Population aged 60+	28.9	3.5	20.5	26.8	Percent in total population
Average net migration	2.7	3.9	−10.3	13.5	Average outflux (−) or influx (+) per 1000 inhabitants
High school graduates qualified to attend university	32.7	8.6	11.1	57.9	Percent of all school graduates
Density of craft businesses	7.2	1.8	3.0	12.8	Craft businesses / 1,000 inhabitants
Substitutability potential	27.4	6.0	14.0	52.0	Percent of employees subject to social insurance requirements

Quelle: Eigene Zusammenstellung.

Figure 2

Distribution of districts by average disposable household income

Number of districts with the respective income



Note: No disaggregated data is available for Berlin.

Source: Federal Returning Officer; raw data from the Regional Database (Regionaldatenbank Deutschland); authors' own calculations.

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Districts with high average income are exclusively located in the west of Germany.

Significant economic, structural, and demographic differences

The average disposable household income in any given district was an average of 21,700 euros nationwide in 2016. It was the lowest in Gelsenkirchen (slightly over 16,200 euros) and the highest in Starnberg with almost 35,000 euros (see Figure 2).⁹ Although the nationwide unemployment rate is very low (5.1 percent in January 2019), there are striking differences here as well. While the Eichstätt and Donau-Ries districts in Bavaria have an unemployment rate of below two percent, in Bremerhaven and Gelsenkirchen around 13 percent of the economically active population is registered as unemployed.

Enormous differences are also apparent when it comes to demographic trends. There are districts in which only one in five persons is 60 or older (for example, Frankfurt am Main and the city of Heidelberg). Other districts have almost twice as many (e.g., Suhl, Dessau-Roßlau, and Altenburger Land – all of which are in eastern Germany) (see Figure 3). Migratory movement is closely linked to this finding, but it only becomes apparent in the long term. The balance of total migration (the difference between influx and outflux per 1,000 residents) between 2000 and 2017 yields a picture that matches the age structure (see Figure 4). In Suhl, for example, ten more persons per 1,000 residents moved away from the urban area than moved to it. Together with Germany's low birthrate, this has led to dramatic depopulation. At the end of 2017, just under 13,000 fewer people lived in Suhl than at the end of 2000.

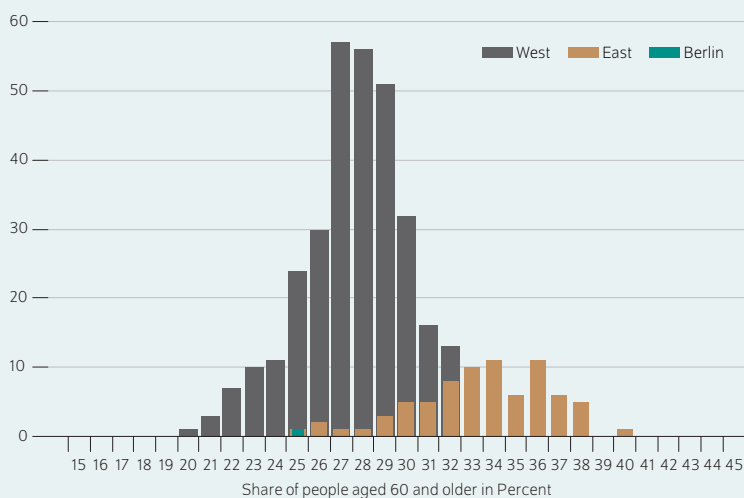
Similar differences become visible when business structures are compared. Considering the concentration of craft businesses in districts as one indicator for economic granularity, for example, yields a result of less than three craft businesses per 1,000 residents (Wolfsburg) in some districts, while in others there are almost 13 (Bad Tölz).¹⁰

Another structural variable picks up on the nationwide debate around globalization and digitalization (keyword: IoT/smart factories, called *Industrie 4.0* in Germany). Workers employed in the manufacturing sector are particularly anxious about losing their jobs due to the rise in automation. The risk does not affect all districts to the same extent. There are districts in which a total of eight percent of all dependent employees work in the manufacturing sector (for example, Potsdam and Bonn), and others in which up to 63 percent do (Tuttlingen). To map the risk of further waves of automation, we used an indicator developed by the Institute for Employment Research (*Institut für Arbeitsmarkt- und Berufsforschung*, IAB): this "substitution potential" indicates

Figure 3

Distribution of districts by share of people aged 60 and older

Number of districts with the respective population share



Note: No disaggregated data is available for Berlin.

Source: Federal Returning Officer; raw data from the Regional Database (Regionaldatenbank Deutschland); authors' own calculations.

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The 'oldest' districts are located in the eastern part of Germany.

⁹ Disposable household income reflects the purchasing power of a district's population. For the analysis of voting decisions, and from an economic perspective, it is more important than GDP per person, which gives more information on the district's economic output. For disparities in GDP per employed person, also see Federal Ministry of the Interior, Building, and Community, "Unser Plan für Deutschland."

¹⁰ A negative correlation was found between the concentration of tradespeople and economic output of a district as measured by GDP per resident. In districts with a higher concentration of tradespeople, economic output tends to be lower.

the extent to which professions or jobs can be replaced by computers or computer-controlled machines (see Figure 5).¹¹

Overall, these data on the district level facilitate a description of the different conditions of the people living there. They still reveal a west-east gap when it comes to demographics in particular. But there are also marked differences among eastern German districts, and therefore east Germany as a whole cannot be designated a “problematic region.” The distribution of disposable household income or the unemployment rate clearly indicate that with regard to social cleavage among its districts, west Germany is confronted with a larger range than its eastern counterpart.

Districts where the AfD or Green Party are very popular differ strongly along all three dimensions

The structural data described above were grouped into three thematic indices (see box) that outline the “economic situation,” “structural vulnerability,” and “demographic trend” for 398 districts. We then analyzed to what extent these variables correlate with the parties’ shares of votes in the 2019 European elections (see table). The focus was on the Green Party and the AfD. The results for the other parties are reported too.

The Green Party’s popularity increases, the better the economic situation of a district, i.e. the lower the unemployment rate and the higher the disposable household income. Likewise, the higher incomes increased over the past ten years, the more popular the Green Party. The Greens are also particularly strong in districts with a positive demographic trend, in regions with comparatively few old people and a high rate of population influx. The Greens are the only party for which there is a correlation between the positive composition of demographic components in the districts and rising popularity. On the contrary, in districts where the risk of job loss due to rising automation is high and the economy is more granular in general, the Greens’ performance is poorer. Accordingly, the Greens appear to be particularly attractive in districts with less manufacturing and more knowledge-intensive services, which are now experiencing strong growth.

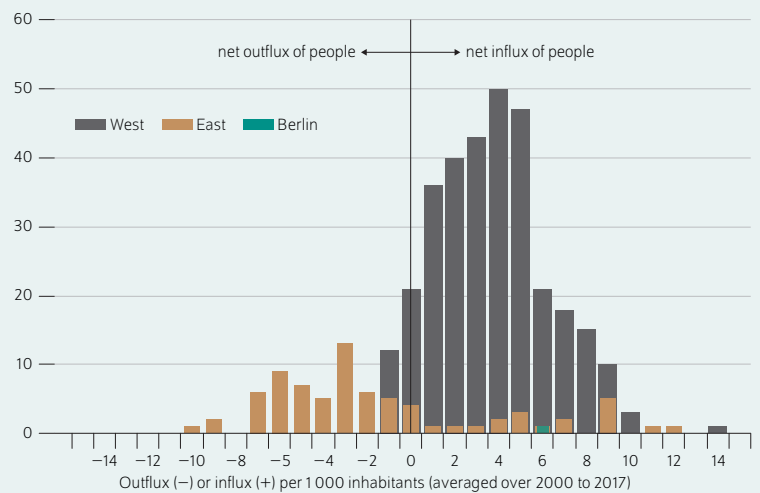
The magnitude of the effect is also informative. A district’s current economic situation (high income or low unemployment) does play a role, but is not as important as a district’s demographic strength and structural vulnerability. In other words, in districts that are demographically young, dynamic, structurally solid, and future-oriented, the Green Party received many votes.

The AfD’s situation looks very different. In general, the larger the structural problems – in particular, where many people are threatened by job loss and the concentration of craft

Figure 4

Distribution of districts by average migration balance

Number of districts with the respective migration balance



Note: No disaggregated data is available for Berlin.

Source: Federal Returning Officer; Regional Database Germany (Regionaldatenbank) for 2016; indicators and maps of the Federal Office for Building and Regional Planning (INIKAR); authors’ own calculations.

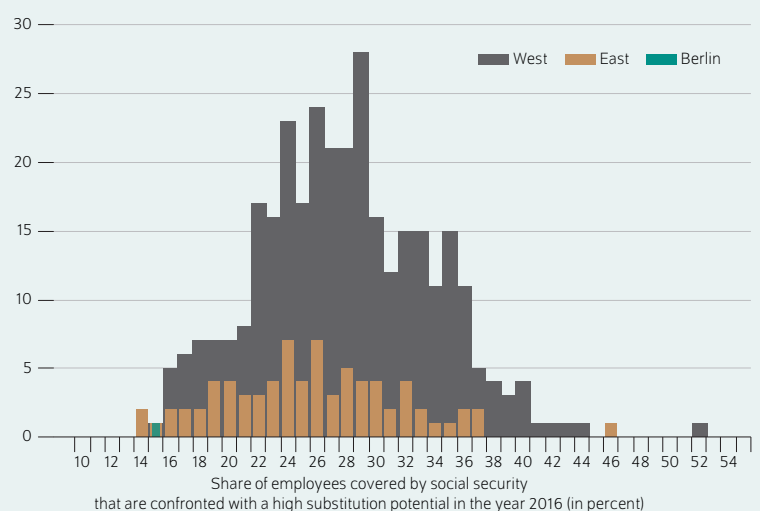
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East German districts have been confronted with a significant outflux of people.

Figure 5

Distribution of districts by substitution potentials of occupations

Number of districts with the respective share of ‘jobs at risk’



Source: Dengler, Matthes und Wydra-Somaggio (2018), a.a.O.; authors’ own illustration.

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There are districts with high substitution potential in across regions in Germany.

¹¹ See Katharina Dengler, Britta Matthes, and Gabriele Wydra-Somaggio, “Digitalisierung in den Bundesländern: Regionale Branchen- und Berufsstrukturen prägen die Substituierbarkeitspotenziale,” IAB-Kurzbericht, 22/2018 (2018) (in German; available online). The two indicators, employed persons in the manufacturing sector and substitution potential, are highly correlated.

Table

Impact of the three dimension¹ on the vote shares of parties in the European Election 2019

Regression results

		Independent Variable: Vote shares in the European election 2019					
Explanatory variables		Union	SPD	Greens	AfD	Linke	FDP
Economic situation/strength	Coefficient	1.538** (0.224)	-1.727*** (0.270)	0.612*** (0.203)	-0.443*** (0.203)	-0.455*** (0.129)	0.202*** (0.071)
Demographic trend	Coefficient	-0.223 (0.279)	-1.520*** (0.319)	1.840*** (0.295)	-0.820*** (0.205)	0.000* (0.138)	-0.116*** (0.098)
Structural vulnerability of the economy	Coefficient	4.239*** (0.315)	-1.846*** (0.420)	-2.915*** (0.269)	0.820*** (0.239)	-0.605*** (0.139)	-0.507*** (0.098)
East/West dummy variable	Coefficient	-10.002*** (0.814)	-8.221*** (0.874)	-5.088*** (0.909)	10.037*** (0.514)	9.427*** (0.502)	-0.445** (0.248)
Constant	Coefficient	33.095*** (0.262)	17.069*** (0.346)	19.215*** (0.271)	9.712*** (0.220)	3.448*** (0.123)	5.111*** (0.056)
F-statistic		151.723	70.532	301.877	478.315	1,377.09	12.772
R ²		0.607	0.418	0.753	0.83	0.935	0.117
Adjusted R ²		0.603	0.412	0.752	0.828	0.934	0.108
Number of districts		398	398	398	398	398	398

1 Economic situation, structural vulnerability of the economy, demographic trend.

Note: Standard errors are noted in brackets.

Reading example: The coefficient of 0,612 (row 1 / column Greens) indicates that an increase of the variable "economic situation" by one standard deviation above the federal average results – ceteris paribus – to a vote share increase by 0,612 percentage points. Significance levels: ***=10 percent, **=5 percent, *=1 percent.

Source: Authors' own calculations.

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businesses is high – the better the AfD did in the European elections. Likewise, the AfD was also strong in districts struggling with population outflux and in those where an above-average proportion of older people live.¹² In districts in which the economic situation is not particularly healthy, the share of AfD votes was higher on average. Similarly to the Green Party, the economic component had less of an impact on the AfD's popularity than the two other factors.

The significance of the coefficients of the east-west dummy variables also confirmed the AfD's strength in eastern Germany and that of the Green Party in western Germany, which to a significant extent could not be explained by the variables in the model.¹³

Results of the Green Party and AfD are well measured by the estimation model – except for some regional particularities

Together with the dummy variable, the three structural factors describe 83 percent of the variation in the share of AfD votes in the 2019 European elections (see table, row 13). With regard to the Green Party, at around 75 percent the model explains the variation little less, but the three structural factors capture a high proportion of the variation in the results of both parties.

For some specific districts, the model explains the election results less well. For the AfD, this applies to all of the districts in Saxony, with the exception of the city of Leipzig. There, the model underestimated the AfD's actual results (see Figure 6). In Mecklenburg-Western Pomerania, on the contrary, the model overestimated the AfD's actual share of votes. Assuming that both the selected variables and the model are able to correctly measure the economic, structural, and demographic situation of a district, these over- and underestimates mean that to a relevant extent, the voting decision in these districts was determined by other factors, such as the regional prominence and popularity of specific candidates. The model underestimated the Greens' share of votes in many districts of Schleswig-Holstein. In Flensburg, for example, the results were over ten percentage points higher than the estimated result. On the contrary, in Saarland and Rhineland-Palatinate the party had a lower share of votes

¹² These results are in line with a recent study by the German Economic Institute (IW Köln): Analyzing 96 German „planning regions“ (Raumordnungsregionen) along the dimensions economy, demography, and infrastructure the study identifies 19 'at-risk' regions. While the definition of the structural variable in that study significantly differs from the definition used here, there are still interesting overlaps. In the 'at-risk' regions, we find that the average vote share for AfD is than in the other districts of the respective Bundesland. Vgl. Christian A. Oberst, Hanno Kempermann und Christoph Schröder (2019): Räumliche Entwicklung in Deutschland. In: Michael Hüther, Jens Südekum und Michael Voigtländer (Hrsg.): Die Zukunft der Regionen in Deutschland. Zwischen Vielfalt und Gleichwertigkeit. IW-Studien – Schriften zur Wirtschaftspolitik aus dem Institut der deutschen Wirtschaft (in German, available online).

¹³ This type of dummy variable does give the systematic differences between east and west as an explanation of the results. Instead, the explanation is the variations within western Germany and within eastern Germany.

Figure 6

Estimated and actual vote shares of AfD and Greens in the districts

European election 2019, y-axis: estimated vote share derived from the model, x-axis: actual vote share in percent



Note: N = 398 districts. Districts got named in the chart when the error was larger than five percentage points (for AfD chart on the left) or larger than eight percentage points (for the Greens chart on the right).

Source: Federal Returning Officer; authors' own calculations.

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In many districts the actual AfD vote shares turned out much higher than what the model would predict. The Greens display higher voter shares particularly in the North of Germany.

than the estimate led us to expect. In the three Bavarian districts of Straubing, Straubing-Bogen, and Eichstätt, the overestimate of the Green Party's results was the highest. Given the excellent economic situation and positive demographic trend there, the Green Party's share of votes was expected to be eight or nine percentage points higher.

Demographic and structural factors more important for AfD and Green Party success than in the parliamentary election

In the last section of the analysis, we examine to what extent the observed pattern differs between the European and the 2017 German parliamentary election. The three variables from the estimation described above were also used to analyze the results of the 2017 election.

It is worth asking whether it makes sense to compare a European election to a national parliamentary election. The European election is not as important to many voters, a fact reflected in voter turnout. In Germany, almost 9.2 million more

people voted in the 2017 parliamentary election than in the European election. The results of small and opposition parties tend to be better in European than in national elections.¹⁴ However, national themes also determine how people vote in the European election. And this year's European election cannot really be compared to the previous one, since the AfD was a very different party with respect to personnel and its agenda in 2014. A comparison of the election results in 2017 and 2019 must be treated with due caution but can nevertheless be informative.

In 2019, the AfD was only able to obtain a higher share of votes than it did in the parliamentary election in 40 of the 401 districts. Thirty-six of those districts were in eastern German states (see Figure 7).¹⁵ The AfD's loss in the two southern German states is striking. Particularly in parts of eastern Bavaria, the party experienced significant losses.

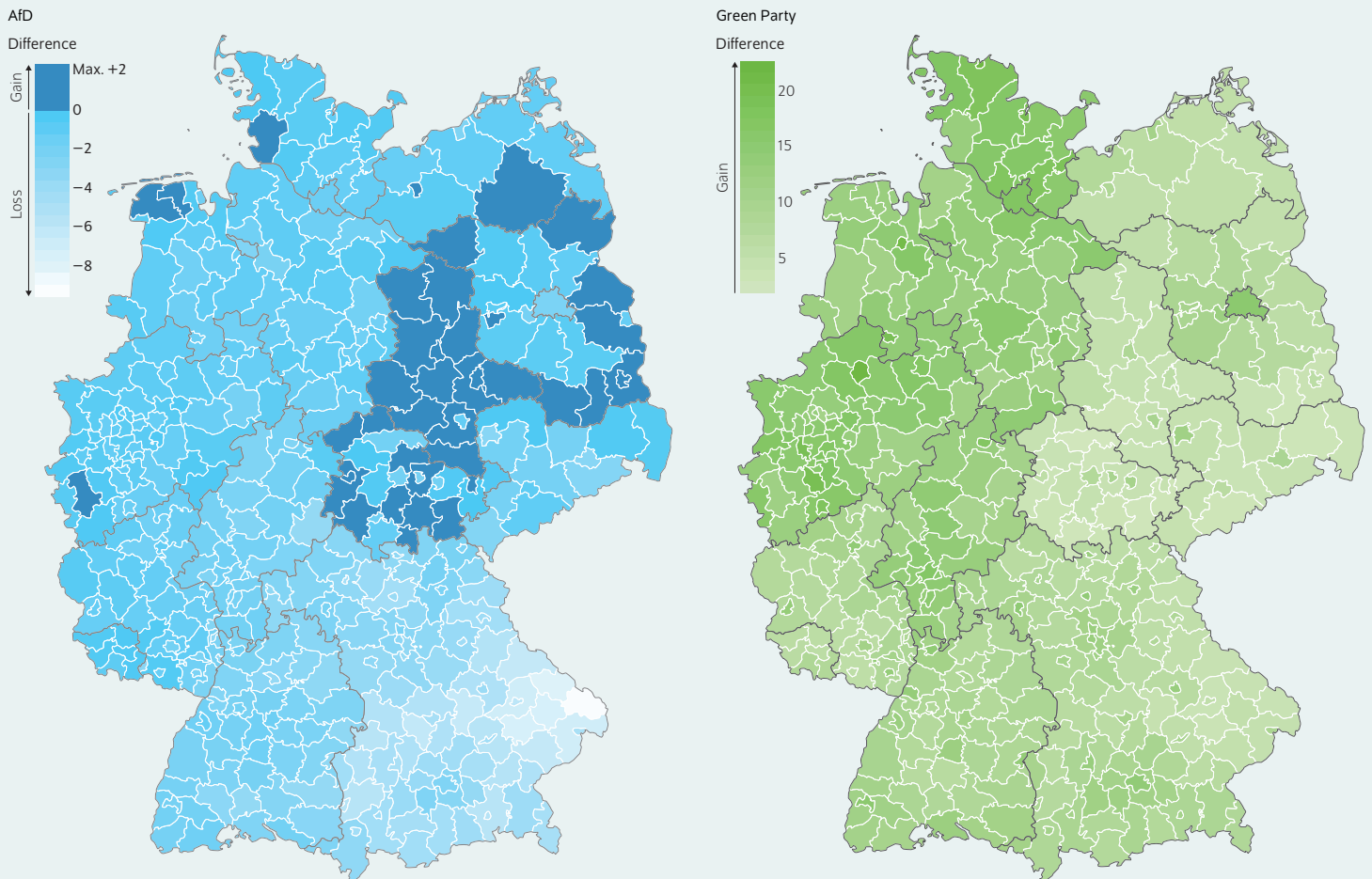
¹⁴ Partially because the European election has always been designated a "second-order national election."

¹⁵ Only four western German districts reported a higher share of AfD votes, but the party's gain in each one was less than one percentage point in comparison to 2017.

Figure 7

Changes in vote shares: European election 2019 vs. Bundestag election 2017

In percentage points



Source: Federal Returning Officer, authors' own calculations.

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For the vast majority of districts, the AfD's vote share turned out lower than in the election 2017. The Greens could increase the vote share in every district as compared to their vote shares in 2017.

On the contrary, the Greens were able to obtain a higher share of votes than in 2017 in each of Germany's 401 districts (see Figure 7). In the western German states, the average increase was significantly higher than in the eastern German ones – with the exception of Berlin. This confirms that the Green Party was able to gain a significantly higher share of the vote in larger cities.¹⁶

In view of these in part considerable changes, we verified the role that the three dimensions studied here played in the changes in shares of votes in comparison to 2017. First, people

in districts with less vulnerable economic structures and positive demographic situations tended to vote for the Green Party in 2017 (see Figure 8). In the European election, these factors had an even stronger influence. The AfD had better results in demographically weaker, structurally vulnerable districts in the 2017 parliamentary election. The correlation did not change in the European election, although the significance of demographic weakness as a characteristic of districts with high proportions of AfD voters increased. And because the party's results in Bavaria and Baden-Württemberg lagged behind those of 2017, structural vulnerability seems to be less important.

The CDU/CSU seems to be the Greens' polar opposite. However, this apparent polarization disappears when the economic strength of districts is considered as well. The

¹⁶ In the list of the ten districts with the largest gains, there are nine urban districts in Schleswig-Holstein (Kiel, Flensburg, Lübeck), Lower Saxony (Oldenburg, Osnabrück), and North Rhine-Westphalia (Münster, Düsseldorf, Cologne, and Bonn). Although the party's gains in eastern German districts were lower on average, some districts there also reported two-digit changes (Potsdam, Leipzig, Rostock, and Jena).

CDU/CSU has better results in economically stronger districts – as does the Green Party, but in contrast to the AfD.

Overall, we observe that the regional polarization in shares of votes existed in both 2017 and 2019.¹⁷ In the case of the Green Party, it actually increased.¹⁸

Conclusion: Germany's social cleavage has changed the nation's political map

The European election revealed a shift in Germany's political landscape: voters are turning away from the grand coalition towards the Green Party, while the AfD is consolidating its position. The analyses carried out here highlight the fact that these two parties are successful in regions with opposing economic, structural, and demographic characteristics. In economically strong regions with a positive migration balance and regions with economic structures that are less vulnerable to change, the Green Party is highly popular. The AfD attracts voters in economically weak, highly structurally vulnerable regions with a high proportion of older residents.

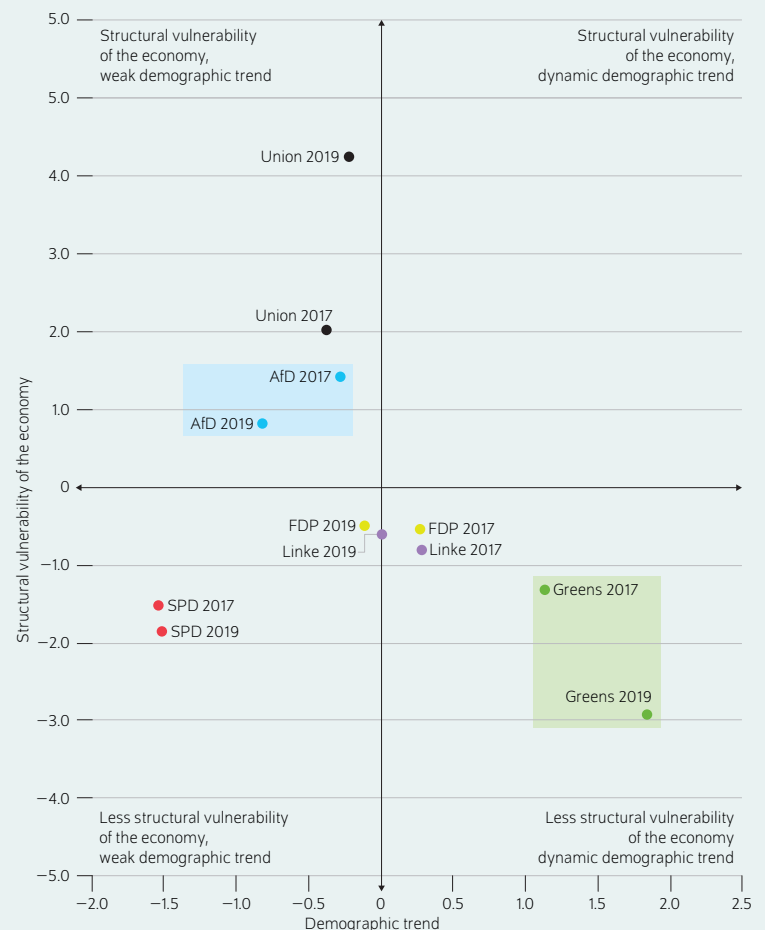
The Greens are strong in districts with positive characteristics, while the AfD is strong in districts with negative characteristics. It is not possible to make such a clear distinction for the other parties in the German Bundestag – including smaller parties like the Free Democratic Party (FDP) and the Left Party (*die Linke*). At the same time, demographic and structural factors are more relevant for the results of both the Green Party and the AfD and the economic situation less so. A comparison with the 2017 parliamentary election confirms increasing polarization along the demographic and structural dimensions.

The results highlight the fundamental demographic problem that some German regions are facing and that is partially responsible for the high approval of the AfD.¹⁹ The structural factor conceals significant economic problems that put a palpable damper on the outlook in these regions. None of the common explanations alone (like the “losers of modernization”²⁰) completely capture this perceived lack of opportunity.

Some policy implications can be derived from these findings. The gains made by the Green Party and the AfD, along

Figure 8

Comparison of estimated coefficients for the factors “structural vulnerability of the economy” and “demographic trend” in the models for the 2019 election and the 2017 election



The employed model for 2017 is identical to the one from the table. To simplify the illustration, the coefficients of the variable “economic situation” and the East-West dummy variable are not shown here.

Source: Authors' own calculation.

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Those districts with high vote shares for the AfD or the Greens show opposite characteristics.

with the corresponding losses for the governing parties, can be interpreted as indicating that the policies by the grand coalition have failed to improve critical life circumstances of people in Germany. Our findings give some indications regarding the types of policies that should be prioritized in the future. Instead of improving the income situation with short-term measures, a strong emphasis should be placed on addressing the structural vulnerabilities of the economy and of the demographic situation. These challenges can only be met with long-term investments. Germany's future depends on strengthening its digital infrastructure, providing more opportunities for further and continuing education, and ensuring adequate municipal financing to invest in infrastructure.

¹⁷ Unlike all other parties, the polarization between the two parties in 2017 and 2019 also applies to the third dimension, “economic situation,” which is not shown in Figure 8.

¹⁸ Although the results presented for the SPD in Figure 8 are not the focus of the present study, they are still noteworthy. The coefficients basically remained the same between 2017 and 2019. This is surprising in view of the losses in the European election that the party had to accept: in 388 districts, the SPD had a lower share of votes than it did in 2017. However, it must also be recognized that the analysis of regional economic and population structures does not consider many key factors that influence voters' decisions (for example, the popularity of the top candidates, the general perception of a party and its agenda). The model selected here actually does explain a good part of the variation in election results (58 percent for the 2017 parliamentary election and 42 percent for the 2019 European election), but the change does not appear to have been driven more strongly by demographic factors.

¹⁹ Also see Christian Franz, Marcel Fratzscher, and Alexander S. Kritikos, “German Right-Wing Party AfD Finds More Support in Rural Areas with Aging Populations,” *DIW Weekly Report*, no. 7/8 (2018): 69–79 (available online).

²⁰ For some relevant explanatory approaches, see Susanne Rippl and Christian Seipel, “Modernisierungsverlierer, Cultural Backlash, Postdemokratie. Was erklärt rechtspopulistische Orientierungen?” *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 70 (2) (2018): 237–254 (in German; available online).

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