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Paying Off Populism: How Regional Policies Affect Voting Behavior

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Paying Off Populism: How Regional Policies Affect Voting Behavior

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Abstract

This paper shows that regional policies can decrease populist support. We focus on the "development objective" ("Objective-1") of the European Regional Development Fund (ERDF), meant to support lagging-behind regions. For causal inference, we exploit three sources of quasi-exogenous variation in a Regression-Discontinuity-Design (RDD), a Difference-in-Differences framework (DiD), and with matching techniques. Using NUTS3-level panel data on the outcomes of elections to the EU parliament, observed over the period 1999-2019, we consistently find that Objective-1 transfers reduces the vote share of right-fringe parties by about 2.5 pp. Left-fringe party support is not affected. Complementary analyses of individual-level survey data from the Eurobarometer show that the European Union's regional policy increases trust in democratic institutions and decreases discontent with the EU.

Keywords: Populism, Regional Policies, European Integration, Regression Discontinuity Design

JEL Classification: D72, H54, R11, R58

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1 Introduction

Support for populist parties from the far-right of the political spectrum, such as the French Rassemblement National, the Fratelli d'Italia or the Alternative for Germany, has been on a constant rise across Western democracies over the previous years. In the UK, the populist surge flushed the country out of the European Union (EU). Populism also casts a shadow on the future development of the EU, since populist leaders often pursue short-term oriented, nationalist policies that hamper international cooperation and bar the way to furthering European integration.

Against this background, recent research on the economic causes of populism has revealed stark regional heterogeneities in populist support, with lagging-behind regions becoming strongholds of populist parties and candidates (cf. Guriev and Papaioannou (2022) for an extensive overview). Consequently, regional policies supporting the development of such regions could help to decrease populist support. Indeed, the EU has a longstanding history of supporting lagging-behind regions and promoting convergence. Via its structural funds, the EU devotes approximately one-third of its budget (the so-called multi-annual financial framework) to regional and cohesion policy.

In this paper, we evaluate the impact of EU regional policy on support for populist parties (left-fringe and right-fringe) throughout Europe. While many studies analyze the causes and drivers of populism, little is known about potential remedies. Only a few papers have analyzed the effect of the EU's regional policy on voting in single-country-single-election settings. The evidence is still mixed, though. Based on a spatial Regression-Discontinuity-Design (RDD) along bordering NUTS2 regions in Wales and South-West England, Crescenzi et al. (2020) find no effect of regional funds on voting behavior in the Brexit referendum. In contrast, Albanese et al. (2022), who also apply a spatial RDD, find that EU transfers reduced votes for populist parties in the 2013 national election in Italy by approximately 10%.

The main contribution of our paper lies in evaluating the impact of the EU's regional policy on populist support in a pan-European setting, using regional-level panel data on the results of elections to the European Parliament. While previous case studies yield valuable insights into specific and context-dependent impacts of regional policy on populism, we identify the average effect across time and space. Results from the elections to the European Parliament are particularly suitable for this purpose. These elections are held simultaneously all across Europe, and tactical voting to achieve some domestic objective is less likely to disguise voter's true political preferences. Our empirical analysis employs a unique dataset on the regional outcomes

of European Parliamentary elections, all observed at the fine-grain NUTS3-level between 1999 and 2019. We observe election outcomes for up to 27 countries, depending on the contemporary state of European unification.

Importantly, the institutional framework of the EU's regional policy generates quasi-exogenous variation in the allocation of funds that can be used for causal inference. In particular the main funding line of the European Regional Development Fund (ERDF)—the "development-objective" also known as "Objective-1"—supports lagging-behind regions, which are defined according to a simple criterion: a NUTS2 region is classified as lagging-behind and thus eligible for transfers under Objective-1 if its GDP per capita does not exceed 75 percent of the EU average.[1] First, this institutional setup gives rise to a regression discontinuity design (RDD), which compares similarly underdeveloped regions around the 75 percent threshold that differ in just one aspect: whether they receive support under the development objective, or not (cf. Becker et al., 2018). Second, the Eastern Enlargement in 2004 caused a drop in the average GDP per capita in the EU and, therefore, generated longitudinal variation in some Western European regions' treatment status, which we exploit in a difference-in-differences setting (DiD). Eventually, in a third step, we exploit the spatial structure of our data, where outcomes are observed at the NUTS3-level but treatment is defined at the NUTS2-level. Thus, some comparatively poor NUTS3-regions do not receive Objective-1 funding just because they are nested in a rich NUTS2 region. Conversely, some relatively rich NUTS3 regions receive treatment just because they have poor neighbors decreasing the NUTS2-average GDP per capita. We match these quasi-exogenously (un-)treated "nested abberants" to comparable NUTS3-regions with the same GDP per capita, but opposing treatment status.

We first document a negative correlation—conditional on country- and time-fixed-effects—between the vote share received by right-fringe parties and per-capita transfers of the EU's structural funds, as well as a positive correlation between transfer intensity and vote shares for left-fringe parties. Using the three identification approaches outlined above, we then provide evidence for a causal relationship between EU transfers and vote shares for far-right parties but not for far-left parties. Our RDD analysis shows that Objective-1 treatment decreases support for populist parties from the right fringe of the political spectrum by ≈ 2.8 pp, which implies a decline of populist support by up to 20%. Difference-in-differences estimates based on regions dropping out of the Objective-1 funding line in 2007 confirm a negative effect of transfers on

[1] The funding landscape defined by Objective-1 affects the regional allocation of structural funds more broadly. For instance, funding rates of the European Social Funds (ESF) may be higher in Objective-1 regions. The central goals of regional convergence and development are spelled out in the ERDF program.

far-right parties' vote shares. Finally, the analysis of matched "nested abberants", i.e., NUTS3-regions on the other side of the threshold than the NUTS2-region they belong to, yields an effect similar to the RDD results regarding magnitude. The regional-level results are complemented by an individual-level analysis, using EU-wide survey data from "Eurobarometer". Employing the same RDD-setup as for the regional data, it turns out that Objective-1 transfers increase trust in democratic institutions, and decreases dis-satisfaction with the EU in the treated regions.

Our paper adds to three related strands of the literature. First, it contributes to an emerging literature looking into the political impacts of public spending and redistributive policies. Most closely, it relates to the two papers cited above (Albanese et al., 2022; Crescenzi et al., 2020), that study the effect of EU regional policy on populist support in the 2013 general election in Italy and the support for the Brexit referendum in 2016, respectively. While the former find a negative effect of EU transfers on the share of votes for far-right parties, Crescenzi et al. (2020) find no effect of EU funds on voting behavior in the Brexit referendum on average. However, when EU funds led to improved labor market conditions, they reduced Euroscepticism. Related work based on survey data from the European Social Survey (ESS) by Bayerlein and Diermeier (2022) and Borin et al. (2021) examines the effect of EU transfers on attitudes towards European integration and political preferences, yielding mixed results. In line with our results, Borin et al. (2021) finds that EU transfers strengthen support for European integration and reduce support for anti-EU parties, while Bayerlein and Diermeier (2022) finds no effect of transfers on support for European integration. Fetzer (2019) focuses on the Brexit referendum again and documents that fiscal austerity more broadly led to a higher share of votes for the "Leave"-campaign.[2]

Second, our paper contributes to the literature on the economic effects of regional policies (Becker et al., 2012; Ehrlich and Seidel, 2018; Brachert et al., 2019; Criscuolo et al., 2019; Siegloch et al., 2021) by looking into their political consequences. Methodically, our study closely relates to a series of papers also employing RDDs to identify economic impacts of the EU's regional policy (Becker et al., 2010; Becker et al., 2013; Becker et al., 2018). These studies find that overall, EU regional policy successfully delivers on its primary objective, i.e., improve the economic development of left-behind regions to foster convergence. Lang et al. (2022) confirm positive growth and income effects based on individual-level survey data and further investigate distributional effects of the policy. Against this background, the decrease in populist support that we find comes as a—arguably unintended—consequence of regional policy.

[2]Further papers studying voting behavior in the Brexit referendum include Fidrmuc et al. (2019) and Becker et al. (2017). The former does not find that EU regional policy correlates with the leave share. The latter identifies structural factors such as socioeconomic profiles and regional characteristics, e.g. the economic structure as primary drivers of voting behavior.

Third, our paper complements the literature on the causes of populism by looking into possible remedies. This literature has analyzed the political consequences of international migration (Halla et al., 2017;Dustmann et al., 2019; Steinmayr, 2021; Gallegos Torres, 2023), macroeconomic ”shocks” like financial crises (Funke et al., 2016; Gyöngyösi and Verner, 2022), increasing international trade (Autor et al., 2020; Dippel et al., 2022) or technological change (Frey et al., 2018, Rodríguez-Pose, 2018; Anelli et al., 2019). The latter literature shows that regional sub-units of developed economies are very differently affected by macroeconomic developments. While some regions benefit from the changing economic environment, others are left behind in structural change. Regions on the losing side of this process are more likely to support populist parties and candidates. We show that regional policies aimed at improving the development perspectives of left-behind regions reduce the ”populist backlash” to economic change.

Moreover, the individual-level analysis contributes to the broader literature on the relationship between trust in democratic institutions and fringe voting (cf. Algan et al., 2017 and Dustmann et al., 2017). Our results suggest that regional policies foster trust in institutions, addressing a root cause of populist support.

The remainder of this paper is organized as follows. Section 2 introduces our data and presents some initial correlates. Section 3 lays out the empirical strategy. Section 4 presents our regional-level results and reports treatment-effects from the RDD, DiD, and the matching approach. Section 5 adds the individual-level analysis and Section 6 concludes.

2 Data

2.1 Data on EU Regional Policy

Since 1994, the EU's regional policy, has followed programming periods of 6–7 years. The EU Commission defines overarching goals and budgets, while national and regional governments define concrete projects and measures. As a matter of principle, almost all measures require co-funding by the national or regional governments. While details may have changed over time, there has been one constant, i.e., the goal to support the economic development of lagging-behind regions. We focus on this specific policy goal, which we refer to as Objective-1. Funds supporting this development objective have consistently been assigned according to a simple rule: All European NUTS2 regions with a GDP per capita below 75 percent of the EU average in certain years prior to a funding period have been eligible for Objective-1 funding in the respective funding period. This arbitrarily set threshold is a source of quasi-exogenous variation that we

exploit empirically to identify policy effects.

Our empirical analysis concentrates on the last three completed programming periods 2000–2006, 2007–2013, and 2014–2020. For each period, we identify the NUTS2-regions eligible (and receiving) funding under Objective-1 from the *Official Journal of the European Communities*.[3] We also collect data on actual transfers from various sources. At the NUTS2-level, the European Commission (DG Regional Policy) provides regionalized information on annual expenditures from EU structural funds (ERDF, CF, ESF).[4] Moreover, there exist separate databases with expenditure information at the more granular NUTS3-level (nested in NUTS2), which can all be accessed via the website of the European Commission.[5]

2.2 Election Data

To analyze the effect of regional policy on populist support, we collect results from elections to the European Parliament from the past 20 years. Our election data is regionally highly dis-aggregated, i.e, we observe election outcomes at the NUTS3-level, the lowest level of the standard European classification of regions. The primary data sources are the national electoral authorities. While recent election results are often available for download, NUTS3-level results for earlier years were available upon request. We use EUROSTAT's correspondence tables to accommodate changes in the boundaries of NUTS regions and various national correspondence tables to account for shifts in the boundaries of local administrative units. The regional units in our final election dataset largely correspond to the NUTS3 classification from 2016. On this basis, we merge all other regional-level data.

We observe NUTS3-level election outcomes for almost all member states of the EU-28, with some exceptions. In the Republic of Ireland, regionally disaggregated election results were unavailable, and in Scotland, Wales, and Northern Ireland, electoral wards cannot be mapped to the NUTS classification. For most countries, our dataset includes elections from 1999, 2004, 2009, 2014, and 2019. When a new member state joins the EU, the first observation corresponds to the first regular European Parliament election in which the new member participates.

To classify parties into the political left-right-spectrum, we build on "The PopuList" (M.Rooduijn et al., 2019)."The PopuList" assesses the political orientation of parties from 31 European

[3]Concretely, regions covered by the development goal of the ERDF for the period 2000–2006 are listed in in the Official Journal L 194 (27/07/1999) on page 53–57; for the period 2007–2013 regions are listed in in the Official Journal L 243 (06/09/2006) on page 44–46 and for the period 2014–2020 respective regions are listed in in the Official Journal L 50 (20/02/2014) on page 22–34.

[4]The information on annual expenditures at the NUTS2-level can be found here. Last retrieved on 05.05.2024.

[5]See Section A in the appendix for a more detailed description of the expenditure data.

countries, evaluated by academics and journalists in a peer-reviewed process.[6] Based on this information, we classify parties as either far-right or far-left. The former group consists of 51 parties from the right fringe of the political spectrum and the latter consists of 34 parties from the left fringe of the political spectrum.

Fortunately, the election cycles to the European Parliament nicely coincide with the funding periods. In each period, we observe at least one election. Our main analysis will focus on election results from the years 2004 (funding period 2000–2006), 2009 (funding period 2007–2013) and 2019 (funding period 2014–2020), i.e., the last election per funding period. We use election results from 1999 and 2014 in the DiD-analysis and for robustness checks.

2.3 Descriptives

Table 1 provides summary statistics on election outcomes at the NUTS3-level. Over the last 20 years, right-fringe parties increased their electoral support in elections to the European Parliament from an average vote share of approximately 8% in 2004 to roughly 10% in 2009, 16% in 2014 and 19% in 2019. In contrast, the support for left-fringe parties has remained stable over time and averaged at about 6%.

Table 1: Descriptive Statistics - Votes

	Mean	Mode	SD	Max	Min	N
Election 1999						
Share Far Right	0.051	0.024	0.064	0.352	0.000	894
Share Far Left	0.069	0.037	0.079	0.407	0.000	894
Election 2004						
Share Far Right	0.102	0.044	0.113	0.583	0.000	1,187
Share Far Left	0.056	0.021	0.074	0.408	0.000	1,187
Election 2009						
Share Far Right	0.109	0.050	0.134	0.777	0.000	1,252
Share Far Left	0.058	0.032	0.070	0.499	0.000	1,252
Election 2014						
Share Far Right	0.161	0.104	0.143	0.744	0.000	1,279
Share Far Left	0.060	0.035	0.078	0.459	0.000	1,279
Election 2019						
Share Far Right	0.212	0.144	0.173	0.790	0.000	1,286
Share Far Left	0.055	0.031	0.071	0.403	0.000	1,286

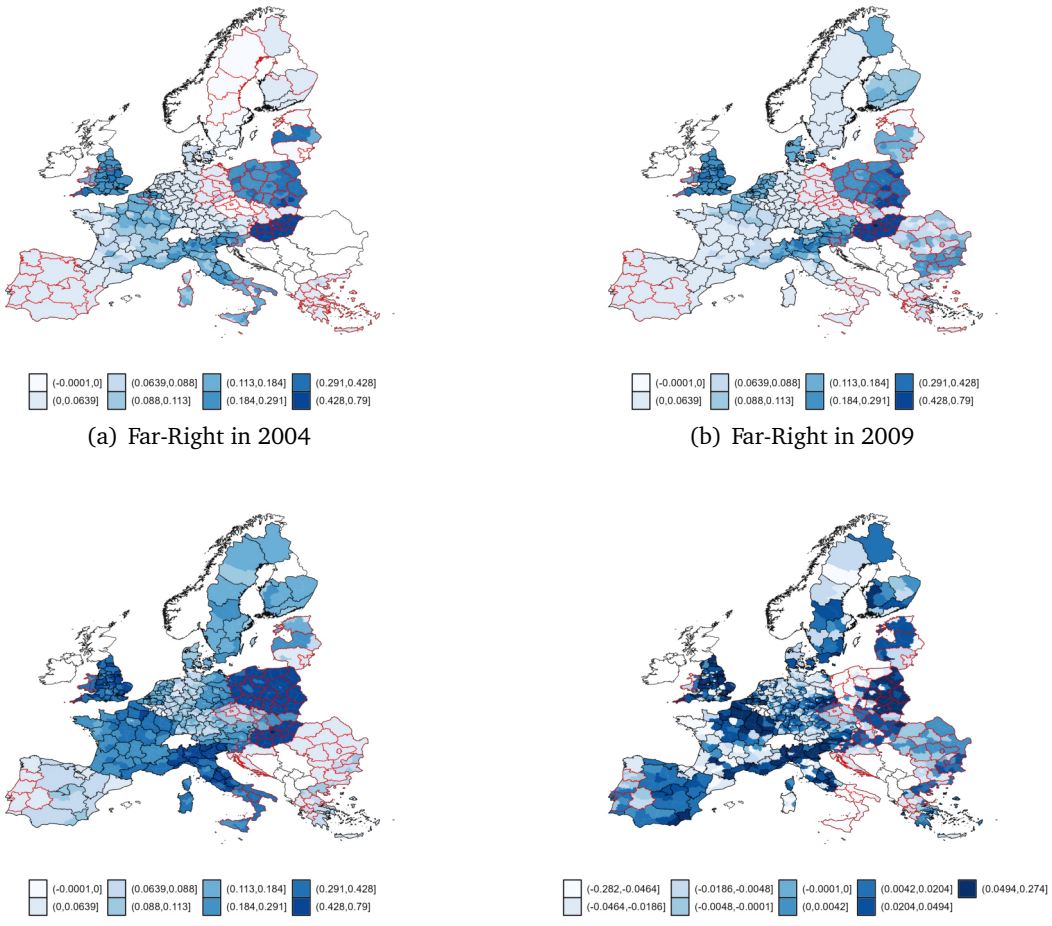
Notes: This table shows moments of the distributions of vote shares for far right and far left parties in the past four elections to the European Parliament.

The numbers in Table 1 mask a pronounced spatial variation in election outcomes, which is illustrated in Figure 1. The maps show the vote shares received by right fringe parties at the

[6] For more information, see https://popu-list.org/

NUTS3-level for our main elections of interest, i.e., elections to the European Parliament in 2004 (upper left panel), 2009 (upper right panel) and 2019 (lower left).[7] These maps reveal substantial variation in populist support between countries—almost all European countries are easily identifiable by the color changes at their borders. The inclusion of country-time fixed effects in our regression analysis absorbs this variation. To illustrate the remaining variation that we exploit in the regression analyses, we plot the residualized vote shares from the 2019 election in the lower-right panel of Figure 1.

Figure 1: Vote Shares for Far-Right Parties in EP Elections



(a) Far-Right in 2004

(b) Far-Right in 2009

(c) Far-Right in 2019

(d) Far-Right in 2019, Residualized

Notes: The maps show the share of votes for far-right parties in the elections to the European Parliament in 2004, 2009, and 2019, as well as the residualized outcome for 2019. Objective-1 regions are demarcated in red.

Table 2 provides an overview of NUTS2 regions by funding period and treatment status. Because of EU enlargements, the number of regions observed varies over time. Our final dataset includes 201 NUTS2 regions in the funding period 2000–2006, 243 NUTS2 regions in the period 2007–2013, and 258 in the period 2013–2020. The number of regions receiving Objective-1 treatment

[7] Appendix Figure A2 presents corresponding maps for the vote shares received by left-fringe parties.

is 52, 66 and 65 in the respective funding periods (compare Table 2).[8] While treatment is defined at the NUTS2-level, outcome variables are observed at the NUTS3-level, with NUTS3 being nested in NUTS2. On average, approximately five NUTS3 regions are contained in one NUTS2 region. In rows three and four of Table 2, we present the total number of NUTS3 regions and those with Objective-1 treatment status. Row five and six of Table 2 show the average per capita disbursements (over the whole period) from the European structural funds in Objective-1-regions and control regions.[9] The average per capita transfer is approximately four to seven times higher in Objective-1-regions compared to the control group, demonstrating the relevance of a region's treatment status for the amount of actual transfers. The difference between treated regions and the rest is the smallest from 2007 until 2013, likely due to special "phasing-out" assistance provided to NUTS2-regions losing treatment status due to the Eastern Enlargement of the EU.

Table 2: Regions and Treatment Status

Funding Period	2000-2006	2007 - 2013	2014 - 2020
NUTS2 Regions	249	261	264
NUTS2 Regions - Dev. Obj.	92	79	68
NUTS3 Regions	1,242	1,291	1,313
NUTS3 Regions - Dev. Obj.	414	379	301
Transfers (No Dev. Obj.)	210	464	299
Transfers (Dev. Obj.)	1,498	2,139	1,351

Notes: This table reports the number of NUTS2 and NUTS3 regions in our estimation sample for each funding period. It also shows the average per capita transfers from the EU separately for treated and non-treated regions.

We supplement our data with regional-level variables, mostly downloaded from the European Commission's Database (ARDECO). ARDECO draws on information from EUROSTAT, supplemented with data from Cambridge Econometrics. The data comes as a balanced panel, i.e., the NUTS regions were harmonized over time. It includes population, employment shares, employment by economic sectors, and GDP per capita in purchasing power parities. Most regional-level data is available at the NUTS3-level. We draw on this data source to construct the forcing variable for our fuzzy RDD and use other variables as controls. Table A2 in the Appendix shows summary statistics of covariates and the forcing variable.

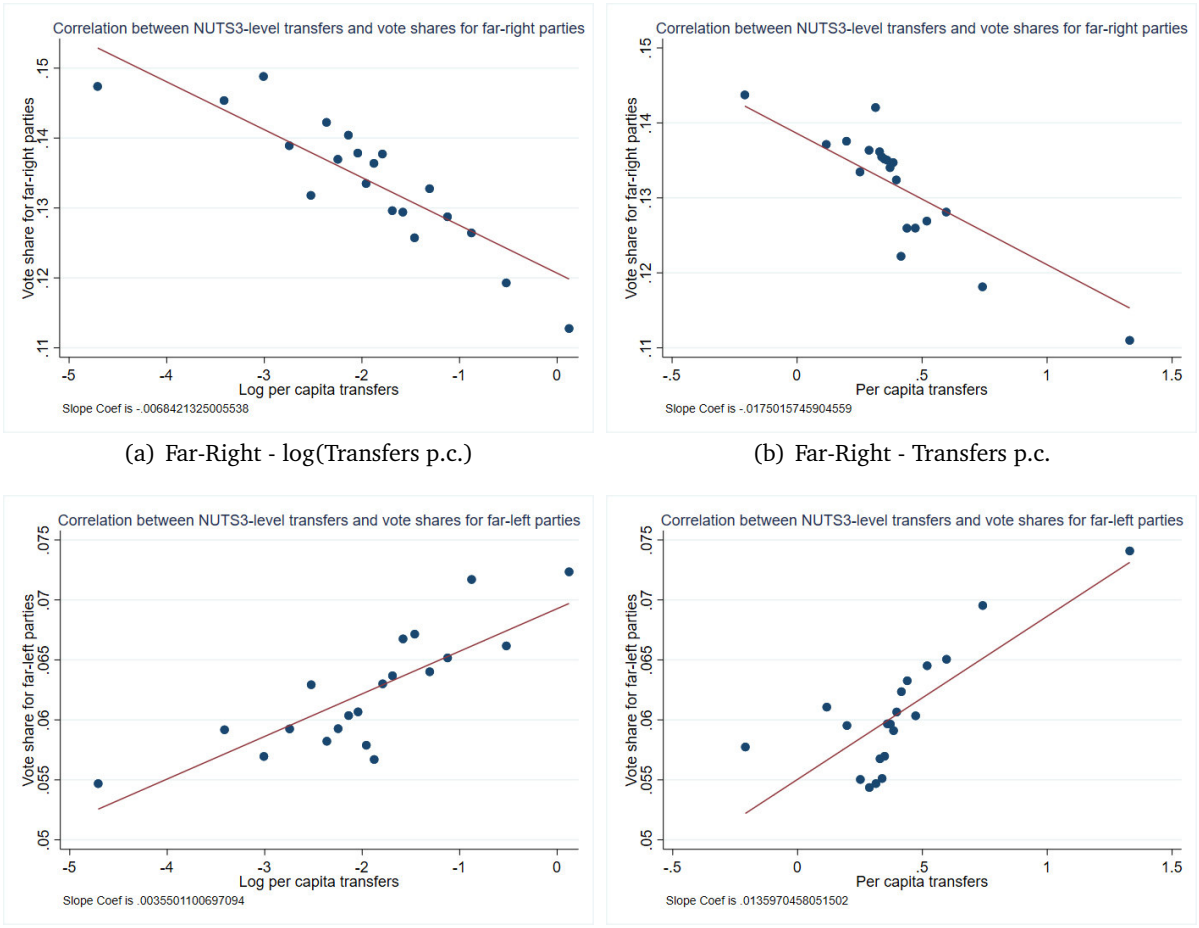
[8] As mentioned above, we drop Ireland as well as Scotland, Wales and Northern Ireland due to data limitations. We also drop the French oversea regions "Guadeloupe", "Martinique", "Guyane" and "La Réunion". We drop the Spanish exclaves "Ceuta" and "Melilla", as well as the Portuguese regions "Região Autónoma da Madeira" and "Região Autónoma dos Açores"

[9] Regionalized information on EU expenditures can be downloaded from the EU Commissions' website (DG Regional Policy).

2.4 Correlation Between EU-Transfers and Populist Support

To motivate the subsequent empirical analyses, we pool election outcomes observed at the NUTS3-level between 2004 and 2019 and correlate the vote shares of left-fringe and right-fringe parties with the EU transfers received by each region during the corresponding funding period. Figure 2 summarizes the statistical relationship using binscatter plots, with all variables demeaned by country-election.[10]

Figure 2: Correlations between EU-transfers and Vote Shares



(a) Far-Right - log(Transfers p.c.)

(b) Far-Right - Transfers p.c.

(c) Far-Left - log(Transfers p.c.)

(d) Far-Left - Transfers p.c.

Notes: The binned scatter plots visualize the correlations between the share of votes for fringe parties (far-right and far-left) and per capita transfers. Observations from the 2004, 2009, 2014 and 2019 elections were pooled and the sample was restricted to countries that were EU members at the beginning of a funding period. We focus on a symmetric sample (+/- 75pp) around the 75% threshold, determining a NUTS2 region's eligibility for Objective-1 transfers. The units of observation are NUTS3 regions. All variables are residualized by country election. Subfigure (a) reports the correlation between the vote share for far-right parties and the log of per capita transfers, (b) uses per capita transfers in levels, Subfigure (c) reports the correlation between far-left parties and log transfers and (d) far-left parties and transfers in levels.

The upper panels (a) and (b) show a negative correlation between far-right voting and per-capita transfers in logs (a) and levels (b). Conversely, the lower panels (c) and (d) show a positive

[10]Very affluent regions with a GDP per capita exceeding 150% of the EU average have been omitted from the binned-scatterplots.

correlation between the EU-transfers and voting support for left-fringe parties. Results of a corresponding regression analysis, reported in Table A3 in the Appendix, confirm the statistical significance of this relationship, even when conditioning on control variables. Accordingly, €1,000 higher EU transfers per capita to a NUTS3 region are associated with a 1.2 pp lower vote share for right-fringe parties and a 1.4 pp higher vote share for left-fringe parties. In the following section, we seek to move beyond these correlations and estimate the causal effect of regional policy on voting.

3 Empirical Strategy

To assess the causal effect of regional policy on electoral support for populist parties, we focus on Objective-1 treatment, i.e., the development-objective supporting lagging behind regions. For identification, we exploit three different sources of quasi-exogenous variation in three different empirical settings.

3.1 Regression-Discontinuity-Design

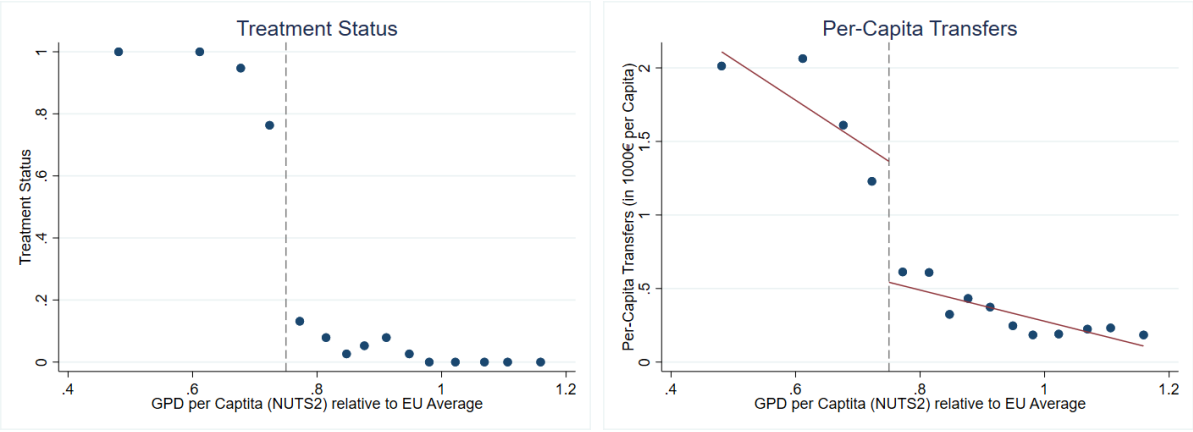
Similar to Becker et al. (2010) and Becker et al. (2018), we leverage the eligibility rule for Objective-1 transfers to identify the effect of regional policy on voting behavior. As described above, a NUTS2 region is formally eligible for development-support under Objective-1 if the regions' average GDP per capita is less than 75% of the EU average.[11] This gives rise to a RDD. The discontinuity at the 75% threshold is illustrated in Figure 3. The left panel of Figure 3 plots the treatment status of NUTS2 regions against the regions' GDP per capita, i.e., the forcing variable (observations are pooled across funding periods). Importantly, as the right panel shows, the treatment implies a significant increase in EU transfers received by treated regions.

As evident from the left panel of Figure 3, the 75% rule is not sharp in practice, i.e., there are some non-compliers on both sides of the cutoff.[12] Consequently, we employ a fuzzy-RDD, that uses the forcing variable "GDP per capita" as IV in 2SLS-regressions.

[11] To be precise, eligibility status is determined based on the average GDP per capita in years prior to the respective funding period. For the three funding periods, we thus consider averages calculated over the following years: for the funding period 2000–2006 the years 1994–1996 are decisive; for the funding period 2007–2013 the years 2000–2002; and, finally, for the period 2014–2020 the years 2007–2009 determine eligibility.

[12] Most of the regions receiving Objective-1 funding despite a GDP per capita above the threshold qualify for exemptions for sparsely populated areas such as the Finnish region "Pohjois-ja Itä-Suomi" and the Swedish regions "Norra Mellansverige", "Mellersta Norrland" and "Övre Norrland". Moreover, GDP revisions and territorial reorganizations frequently lead to non-compliance.

Figure 3: Forcing Variable, Treatment Status, and Per-Capita Transfers



(a) Treatment Status (b) Per-Capita Transfers

Notes: This figure illustrates the discontinuity at the threshold. Subfigure 4(a) plots the treatment probability against the forcing variable (GDP per Capita) with the vertical line indicating the cutoff. Subfigure 4(b) plots the average per capita EU-transfers against the forcing variable. The red lines correspond to a linear fit. Source: ARDECO and European Commission. Own calculations.

The corresponding first stage is given by:

$$D_{int} = \alpha_0 + \alpha_{ct} + \gamma Z_{nt} + f^p(X_{nt}) \times Z_{int} + \zeta K_{int} + \epsilon_{int} \tag{1}$$

and the second stage reads as follows:

$$V_{int} = \beta_0 + \beta_{ct} + \theta D_{int} + f^p(X_{nt}) \times Z_{nt} + \lambda K_{int} + \varepsilon_{int} \tag{2}$$

where D_{int} is the treatment dummy that takes the value 1 if NUTS3 region i nested in NUTS2 region n is treated with Objective-1 transfers in funding period t and 0 otherwise. Z_{int} is an indicator for Objective-1 eligibility, i.e., Z_{nt} is equal to 1 if GDP per capita in the NUTS2 region n is below 75% of the EU average. The vector K_{int} contains strictly exogenous NUTS3-level controls and α_{ct} and β_{ct} are election-by-country fixed effects. Finally, the forcing variable is denoted by X_{nt}.

The dependent variable in the second stage—V_{int}—is the average vote share for right-/ or left-fringe parties in NUTS3 region i in period t. The coefficient of interest θ thus captures the local average treatment effect, i.e., the effect of receiving Objective-1 transfers on voting behavior. The functions f^p are polynomial functions (of different order) of the logarithm of the normalized NUTS2-level GDP per capita, which we allow to differ on either side of the 75% eligibility threshold. Standard errors are clustered at the NUTS2-level.[13]

[13]As in any RDD design, the crucial identifying assumption is a smooth distribution of the forcing variable around the cutoff, e.g., no strategic manipulation of the forcing variable. While this assumption has been tested extensively in

3.2 Difference-in-Differences

Having data from the past 20 years allows us to exploit longitudinal variation in regions' treatment status. In particular, many regions in Western Europe did not qualify for the Objective-1 treatment any longer after the EU's average GDP per capita dropped as a result of the EU enlargement in 2004. Accordingly, comparatively poor regions lost funding not because of economic development, but just because of even poorer regions joining the EU. We leverage this within-region variation over time for causal inference in difference-in-differences regressions.

Specifically, we calculate changes in vote shares between 2004 and prior and past elections. We then relate these changes to a dummy that indicates if a region lost treatment after 2006, which is further interacted with period indicators. Formally, this reads as follows:

$$V_{inct} - V_{inc,2004} = \alpha_0 + \alpha_{ct} + \sum_{\tau=1}^{3} \beta^{\tau} \text{out}_{in} \times \mathbb{1}\{t \in \Omega_{\tau}\} + \varepsilon_{inct} \tag{3}$$

where periods $\{\Omega_{\tau}\}_{\tau=1}^{3}$ are defined as,

$$\begin{aligned} \Omega_1 &= \{1999\} \quad \text{(Pre-trend: Change between 1999 and 2004)} \\ \Omega_2 &= \{2009\} \quad \text{(Post–1: Change between 2009 and 2004)} \\ \Omega_3 &= \{2014\} \quad \text{(Post–2: Change between 2014 and 2004)} \end{aligned}$$

All specifications include country-year fixed effects α_{ct}. Regional-level controls, if included, were fixed at their baseline levels. The sample is restricted to Western European regions receiving Objective-1 funding between 2000 and 2006. Indicator out_{in} takes the value one if a region drops out of funding after 2006 and is zero for regions continuously receiving Objective-1 transfers. We are interested in the vector of coefficients β. The coefficient β^1 picks up the pre-trend, and the post coefficients β^2 and β^3 capture the effect of losing Objective-1 treatment on fringe-party vote shares. This setting complements the RDD analysis, as it recovers the treatment effect from NUTS3 regions that switched treatment status.

3.3 Matching Nested Aberrants

We further leverage the granularity of our data and exploit within NUTS2 variation in NUTS3-regions' GDP per capita. Somewhat arbitrarily, the EU chose the NUTS2-level to define treatment eligibility. Accordingly, some comparatively rich NUTS3-regions with their own per-capita GDP above the 75% threshold receive funding just because the NUTS2-boundaries include

the previous literature, Figure A1 also confirms that no evidence for a discontinuity of GDP per capita exists around the cutoff.

sufficiently poor neighbors. These regions are "exogenously treated" since in a counterfactual world that defined eligibility at the NUTS3-level, they would not receive funding under Objective-1. Similarly, we refer to NUTS3-regions that do not receive funding because they are nested in comparatively rich NUTS2-regions as "exogenously untreated". The larger a NUTS2 region, the more likely the existence of such "nested aberrants", i.e., NUTS3-regions that, taken by themselves, are "on the other side" of the 75% threshold relative to the NUTS2-average of the broader region they belong to.

Figure A3(a) in the Appendix illustrates the within-NUTS2 variation in NUTS3-level GDP per capita and the density plots in Figure A3(b) show a sizeable overlap of GDP per capita between treated and untreated NUTS3 regions. We match exogenously (un)treated NUTS3 regions, i.e., regions that on their own would have the opposite treatment status, to NUTS3 regions with the same GDP per capita but a different (the "correct") treatment status. We then estimate the following regression on the matched sample by means of OLS:

$$V_{int} = \alpha_0 + \alpha_{ct} + \theta D_{int} + \lambda K_{int} + \varepsilon_{int} \tag{4}$$

Again, V_{int} is the share of votes for fringe parties, D_{int} is a treatment dummy, α_{ct} are country-election fixed effects, and K_{int} is a vector of control variables.

4 Regional-Level Results

4.1 Main Results: Regression-Discontinuity

Table 3 presents our main RDD results with the share of votes for far-right parties as the dependent variable. All regression specifications include country-by-election fixed effects to net out country-level differences in fringe-party support and time trends. First, we present results from the full sample. We then narrow down the range around the 75% threshold (+/- 15pp in columns 3 to 6 and +/- 5pp in columns 7 and 8). We control for GDP per capita, i.e., the forcing variable, by including polynomials of different orders, as indicated at the bottom of the table. Polynomials are always allowed to take different shapes on each side of the threshold. Additional control variables are indicated at the bottom of the table.[14] In case of multiple elections per

[14]For the regional controls, we use the average values from the years that were relevant to determine a NUTS2 regions' treatment status, i.e., they are exogenous to the current treatment. Regional controls include employment shares, the share of industrial employment, GDP per capita at the NUTS3-level, log population density and region type by country fixed effects.

funding period, we use the latest election.[15]

Table 3: Transfers and Vote Shares for Far-Right Parties

	Full Range		Range +/- 15				Range +/- 5	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Vote Shares								
Treatment	-0.033**	-0.041***	-0.022**	-0.028***	-0.025***	-0.031***	-0.024*	-0.029*
	(0.014)	(0.013)	(0.010)	(0.010)	(0.009)	(0.009)	(0.013)	(0.015)
# of Observations	3,721	3,721	1,175	1,175	1,175	1,175	416	416
Adj. R-Squared	0.081	0.134	0.010	0.058	0.002	0.052	0.040	0.107
K-P-F-Statistic	145.12	139.32	58.12	54.21	73.84	67.18	13.32	15.87
Regional Controls		Yes		Yes		Yes		Yes
Ctry-Election-FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Order of Poly.	Cub.	Cub.	Quad.	Quad.	Lin.	Lin.	Lin.	Lin.

Notes: This table shows the results from the fuzzy regression discontinuity design. The dependent variable is the share of votes for far-right parties. The units of observation are NUTS3 regions. The treatment dummy is instrumented with a dummy that indicates eligibility based on the GDP per capita criterion ($<$ 75% of the EU's average). The specifications include country-election fixed effects and, if indicated, regional controls (sectoral employment shares and log of population density, gdp per capita and region-type by country fixed effects all measured at the level of NUTS3 regions). At the bottom of the table we report the first stage's Kleibergen-Paap-F-Statistic. We estimate the effect on the full range, on a range +/-15 and +/-5. To control for the forcing variable, we use polynomials which are allowed to have different shapes on each side of the threshold. Standard errors are clustered at the NUTS2 level. * p $<$ 0.1; ** p $<$ 0.05; *** p $<$ 0.01.

Columns 1 to 2 show results from the full sample, which gives us 3721 NUTS3 region-election observations. To flexibly control for the structural relationship between GDP per capita and voting, these specifications include third-order polynomials of the forcing variable. The point estimate shown in column 1 implies a reduction of the vote share for far-right parties by 3.3pp as a result of receiving Objective-1 transfers. Column 2 adds regional controls, which increases the point estimate by almost 1pp. All controls are fixed to their pre-funding period levels to avoid bad control problems. Results from the full sample provide a first benchmark. However, it is good practice not to rely on polynomials of the forcing variable only, but to focus the analysis on observations in closer proximity to the threshold. Thus in columns 3 to 6, we restrict the sample to regions with a per capita GDP between 60 and 90 percent of the EU average, i.e., +/- 15pp around the cutoff. This leaves us with 1175 NUTS3-level observations. Columns with even numbers include regional-level control variables. In columns 3 to 4, we add second-order polynomials of the forcing variable. For comparison, columns 5 to 6 include the forcing variable in linear form only.

Results from the sample around the threshold consistently show that Objective-1 treatment decreases populist support. In particular, the vote share received by right-fringe parties decreases between 2.2 and 3.1 percentage points. All point estimates are statistically significant at conventional levels. Our preferred specification is in column 4. Accordingly, Objective-1 transfers

[15] In practice, this implies the exclusion of the election in 2014 only. In the table with robustness checks (Table 7) we present estimates that include the election in 2014.

decrease voting support of far-right parties by 2.8pp, i.e., 21 percent of the vote share of 13.4 received on average by these parties.

In each RDD, narrowing the sample to smaller ranges around the threshold decreases the probability of violating the exclusion restriction. However, identification comes at a cost since the number of observations becomes smaller as the range narrows and the share of non-compliers tends to increase. Columns 7 to 8 focus on regions with GDP per capita $+/-5$pp around the threshold. The number of observed NUTS3 regions drops to 416, and precision decreases, but the point estimate remains of similar magnitude, which increases our confidence in the causal interpretation of previous estimates.

Table A4 in the Appendix estimates the treatment effect on the *change* in far-right parties' vote shares. In line with the main results from Table 3, we find negative and significant treatment effects based on the full sample and across ranges and specifications. By looking at changes in vote shares instead of levels, we net out the effect of regional characteristics as persistent drivers of voting behavior. The differencing comes at the cost of potentially also differencing away parts of the treatment effect as well; for example, if an always treated region experienced a change in the level of vote shares resulting from the treatment but no change in the growth rates of vote shares. Hence, the results in Table A4 also qualify the treatment effect by indicating that EU regional policy does not only decrease levels but also the growth of populist support.

Table 4: Transfers and Vote Shares for Far-Left Parties

	Full Range		Range +/- 15				Range +/- 5	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Vote Shares								
Treatment	-0.004	-0.003	0.004	0.009	-0.001	0.007	0.017	0.017
	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)	(0.017)	(0.013)
# of Observations	3,721	3,721	1,175	1,175	1,175	1,175	416	416
Adj. R-Squared	0.006	0.052	0.018	0.111	0.004	0.107	-0.041	0.082
K-P-F-Statistic	145.12	139.32	58.12	54.21	73.84	67.18	13.32	15.87
Regional Controls		Yes		Yes		Yes		Yes
Ctry-Election-FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Order of Poly.	Cub.	Cub.	Quad.	Quad.	Lin.	Lin.	Lin.	Lin.

Notes: This table shows the results from the fuzzy regression discontinuity design. The dependent variable is the share of votes for far-left parties. The units of observation are NUTS3 regions. The treatment dummy is instrumented with a dummy that indicates eligibility based on the GDP per capita criterion ($<$ 75% of the EU's average). The specifications include country-election fixed effects and, if indicated, regional controls (sectoral employment shares and log of population density, gdp per capita and region-type by country fixed effects all measured at the level of NUTS3 regions). At the bottom of the table we report the first stage's Kleibergen-Paap-F-Statistic. We estimate the effect on the full range, on a range +/-15 and +/-5. To control for the forcing variable, we use polynomials which are allowed to have different shapes on each side of the threshold. Standard errors are clustered at the NUTS2 level. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table 4 presents results with far-left parties' vote shares as dependent variables. All coefficients

up to $+/-15$pp around the threshold are very close to zero and statistically insignificant. Point estimates in columns 7 and 8, based on observations near the threshold, suggest a 1.7 pp increase in far-left parties' vote shares in treated regions, although this effect is statistically insignificant. Similarly, Table A5 in the Appendix displays changes in far-left parties' vote shares, which—except for one specification—are all insignificant.

In sum, the baseline RDD results as reported in Tables 3 and 4 provide strong evidence for a negative causal effect of EU regional policy on the vote share for far-right parties but yield no support for a causal effect on the vote share for far-left parties. Specifically, the coefficients in Table 3 suggest that Objective-1 treatment depresses the share of votes for far-right parties by 2 - 3pp, corresponding to a reduction of 15-20% relative to the dependent variable's mean.

In addition to the above, Table A6 in the Appendix estimates the treatment effect on vote shares for parties that are part of a country's national government at the time of the election to the European Parliament. Our most preferred specification, focusing on a range of +/- 15pp around the threshold, provides suggestive evidence that governing parties benefit from treatment through higher vote shares. This offers at least a partial answer to the question of who benefits from the losses of far-right parties. Since, at least in public media, voting behavior in European elections is often interpreted as a way to express discontent with the national government, these results could suggest higher levels of satisfaction with government in treated regions and, for that reason, lower support for far-right parties. In line with this reasoning, Table A7 indicates slightly higher turnout rates in treated regions, also regarded as a measure of voters' satisfaction with government and the political system.

4.2 Losing Treatment: Difference-in-Differences Results

As explained in Subsection 3.2, we also exploit longitudinal variation in Western European regions' treatment status that was caused by the EU's Eastward enlargement in 2004. Accordingly, we restrict the sample to NUTS2-regions (i.e. the NUTS3-regions contained therein) classified as Objective-1 treatment regions from 2000 until 2006. Beginning with the next funding period in 2007, some of these regions lost treatment status since their GDP per capita suddenly exceeded 75% of the decreased EU average (for a list of regions that lost eligibility in 2007, see Table A1 in the Appendix). With the DiD approach, we seek to compare NUTS3-regions that lost Objective-1 status due to the shift in average GDP per capita with NUTS3-regions that remained treated. Therefore, we exclude regions that would have dropped out of treatment in 2007 even without the EU enlargement, i.e., NUTS2 regions with a GDP per capita above 75% of the EU15 average.

Results from estimating equation 3 with and without covariates are shown in Table 5. The focus is on the DiD-parameters in vector β, that identifies the causal effect of losing treatment status on voting behavior. Columns 1 and 2 report the results for changes in far-right parties' vote shares and columns 3 and 4 look at the effect on vote shares for far-left parties.

Table 5: Loosing Development-Objective Transfers and the Effect on Voting Behavior

	Far Right		Far Left	
	(1)	(2)	(3)	(4)
Extreme Parties' Vote Shares				
Pre – Δ 1999 and 2004	0.005	0.004	-0.016	-0.015
	(0.007)	(0.006)	(0.010)	(0.010)
Post I – Δ 2009 and 2004	0.012**	0.010**	-0.015**	-0.014*
	(0.006)	(0.005)	(0.007)	(0.007)
Post II – Δ 2014 and 2004	0.019***	0.017***	-0.024*	-0.024*
	(0.005)	(0.004)	(0.014)	(0.014)
# of Observations	913	913	913	913
Adj. R-Squared	0.901	0.908	0.810	0.820
Regional Controls		Yes		Yes
Country-FE	Yes	Yes	Yes	Yes

Notes: This table shows difference in differences estimates. The sample includes all Western European Objective 1 regions from the funding period 2000 - 2006 which would have qualified for Objective 1 treatment in 2007 - 2013 without the enlargement (GDP per Capita $<$ 0.75% of EU15). The treatment dummy takes the value 1 if a region lost objective 1 treatment in 2007 - 2013. The unit of observation are NUTS3 regions. Standard errors are clustered at the NUTS2 level. Regional-level controls are log population density, employment shares, gdp per capita and region-type by country fixed effects. All controls were fixed to baseline levels. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

The first row of the table reports on pre-trends, i.e., changes in populist support between 2004 and 1999 before the Eastward enlargement. Row 2 assesses the immediate treatment effect, i.e., the change in vote shares between 2004 and the first election after losing treatment in 2009. Finally, row 3 looks into longer-run effects by comparing election results observed in 2014 to the last election under treatment in 2004. The specifications in columns 1 and 3 include country-election fixed effects, to which we add region-level controls in columns 2 and 4.

The small and statistically insignificant coefficients in columns 1 and 2 in row 1 confirm the absence of pre-trends in electoral support for far-right parties. Accordingly, before the Eastern enlargement, regions that lost treatment in later years and those that remained treated were on similar trends prior to the loss of treatment, supporting the validity of the identifying assumption. Row 2 indicates that dropping out of treatment induced an increase in far-right parties' vote shares by 0.1-0.12pp in the first election after the enlargement. The treatment effect increases over time, as can be seen from the results in row 3, which captures the differential increase in right-fringe vote shares between 2014 and 2004. The point estimates imply that losing Objective-1 status increased far-right party support by approximately 1.7–1.9pp relative to the control

group. The gradual increase in the treatment effect is plausible since, in the funding period 2007–2013, specific "phasing out" provisions supported regions that lost treatment. Thus, the DiD results confirm our previous RDD results on the effect of EU regional policy on right-fringe voting support.

Columns 3 and 4 of Table 5 report the estimated effect of losing Objective-1 treatment on far-left party support. All post coefficients, i.e., rows 2 and 3 of Panel B, show negative treatment effects. For instance, we estimate a differential drop in far-left parties' vote shares by around 1.4–1.5pp between 2009 and 2004 and slightly larger effects for the difference between 2014 and 2004. This effect size aligns with the point estimates from the RDD after restricting the sample to observations in a very close window around the threshold (column 8 of Table 4) and to the correlational evidence presented in Appendix Table A3. However, these effects should be interpreted cautiously: the coefficients in row 1 are also negative and of similar size, hinting at a pre-trend in left-fringe support. Thus, the post-period estimates might reflect a reversion of far-left party support to pre-2004 levels in the treatment group.

4.3 Matched Sample: Nested Aberrants

Eventually, to further corroborate our previous findings, we focus on quasi-exogenously (un-)treated NUTS3-regions, which we refer to as "nested aberrants". Nested aberrants are comparatively rich NUTS3-regions (GDP per capita $>$75% of the EU's average) that receive Objective-1 transfers only because they are nested in a NUTS2-region below the threshold, or NUTS3-regions with a GDP per capita of less than 75% of the EU average that do not receive Objective-1 transfers because their NUTS2 region's average is above the threshold. We seek to compare rich aberrants that exogenously receive treatment with similarly rich NUTS3 regions that do not receive Objective-1 transfers and likewise poor aberrants not receiving treatment with similarly poor NUTS3-regions that do. To achieve this comparison we first restrict the sample as follows: We keep only NUTS2 regions complying with the 75% rule. We then drop all NUTS3 regions with a GDP per capita exceeding the highest GDP per capita in a treated NUTS3 region from the same country and election. Similarly, we drop all NUTS3 regions with a GDP per capita lower than the lowest GDP per capita of an untreated NUTS3 region from the same country and election. We refer to the regions in the restricted sample as regions sharing a common GDP support. We then estimate the treatment effect of Objective-1 transfers on populist support from this sample of comparable regions. Table 6 reports results from the regression analysis. All regressions include country-election fixed effects and regional-level controls. The first two columns use nested aberrants on both sides of the threshold. Columns 3 and 4 in the middle

compare exogenously untreated regions to treated regions. This analysis focuses on comparatively poor NUTS3 regions, all below the cutoff; some do not receive funding simply because they are located within a comparatively wealthy NUTS2 region. Conversely, columns 5 and 6 focus on relatively rich NUTS3-regions above the cutoff, some of which are exogenously treated with Objective-1 transfers because they have poor neighbors. In odd-numbered columns, we use all observations from respective subsamples, while in even-numbered columns, the sample is further homogenized via caliper matching. Specifically, we perform tight caliper matching on NUTS3 regions' GDP per capita within country-election strata (cf. Appendix Figure A3 for the balancing of GDP per capita between treated regions and controls).[16]

Table 6: Nested Aberrants and Vote Shares for Far-Right Parties

	Exo. (un)treated		Exo. untreated		Exo. treated	
	(Common Sup.)	(Caliper)	(Common Sup.)	(Caliper)	(Common Sup.)	(Caliper)
Panel A.						
Treatment	-0.021***	-0.020**	-0.032***	-0.035**	0.000	0.006
	(0.008)	(0.009)	(0.011)	(0.014)	(0.006)	(0.005)
# Treated NUTS3	291	90	228	53	63	29
# Control NUTS3	178	90	115	53	63	29
Adjusted R-Squared	0.963	0.972	0.965	0.973	0.946	0.969
Country-Election-FE	Yes	Yes	Yes	Yes	Yes	Yes
Regional Controls	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table shows results from a comparison of NUTS3 regions with different treatment status conditional on levels of economic development at the NUTS3-level. The dependent variable is the share of votes for far-right parties at the NUTS3-level. The sample is restricted to NUTS2 regions that comply with the 75% rule and to NUTS3 regions with GDP per capita on the country-election specific "area of common support", i.e., for a treated NUTS3 region, there exists at least one untreated NUTS3 region in the same country-election cycle with a GDP per capita as small as the treated region's GDP per capita. Accordingly, for each untreated NUTS3 region, at least one treated NUTS3 region exists in the same country and period with GDP per capita as high as the untreated region's GDP per capita. In odd columns we use all observations and in even columns we estimate on a sample homogenized via caliper matching on GDP per capita within country-election strata. All regressions include country-election-fixed effects. All specifications include regional controls (sectoral employment shares and log of population density, gdp per capita and region-type by country fixed effects all measured at the level of NUTS3 regions). Standard errors are clustered at the NUTS2-level. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Column 1 reports a negative and statistically significant effect of EU transfers on far-right parties' vote shares of around 2 pp. After the caliper-matching, the number of observations drops to 90 aberrant NUTS3 regions and 90 matched controls, but the point estimate remains almost unchanged and significant. In columns 3 and 4 we compare regions receiving transfers to similarly underdeveloped, but exogenously untreated regions. The point estimates suggest a negative and highly significant effect of 3.2 pp to 3.5 pp for these comparatively poor regions. In contrast, we find no treatment effect when comparing exogenously treated aberrant regions to similar but untreated NUTS3 regions (columns 5 and 6). This suggests that underdeveloped regions targeted by regional policy (columns 3 and 4) are more responsive to the treatment than

[16]We follow the convention in the literature and set the caliper to 0.25 times the standard deviation of the matching variable (cf. Rosenbaum and Rubin, 1985)

their wealthier counterparts.

Table A8 in the Appendix reports the same specifications with the share of far-left parties as dependent variables. In line with the RDD results, there is no evidence of a treatment effect on voting for far-left parties. All point estimates are quantitatively small and statistically insignificant.

4.4 Robustness and Magnitude of RDD-Main Results

Robustness To test the robustness of our main result from the RDD, we estimate modified versions of the specifications from columns 4 and 6 of Table 3, i.e., we consider the range of +/- 15pp around the threshold and include regional-level controls. Results are reported in Table 7.

Columns 1 and 2 add historical vote shares for far-right parties as explanatory variables to the model, mostly results from elections to the European Parliament in 1999, which control for persistent differences in voting behavior between NUTS3 regions. Consequently, identification relies on changes to trends in regional voting behavior, akin to the first difference specifications. As expected, the point estimates drop compared to the baseline results in Table 3, indicating that treatment depresses vote shares for far-right parties by approximately 1.7 pp. However, due to a precision gain—past vote shares being powerful predictors of contemporaneous voting behavior—the effect's statistical significance increases.

In columns 3 and 4, we condition on turnout, which we unfortunately do not observe for all countries. Although turnout is arguably a "bad control", this specification tests whether lower far-right vote shares are driven by higher voter turnout. While Table A7 in the appendix hints at a positive effect of regional policy on turnout, the results in columns 3 and 4 of Table 7 do not support the hypothesis that higher turnout is a relevant cause for a lower vote share for far-right parties as the point estimates align with the main findings.

Columns 5 and 6 provide results from estimates based on more aggregate data from the NUTS2-level, the spatial unit at which the treatment status is defined. Reassuringly, the point estimates are in the same order of magnitude as the baseline results. As the number of observations drops to 230, our estimates lose precision but remain significant at the 10% and 5% levels, respectively.

In columns 7 and 8, we restrict the estimation sample to EU-15 countries. Over our period of analysis, most NUTS2-regions in Eastern Europe were classified as Objective-1 region at least at some point in time. Omitting Eastern Europe only leads to a very small drop in the point estimate. Finally, the estimates in columns 9 and 10 include the 2014 election results, which

were omitted from the baseline analysis as we used only the most recent election per funding period. Including the 2014 results expands our sample to 1,577 NUTS3 region-year observations. The main findings remain qualitatively unchanged.

In Appendix Table A9, we check the sensitivity of our main results towards omitting single countries from the estimation sample. Reassuringly, this "leave-one-country-out" exercise shows that the RDD-results do not depend on individual countries, although the magnitude of the effect shows some variance.[17]

In our main specification, we follow the literature on the evaluation of the effects of the EU's regional policy and estimate a parametric RDD focussing on ranges around the 75% cutoff. The most recent RDD literature has particularly criticized the use of the "global sample" in conjunction with higher-order polynomials as prone to introducing jumps at the boundaries of the support, i.e., the cutoff (cf. Calonico et al., 2014). Since our main specification uses second-order polynomials at most and focuses on ranges +/-15% around the threshold, i.e., we fit linear and quadratic polynomials locally, our approach appears rather unproblematic in light of the most recent advancements in the RDD literature. As an additional robustness check, Section B.4 in the appendix reports results from estimating non-parametric specifications using local linear regressions and kernel weighting for various bandwidths.[18] Although slightly smaller in magnitude, the pattern we find is consistent with the main results.

Magnitude The specifications in Table 8 use log-transformed vote shares as outcome, weight the regressions by population, and use actual per capita transfers as explanatory variables. With this, we seek to gauge the relevance and magnitude of the effects. The estimates reported in columns 1 and 2 with the logged vote shares on the left-hand side imply a reduction in the share of votes for far-right parties by 15–20%. This aligns well with the size of the estimates from the levels specification in Table 3 relative to the estimation sample's mean vote share for far-right parties of $\approx$ 13.5 pp. Columns 3 and 4 of Table 8 show that the estimates are only slightly smaller when more weight is given to more populous NUTS3 regions. The fact that our results are not primarily driven by sparsely populated regions is important for the effect's significance in shaping the overall distribution of votes. Finally, in columns 5 and 6, we use the per capita transfers (in €100) as the explanatory variable, which we instrument with the same eligibility

[17] For instance, the omission of Spain leads to an increase in the point estimate, indicating a reduction in the vote share for far-right parties by $\approx$ 3.8 pp. Conversely, dropping the UK decreases the point estimate to $\approx$ 2 pp. These 'sensitivities' partially reflect different levels in the share of votes for far-right parties in the two countries. Moreover, omitting Italy, a country with many regions of varying treatment status and only few non-compliers, increases the standard errors.

[18] We implement the estimation procedure via the RDROBUST package (Calonico et al., 2017).

Table 7: Robustness: Transfers and Vote Shares for Far-Right Parties (Range is 15)

	Cond. on FP-Values		Cond. on Turnout		NUTS-2		EU-15		Incl. 2014	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Vote Shares										
Treatment	-0.018***	-0.017**	-0.022***	-0.018**	-0.022**	-0.024*	-0.028***	-0.026***	-0.028***	-0.023**
	(0.006)	(0.007)	(0.008)	(0.007)	(0.011)	(0.013)	(0.009)	(0.010)	(0.009)	(0.010)
# of Observations	1,175	1,175	909	909	230	230	1,083	1,083	1,577	1,577
Adj. R-Squared	0.356	0.358	0.074	0.087	0.091	0.092	0.052	0.056	0.052	0.060
K-P-F-Statistic	67.02	54.33	41.37	36.74	76.24	64.49	63.61	53.25	63.76	51.99
Regional Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ctry-Election-FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Order of Poly.	Lin.	Quad.	Lin.	Quad.	Lin.	Quad.	Lin.	Quad.	Lin.	Quad.

Notes: This table shows the results from alternative specifications based on the fuzzy regression discontinuity design. The estimation sample comprises NUTS2 regions in a range of +/- 15 around the threshold. In columns 1 and 2 we include a control for the share of votes for far-right parties in an early election (usually 1999) and in columns 3 and 4 we control for turnout. In columns 5 and 6 we estimate our main specification using NUTS2 instead of NUTS3 regions. In columns 7 and 8 we use only EU 15 countries, i.e. we omit Eastern Europe. In column 11 and 12 we also include the election results from 2014. The treatment dummy is always instrumented with a dummy that indicates eligibility based on the GDP per capita criterion ($<$ 75% of the EU's average). All specifications include country-election fixed effects and regional controls (sectoral employment shares and log of population density, gdp per capita and region-type by country fixed effects all measured at the level of NUTS3 regions). At the bottom of each Panel, we report the first stage's Kleibergen-Paap -. To control for the forcing variable, we use polynomials which are allowed to have different shapes on each side of the threshold. Standard errors are clustered at the NUTS2 level. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

dummy as before.[19] The point estimates imply that an additional €100 of transfers per capita and funding period depresses the share of votes for far-right parties by 0.6pp on average.[20]

Table 8: Magnitudes: Transfers and Vote Shares for Far-Right Parties (Range is 15)

	LHS in Log		Pop-Weighted		Transfers RHS	
	(1)	(2)	(3)	(4)	(5)	(6)
Vote Shares						
Treatment	-0.189**	-0.166**	-0.029***	-0.027**		
	(0.078)	(0.080)	(0.010)	(0.011)		
Transfers (€100/PC)					-0.006***	-0.006**
					(0.002)	(0.002)
# of Observations	1,168	1,168	1,175	1,175	1,175	1,175
Adj. R-Squared	0.067	0.072	0.098	0.101	-0.172	-0.175
K-P-F-Statistic	67.36	54.42	92.02	74.28	14.23	11.28
Regional Controls	Yes	Yes	Yes	Yes	Yes	Yes
Ctry-Election-FE	Yes	Yes	Yes	Yes	Yes	Yes
Order of Poly.	Lin.	Quad.	Lin.	Quad.	Lin.	Quad.

Notes: This table shows the results from alternative specifications based on the fuzzy regression discontinuity design. The estimation sample comprises NUTS2 regions in a range of +/- 15 around the threshold. The dependent variable in columns 1 and 2 is the log share of votes for far-right parties. Regressions in columns 3 and 4 are weighted by population. In column 5 and 6 we use per capita transfers in 100 Euro at the NUTS2 level as explanatory variable which we instrument with the eligibility dummy. The instrument is always a dummy that indicates eligibility based on the GDP per capita (1 if $<$ 75% of the EU's average). All specifications include country-election fixed effects and regional controls (sectoral employment shares and log of population density, gdp per capita and region-type by country fixed effects all measured at the level of NUTS3 regions). At the bottom of each Panel, we report the first stage's Kleibergen-Paap -. To control for the forcing variable, we use polynomials which are allowed to have different shapes on each side of the threshold. Standard errors are clustered at the NUTS2 level. * p $<$ 0.1; ** p $<$ 0.05; *** p $<$ 0.01.

5 Individual-Level Analysis

In the preceding part of this paper, we have shown that regional policy reduces the vote share of right-fringe parties in European Elections. To corroborate our findings and infer potential mechanisms, we replicate our RDD from above but assess individual-level data instead. We use data from the Eurobarometer (EB), a Europe-wide survey that, among other things, asks about attitudes towards the EU, trust in democratic institutions, and expectations about future economic development.[21]

[19] We use data on per period transfers to NUTS2 regions from the EU's structural fund, i.e. "ERDF", "ESF", "CF". The data has been last retrieved here on 05.05.2024.

[20] The same magnitude can be calculated indirectly: the RDD coefficient in a specification with per capita transfers as the dependent variable implies that treatment leads to $\approx$ €500 additional per capita transfers throughout a 7-year funding period. This estimate, combined with the main effect in Table 3, yields the same magnitude as suggested by columns 5 and 6 of Table 8.

[21] Bayerlein and Diermeier (2022) investigate effects of EU structural funds on euroscepticism using data from the European Social Survey.

5.1 Data: The Eurobarometer

The EB is a multi-annual survey conducted on behalf of the EU Commission. The so-called "Standard Eurobarometer"—with at least two survey waves each year—contains questions related to personal convictions, trust measures, and respondents' political attitudes. In each wave, the EB surveys approximately 25,000 individuals and at least 500 from each member state. We combine 40 waves of the standard EB, covering 2000 to 2019. For most countries, respondents' residence is recorded at the NUTS2-level, but for some countries like Germany, the UK, and parts of Italy, only more aggregate geographic data is available. We standardize the regional identifiers over time, supplement the EB with regional characteristics from ARDECO (see Section 2), and accordingly aggregated voting results.

We group questions asked in the EB into three broad categories: In the first category—"economic expectations", we summarize survey answers on individuals' expectations towards the future development of the economy or the labor market. The second category on "attitudes" contains responses to survey questions about individuals' overall image of the EU, or their level of satisfaction with democracy in the EU. The last category contains measures of individuals' "trust" in democratic institutions, both of their home country and the EU. We construct binary indicators for all outcomes if the response is not yet on a 0–1 scale.

To give a first impression of the raw data, Figure A5 in the Appendix plots the evolution of one measure from each category over time, separately for Objective-1 regions and untreated regions.[22] In all figures, the time series for the treated and untreated groups strongly co-move. Figure A5(a) shows that over the entire period from 2000 to 2019, treated regions have a consistently less negative image of the EU. Likewise, people living in treated regions generally express higher trust in the EU (cf. Figure A5(b)).[23]

5.2 RDD Results: Eurobarometer

To move beyond the suggestive evidence presented in Appendix Figure A5, we employ the same RDD as in Section 4.1 to estimate the causal effects of EU transfers on individual-level outcomes. We focus on a range of +/-15pp around the 75% threshold and, as previously, on outcomes observed at the end of each funding period. As in the regional-level analysis, we include country-

[22] Figure A5(a) plots the evolution of individuals' expectations regarding economic development, measured by the share of people who expect the economic situation to improve, Figure A5(b) shows the share of individuals with a negative EU image, and Figure A5(c) the share of people with trust in the EU.

[23] One can also see how the evolution of these time series plausibly reflects significant macro developments, e.g., during the European debt crisis between 2010 and 2015, the share of people with a negative EU image peaked and trust levels hit their bottom.

time fixed effects, regional-level controls, as well as some—arguably exogenous—individual-level controls such as age and gender.[24] Figure 4 plots the point estimates of the treatment effect and related confidence intervals for specifications with first- and second-order polynomials (triangles and circles).

The primary objective of regional policy is to foster economic convergence between regions, which, as documented by previous research, is successful (cf. Becker et al., 2013; Becker et al., 2012). Hence, it is natural to assume that individuals affected by this policy may have a more optimistic/less pessimistic view on their economic perspectives, which, might affect their voting behavior. Accordingly, the first block of results shown in Figure 4 reports on the effects of EU transfers on individuals' economic expectations. Surprisingly, the results do not hint at any systematic effect of Objective-1 transfers on individuals' economic expectations.

Despite the lack of a positive effect of transfers on economic expectations, the middle block of Figure 4 shows that treatment increases the share of individuals who believe their country benefits from the EU by approximately 5pp. Additionally, the share of individuals with a distinctly negative view of the EU is about 5pp lower in treated regions. For the first outcome, the point estimates correspond to an $\approx 7\%$ increase relative to the mean of the dependent variable. The relative effect size for the second outcome is substantially larger: in the estimation sample, about $\approx 25\%$ of the individuals hold a negative view; hence, the point estimate implies a 20% reduction relative to the mean. Interestingly, we observe only a much smaller increase in the share of individuals with explicitly positive views of the EU. Apparently, Objective-1 transfers may decrease discontent with the EU, without substantially boosting content. However, when explicitly asked about their satisfaction with democracy in the EU, satisfaction levels tend to increase with Objective-1 treatment, while dissatisfaction is not affected.

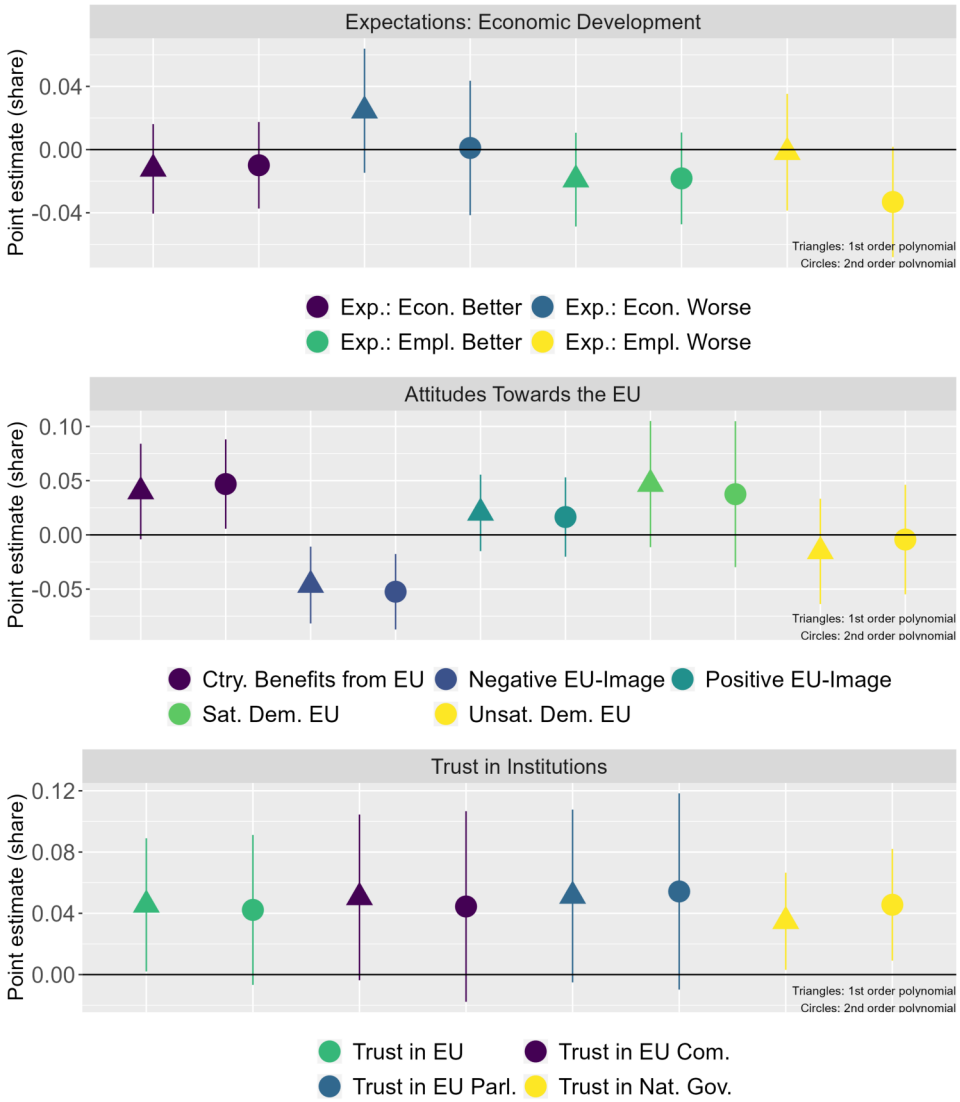
The last block reports on the effects of EU transfers on individuals' trust in democratic institutions. Across the board, the estimates show that Objective-1 transfers increase trust in the EU institutions and in the national government.[25] These results are consistent with the main finding about Objective-1 treatment's impact on voting behavior, as trust in government and satisfaction with the political system are known to be associated with fewer votes for fringe parties (cf. Dustmann

[24] Specifically, the regional-level controls include the employment share, the share of industrial workers, and population density. The variables from the EB that we include as controls are individuals' gender, marital status, dummies for age categories, and community type (rural, suburban, urban) by country. To correct for the over-/under-representation of certain regions, we weight each individual answer by the inverse of the number of observations in a region, thus equalizing the overall weight of each region.

[25] Indeed, when interpreted relative to the mean of the dependent variable, the effect on trust in the national government is the largest. The share of people with trust in the EU, the EU Commission, the European Parliament and the national government are 44%, 51%, 54% and 32%.

et al., 2017).

Figure 4: Point Estimates RDD - Individual-Level

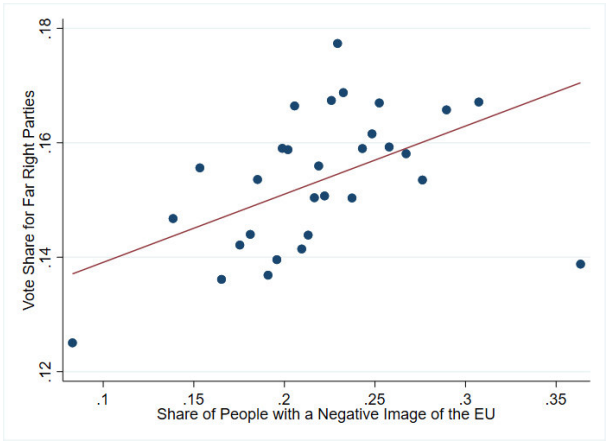


Notes: The figure plots the point estimates and 90% confidence intervals from our FRDD, focusing on a range of +/-15% around the threshold. The estimates are obtained from individual-level data from the last three years of a funding period. All outcomes are 0-1 dummies. The triangles/circles represent the point estimates from a specification with linear/quadratic polynomials. Regressions include country-time fixed effects and the employment share, the share of industrial workers, population density, individuals' gender, marital status, dummies for age categories, and their community type (rural, suburban, urban) by country as further controls. Specifications are weighted by the inverse of the number of observations in a given regional unit. Standard errors are clustered at the region-level. Source: Eurobarometer and Ardeco.

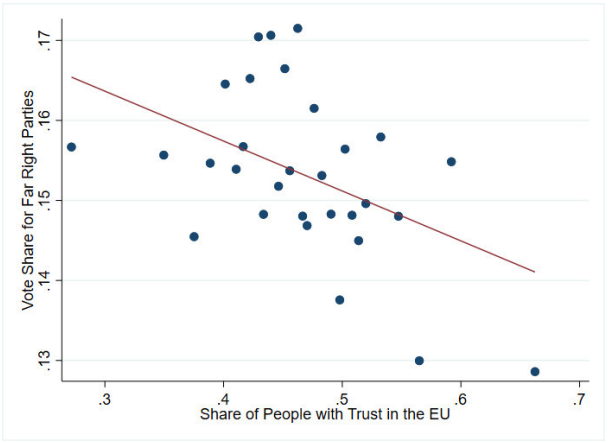
Overall results in Figure 4 suggest that the reason for decreasing support of populist parties in reaction to the EU's regional policy has less to do with voters' economic considerations, but more with voters (re-)gaining trust in the political system. This interpretation is supported by the binscatters in Figure 5. By way of example, they show the relationship between right-fringe voting on the regional-level and regional-level aggregates of the answers to the Eurobarometer.

While far-right voting support relates to attitudes to the EU and to trust in institutions—both of which are affected by Objective-1 transfers—there is no statistical relationship between economic expectations and the vote share received by far-right parties.

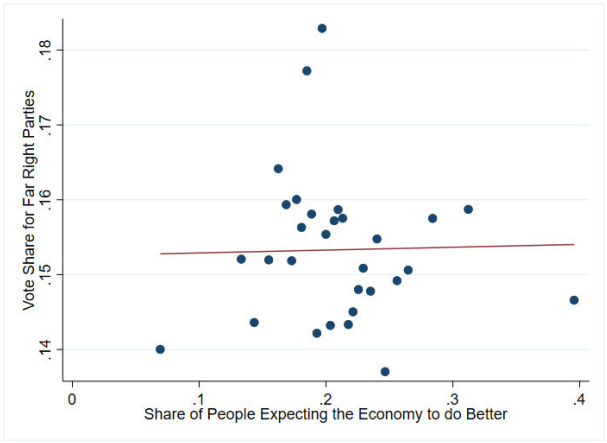
Figure 5: Regional-Level Correlation - Survey Answers and Voting



(a) Negative Image of the EU



(b) Trust in the EU



(c) Expecting the Economy to do Better

Notes: The figures show the correlations between vote shares for far-right parties and the share of individuals with a negative view of the EU (a), trust in the EU (b), and (c) the expectation that the economic situation will improve at the regional level (NUTS2 or broader). Both variables are residualized by country-election, i.e., the correlations are from within countries. Source: Eurobarometer and national electoral authorities, Own calculations.

To further explore the relationship between EU regional policy on the one hand and attitudes, trust and expectations on the other hand, we split survey responses by respondents' education level. Appendix Table A10 presents estimates for the respective subgroups. We find suggestive evidence for a more pronounced treatment effect on individuals without formal education until age 21. For instance, among those with low education, treatment decreases the share of respondents holding a negative view of the EU by approximately 5pp, in contrast to around 2.5pp for those with higher education. The difference is even more pronounced for most trust measures.[26] Hence, one perspective on the size of the treatment effects is that Objective-1

[26]We find a positive effect of treatment on trust in the EU by about 5pp and no effect among individuals with

transfers close 50% of the trust gap between high- and low-educated individuals.

6 Conclusion

While the economic causes of populism are comparatively well understood, little is known about potential remedies. We show that regional policies can mitigate the populist surge. Specifically, public investments into regional development funded by the EU's regional policy program reduce the support of nationalist parties from the right fringe of the political spectrum. Indeed, populist support decreases by up to 20% in European regions receiving funding under the development objective (Objective-1) of the EU's structural funds. This result holds in different empirical models exploiting different sources of quasi-exogenous variation.

With that, investments into regional development help to counter the political polarization in space observed in many Western democracies. As a general pattern, urban agglomerations are less inclined to support populist parties or candidates, who tend to have their strongholds in more peripheral regions. Our analysis shows for the EU that regional policies may at least slow down the drifting-apart between prosperous centers and lagging behind regions—not only economically, but also politically.

In the EU, the rise of populism casts a shadow on the prospects of European integration. Right-wing populists in particular pursue a nationalist agenda, that tends to be sceptical towards the institutions of the EU, and to furthering European cooperation. We show that the electoral support of exactly this set of parties is most responsive to EU regional policy. In line with that, our individual-level analysis suggests that regional policies increase individuals' trust in the EU and its institutions, as well as consent with democracy more generally. This seems to be a reason why populist support decreases in regions receiving support from the EU's structural funds.

Our paper deliberately takes a pan-European view, assessing the effect of regional policy on an average European region. This broad view comes at the expense of detail. While we identify the overall effect of Objective-1 transfers, we cannot say much about the effectiveness of specific policy measures—not to speak of efficiency. More research is needed to better understand how exactly public support for regional development affects voting behavior, which measures are most successful (and under which circumstances), and how the political consequences of regional policies interact with their economic effects.

high levels of education. This is despite individuals with lower educational levels having considerably less trust in institutions, e.g., only 37% of individuals with lower education express trust in the EU as compared to 48% among individuals with higher education.

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Appendix A Expenditure Data

The expenditure data comes from separate datasets for each funding period; ensuring data consistency within funding periods but not across periods. For the funding cycles from 2000 to 2006 and 2007 to 2013, NUTS3-level expenditure information is published in the Annexes to reports produced for the Commission, which describe the regional distribution of EU expenditures. For the last completed funding period, the European Commission started to provide project-specific information, including the projects' geocodes, the total volume of the projects and the co-financing rate.

Funding period 2000–2006: The expenditure data for the funding period 2000–2006 covers ERDF and Cohesion Fund expenditures and was collected in a study carried out by SWECO on behalf of the DG Regional Policy. According to the final report, the study successfully mapped 98% of ERDF and Cohesion Fund expenditures from the 2000–2006 budgets to NUTS3 regions (cf. *ERDF and CF Regional Expenditure*). The corresponding report is titled "Regional expenditure study 2000–2006". In a previous study, Becker et al. (2013) use the same data.

Funding period 2007–2013: NUTS3-level expenditure data for the funding period 2007–2013 comes from a similar data collection effort conducted by the Spatial Foresight GmbH on behalf of the EU Commission (Spatial Foresight GmbH, 2015). The data also covers expenditures through ERDF and the Cohesion Fund.[27] The corresponding report is titled "Geography of Expenditure".

Funding period 2014–2020: For the last completed funding period, which ran from 2014 until 2020, we could not get regional expenditure data directly. However, in 2022 the EU-Commission launched the *Kohesio* platform, which allows downloading information at the project level, i.e., it documents all co-financed projects, their volume, and their geo-referenced location.[28] While this data source seems ideal, many of the geocodes turned out to be identical, e.g., a town's centroid. We adopted various cleaning steps to be confident that our data reasonably describe transfer intensity, e.g., we dropped the largest 0.5% of projects since those are primarily large infrastructure projects, such as road construction, that cannot be mapped to individual NUTS3 regions. We also dropped expenditures from the ESF in regions with a spike in the number of respective projects. The reported location of ESF projects often corresponds to the location of the local authority that manages the project. For example, if the employment agency runs a retraining program for the unemployed across the country that receives money from the ESF,

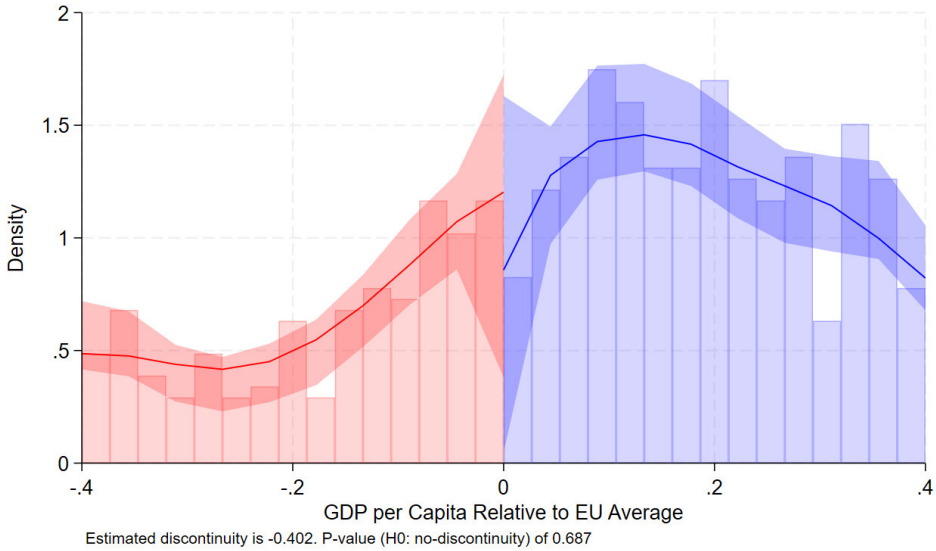
[27] We downloaded both datasets, i.e. for the period 2000–2006 and for 2007–2013, from the official website of the European Commission (cf. here). Last retrieved: 10.03.2021.

[28] The project level data can be downloaded here. Last retrieved: 16.06.2023

the project location would be the location of the employment agency. We then use the cleaned project-level data to calculate the regional-level expenditure.

Appendix B Additional Regional-Level Material

Figure A1: Distribution of the Forcing Variable



Notes: The figure shows the NUTS2-level GDP per capita distribution centered around the 75% cutoff. Neither the plot nor a formal test provides evidence for a discontinuity of the forcing variable at the cutoff.

B.1 Descriptive Information

Table A1: List of Regions Used in Difference-in-Differences Estimation

NUTS2 regions that remained treated	NUTS2 regions that dropped out of treatment
DE41 (8), DE80 (8), DED2 (5), DED (4), DEE0 (14), DEG0 (23), EL41 (3), EL43 (4), EL51 (5), EL54 (3), EL61 (3), EL62 (4), EL63 (3), EL65 (3), ES11 (4), ES42 (5), ES43 (2), ES61 (8), FI1D (7), ITF3 (5), ITF4 (6), ITF6 (5), ITG1 (9), PT11 (8), PT16 (8), PT18 (5), UKK3 (1)	AT11 (3), BE32 (7), DE42 (10), DED5 (3), EL42 (2), EL52 (7), EL53 (3), EL64 (5), ES12 (1), ES13 (1), ES41 (9), ES52 (3), ES62 (1), ES70 (2), FRM0 (2), ITF2 (2), ITF5 (2), ITG2 (8), PT15 (1), SE31 (3), SE32 (2), SE33 (2), UKD7 (4), UKE3 (2)

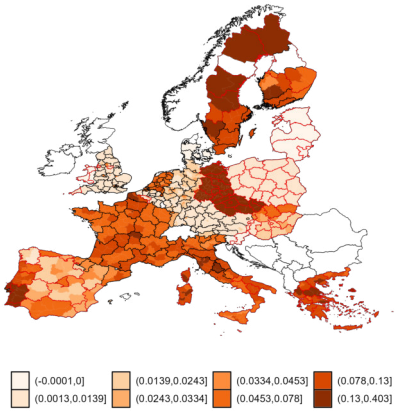
Notes: Regions used in the difference-in-differences regressions. All listed NUTS2 regions received Objective-1 treatment until 2007. The number of nested NUTS3 regions is shown in brackets. Source: Official Journal of the European Union (L 194, L 243/44)

Table A2: Descriptive Statistics of NUTS3-Level Covariates

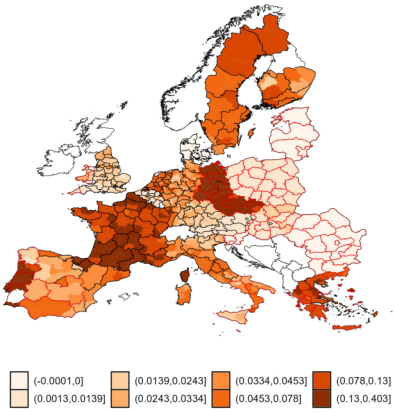
	Mean	Mode	SD	Max	Min	N
GDP / Capita	21,532	20,479	15,638	365,805	798	5,004
GDP / Capita - Forcing	0.910	0.848	0.547	12.522	0.129	5,004
Employment Share	0.444	0.422	0.146	2.918	0.214	5,004
Industry Share	0.350	0.337	0.133	0.862	0.041	5,004
Total Population (in 1000)	370.570	264.009	413.664	6,263.517	19.833	5,004
Population Dens. (Pop/km2)	575	144	1,405	21,339	2	5,004

Notes: This table shows summary statistics of covariates at the NUTS3-level pooled over the election years 2004, 2009, 2014 and 2019. Source: ARDECO database.

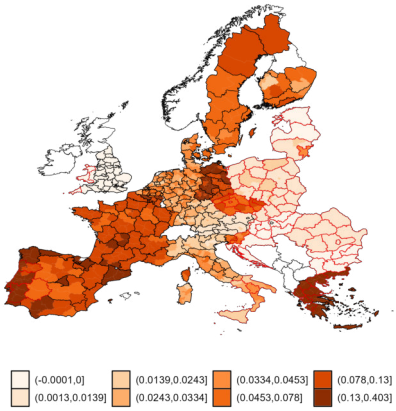
Figure A2: Vote Shares for Left-fringe Parties in EP Elections



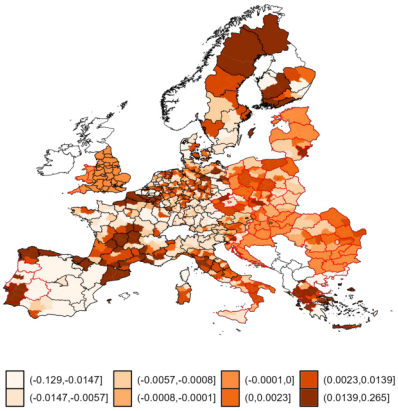
(a) Far-Left in 2004



(b) Far-Left in 2009



(c) Far-Left in 2019



(d) Far-Left in 2019, residualized

Notes: The figures show the share of votes for far-left parties in the elections to the European Parliament in 2004, 2009, and 2019, as well as the residualized outcome for 2019. Objective-1 regions are demarcated in red.

B.2 Enhanced Correlations: Transfers and Voting

To explore the correlation between vote shares and EU-transfers, we pool the data from the last four elections to the EP and estimate the following OLS regression at the NUTS3-level:

$$V_{ict} = \beta_0 + \beta_1 X_{ict} + \phi_{ct} + \alpha T_{ict} + \varepsilon_{ict} \tag{5}$$

The coefficient α measures the correlation between the population normalized measure of EU transfers (T_{ict}) and the vote shares V_{ict}, conditional on country-election fixed effects (ϕ_{ct}) and regional control variables (X_{ict}).[29] Panel A of Table A3 reports the respective point estimates when the explanatory variable is in log. Panel B shows the results when EU transfers are in levels (€1000/per capita). The dependent variables are the shares of votes for right-fringe parties (columns 1 and 2) and left-fringe parties (columns 3 and 4).

Table A3: NUTS3-Level Transfers and Vote Shares for Far-Right/-Left Parties

	Far-Right Parties		Far-Left Parties	
	(1)	(2)	(3)	(4)
Panel A - Log of p.c. Transfers				
Transfers	-0.007***	-0.004***	0.003***	0.003***
	(0.001)	(0.001)	(0.000)	(0.000)
# of Observations	3,900	3,899	3,900	3,899
Adj. R-Squared	0.910	0.919	0.866	0.883
Panel A - Transfers (€1000/p.c.)				
Transfers	-0.017***	-0.012***	0.013***	0.013***
	(0.002)	(0.002)	(0.001)	(0.001)
# of Observations	4,074	4,073	4,074	4,073
Adj. R-Squared	0.909	0.919	0.869	0.885
Regional Controls		Yes		Yes
Country-Election-FE	Yes	Yes	Yes	Yes

Notes: This table shows correlations between the share of votes for extreme parties (far-right in columns 1 and 2 and far-left in columns 3 and 4) and per capita transfers. The units of observation are NUTS3 regions. The specifications include country-election fixed effects and may or may not include regional controls (Log employment, log GDP per capita, log of population density and higher order terms thereof). In Panel A, the independent variable is in log and in Panel B, the independent variable is in levels (€1000 per capita). We omit very affluent regions from the sample and focus instead on a symmetric sample (+/- 75%) around the threshold, determining a NUTS2 region's eligibility for objective 1 transfers. We pool all observations from the 2004, 2009, 2014 and 2019 elections and keep all countries that were EU members at the beginning of a funding period. * p $<$ 0.1; ** p $<$ 0.05; *** p $<$ 0.01.

Results in Panel A indicate that higher per-capita transfers are associated with a lower share of votes for right-fringe parties. Qualitatively this holds in specifications with and without regional controls. The opposite is true for the association between transfers and the share of votes for

[29] The regional controls collected in X_{ict} include log population density, employment, GDP per capita and higher-order terms. The estimation sample includes all Objective-1 regions and all NUTS3 regions nested in a NUTS2 region with a GDP per capita that does not exceed 1.5 times the EU's average (i.e., the sample is symmetric around the threshold).

left-fringe parties. Both effects are highly significant in a statistical sense. Quantitatively, the coefficients in columns 2 and 4, Panel A, imply that 100% larger EU transfers are associated with vote shares for far-right parties being 0.5pp lower, and far-left parties' vote shares being 0.4pp higher. Results in Panel B suggest that transferring an additional €1000 per capita is associated with vote shares for far-right parties being 1.2pp lower and for far-left parties 1.4pp higher (columns 2, 4).

B.3 Additional Regression Results: Regional

Table A4: ERDF Transfers and Vote Shares for Far-Right Parties - In First Differences

	Full Range		Range +/- 15				Range +/- 5	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Δ Shares								
Treatment	-0.017***	-0.018***	-0.013**	-0.013**	-0.015***	-0.015**	-0.020*	-0.013
	(0.005)	(0.005)	(0.006)	(0.007)	(0.006)	(0.006)	(0.011)	(0.009)
# of Observations	3,414	3,414	1,077	1,077	1,077	1,077	372	372
Adj. R-Squared	0.034	0.049	0.010	0.035	0.007	0.032	0.066	0.087
K-P-F-Statistic	126.19	120.56	51.61	46.93	58.50	52.91	15.60	17.15
Regional Controls		Yes		Yes		Yes		Yes
Ctry-Election-FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Order of Poly.	Cub.	Cub.	Quad.	Quad.	Lin.	Lin.	Lin.	Lin.

Notes: This table shows the results from the fuzzy regression discontinuity design. The dependent variable is the change (first difference) in the share of votes for far-right parties. The units of observation are NUTS3 regions. The treatment dummy is instrumented with a dummy that indicates eligibility based on the GDP per capita criterion (< 75% of the EU's average). The specifications include country-election fixed effects and may or may not include regional controls (sectoral employment shares and log of population density, gdp per capita and region-type by country fixed effects all measured at the level of NUTS3 regions). At the bottom of the table we report the first stage's Kleibergen-Paap-F-Statistic. We estimate the effect on the full range, on a range +/-15, and +/-5. To control for the forcing variable, we use polynomials which are allowed to have different shapes on each side of the threshold. Standard errors are clustered at the NUTS2 level. * p < 0.1; ** p < 0.05; *** p < 0.01.

Table A5: ERDF Transfers and Vote Shares for Far-Left Parties - In First Differences

	Full Range		Range +/- 15				Range +/- 5	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Δ Shares								
Treatment	-0.003	-0.002	0.003	0.003	-0.002	-0.002	0.030**	0.025
	(0.006)	(0.007)	(0.009)	(0.010)	(0.009)	(0.010)	(0.015)	(0.019)
# of Observations	3,414	3,414	1,077	1,077	1,077	1,077	372	372
Adj. R-Squared	0.008	0.009	0.015	0.024	0.003	0.011	0.076	0.088
K-P-F-Statistic	126.19	120.56	51.61	46.93	58.50	52.91	15.60	17.15
Regional Controls		Yes		Yes		Yes		Yes
Ctry-Election-FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Order of Poly.	Cub.	Cub.	Quad.	Quad.	Lin.	Lin.	Lin.	Lin.

Notes: This table shows the results from the fuzzy regression discontinuity design. The dependent variable is the change (first difference) in the share of votes for far-left parties. The units of observation are NUTS3 regions. The treatment dummy is instrumented with a dummy that indicates eligibility based on the GDP per capita criterion (< 75% of the EU's average). The specifications include country-election fixed effects and may or may not include regional controls (sectoral employment shares and log of population density, gdp per capita and region-type by country fixed effects all measured at the level of NUTS3 regions). At the bottom of the table we report the first stage's Kleibergen-Paap-F-Statistic. We estimate the effect on the full range, on a range +/-15 and +/-5. To control for the forcing variable, we use polynomials which are allowed to have different shapes on each side of the threshold. Standard errors are clustered at the NUTS2 level. * p < 0.1; ** p < 0.05; *** p < 0.01.

Table A6: Transfers and Vote Shares for Governing Parties

	Full Range		Range +/- 15				Range +/- 5	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Vote Shares								
Treatment	0.006	0.007	0.028*	0.022	0.029*	0.022	0.004	0.001
	(0.015)	(0.016)	(0.016)	(0.015)	(0.016)	(0.015)	(0.020)	(0.023)
# of Observations	3,721	3,721	1,175	1,175	1,175	1,175	416	416
Adj. R-Squared	0.006	0.010	0.006	0.010	-0.002	0.007	0.004	0.035
K-P-F-Statistic	145.12	139.32	58.12	54.21	73.84	67.18	13.32	15.87
Regional Controls		Yes		Yes		Yes		Yes
Ctry-Election-FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Order of Poly.	Cub.	Cub.	Quad.	Quad.	Lin.	Lin.	Lin.	Lin.

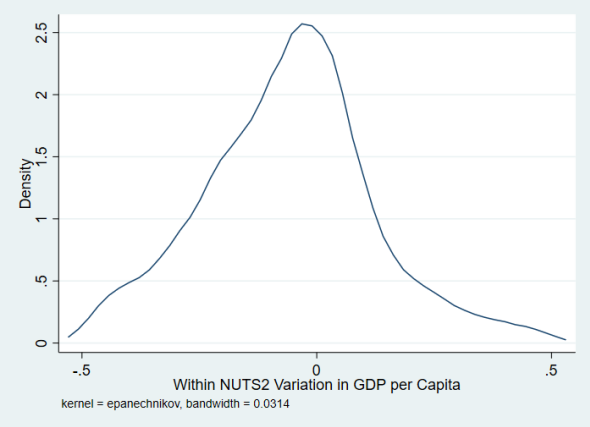
Notes: This table shows the results from the fuzzy regression discontinuity design. The dependent variable is the share of votes for governing parties. The units of observation are NUTS3 regions. The treatment dummy is instrumented with a dummy that indicates eligibility based on the GDP per capita criterion (< 75% of the EU's average). The specifications include country-election fixed effects and may or may not include regional controls (sectoral employment shares and log of population density, gdp per capita and region-type by country fixed effects all measured at the level of NUTS3 regions). At the bottom of the table we report the first stage's Kleibergen-Paap-F-Statistic. We estimate the effect on the full range, on a range +/-15 and +/-5. To control for the forcing variable, we use polynomials which are allowed to have different shapes on each side of the threshold. Standard errors are clustered at the NUTS2 level. * p < 0.1; ** p < 0.05; *** p < 0.01.

Table A7: Transfers and Turnout

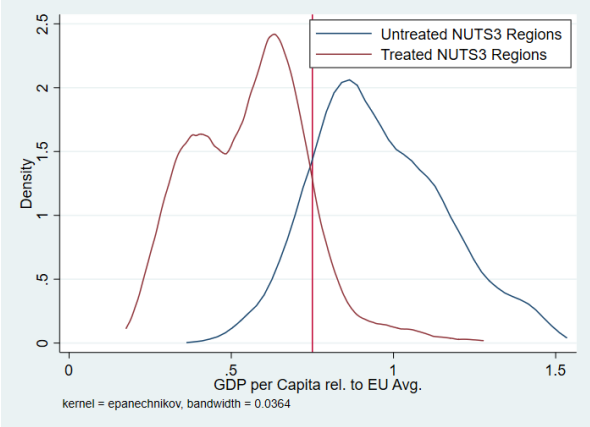
	Full Range		Range +/- 15				Range +/- 5	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Vote Shares								
Treatment	-0.013	-0.014	0.036	0.033	0.022	0.015	0.096*	0.102**
	(0.035)	(0.036)	(0.033)	(0.029)	(0.035)	(0.032)	(0.053)	(0.044)
# of Observations	3,106	3,106	909	909	909	909	339	339
Adj. R-Squared	0.052	0.074	0.027	0.118	0.018	0.103	0.165	0.270
K-P-F-Statistic	90.40	82.31	39.28	35.10	42.28	38.86	12.86	14.53
Regional Controls		Yes		Yes		Yes		Yes
Ctry-Election-FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Order of Poly.	Cub.	Cub.	Quad.	Quad.	Lin.	Lin.	Lin.	Lin.

Notes: This table shows the results from the fuzzy regression discontinuity design. The dependent variable is turnout. The units of observation are NUTS3 regions. The treatment dummy is instrumented with a dummy that indicates eligibility based on the GDP per capita criterion (< 75% of the EU's average). The specifications include country-election fixed effects and may or may not include regional controls (sectoral employment shares and log of population density, gdp per capita and region-type by country fixed effects all measured at the level of NUTS3 regions). At the bottom of the table we report the first stage's Kleibergen-Paap-F-Statistic. We estimate the effect on the full range, on a range +/-15 and +/-5. To control for the forcing variable, we use polynomials which are allowed to have different shapes on each side of the threshold. Standard errors are clustered at the NUTS2 level. * p < 0.1; ** p < 0.05; *** p < 0.01.

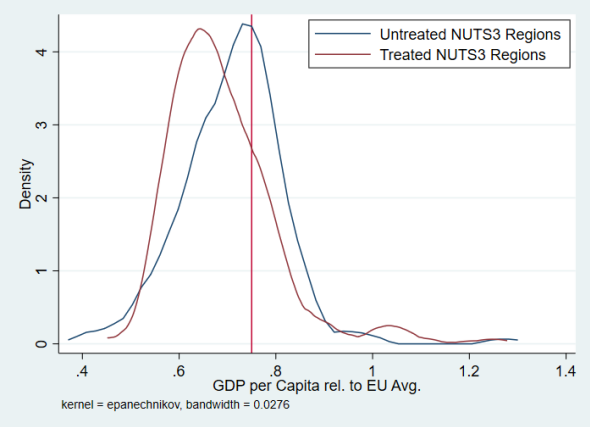
Figure A3: Variation of GDP per Capita Between NUTS3 Regions



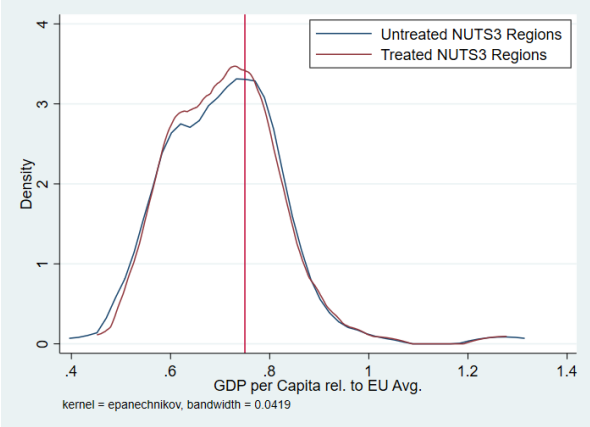
(a) Within NUTS2 variation



(b) GDP per Capita at NUTS3-Level



(c) GDP per Capita on Area of Common Support



(d) GDP per Capita after Caliper Matching

Notes: Subfigure (a) shows the distribution of the differences between a NUTS3 region's GDP per capita and the GDP per capita at the level of the mother NUTS2 region. Subfigure (b) shows the distribution of GDP per capita at the NUTS3-level, separately for treated regions and untreated regions. Subfigure (c) shows the distribution of GDP per capita at the NUTS3-level for treated and untreated NUTS3 regions after the sample has been restricted to the country by period specific area of common support with regard to GDP per capita. Subfigure (d) shows the distribution of GDP per capita on the matched sample, separately for treated and untreated NUTS3 regions. Source: Official Journal of the European (L 194, L 243/44, L 50/22) and Union European Commission - DG REGIONAL POLICY

Table A8: Nested Aberrants and Vote Shares for Far-Left Parties

	Exo. (un)treated		Exo. untreated		Exo. treated	
	(Common Sup.)	(Caliper)	(Common Sup.)	(Caliper)	(Common Sup.)	(Caliper)
Panel A.						
Treatment	0.000	-0.000	0.005	0.011	-0.007	-0.007
	(0.005)	(0.007)	(0.005)	(0.008)	(0.006)	(0.012)
# Treated NUTS3	291	90	228	53	63	29
# Control NUTS3	178	90	115	53	63	29
Adjusted R-Squared	0.941	0.948	0.933	0.947	0.964	0.958
Country-Election-FE	Yes	Yes	Yes	Yes	Yes	Yes
Regional Controls	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table shows results from a comparison of NUTS3 regions with different treatment status conditional on levels of economic development at the NUTS3-level. The dependent variable is the share of votes for far-left parties at the NUTS3-level. The sample is restricted to NUTS2 regions that comply with the 75% rule and to NUTS3 regions with GDP per capita on the country-election specific "area of common support", i.e., for a treated NUTS3 region, there exists at least one untreated NUTS3 region in the same country-election cycle with a GDP per capita as small as the treated region's GDP per capita. Accordingly, for each untreated NUTS3 region, at least one treated NUTS3 region exists in the same country and period with GDP per capita as high as the untreated region's GDP per capita. In odd columns we use all observations and in even columns we estimate on a sample homogenized via caliper matching on GDP per capita within country-election strata. All regressions include country-election-fixed effects. All specifications include regional controls (sectoral employment shares and log of population density, gdp per capita and region-type by country fixed effects all measured at the level of NUTS3 regions). Standard errors are clustered at the NUTS2-level. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table A9: Leave-one-county-out coefficients

	First order polynomial		Second order polynomial			
Country	β	se	β	se	YMean	N
AT	-0.032	0.009***	-0.029	0.010***	0.175	1,160
BE	-0.029	0.009***	-0.026	0.010**	0.183	1,109
BG	-0.031	0.009***	-0.028	0.010***	0.173	1,172
CZ	-0.031	0.009***	-0.029	0.010***	0.173	1,154
DE-W	-0.032	0.009***	-0.029	0.010***	0.183	1,132
DK	-0.031	0.009***	-0.028	0.010***	0.174	1,169
EE	-0.031	0.009***	-0.028	0.010***	0.173	1,172
EL	-0.032	0.009***	-0.030	0.010***	0.179	1,063
ES	-0.039	0.012***	-0.035	0.013***	0.184	1,085
FI	-0.033	0.009***	-0.030	0.011***	0.177	1,151
FR	-0.033	0.009***	-0.030	0.011***	0.177	1,052
HR	-0.031	0.009***	-0.028	0.010***	0.173	1,155
HU	-0.031	0.009***	-0.028	0.010***	0.173	1,175
IE	-0.031	0.009***	-0.028	0.010***	0.173	1,175
IT	-0.032	0.011***	-0.029	0.012**	0.173	1,069
NL	-0.031	0.009***	-0.029	0.010***	0.177	1,161
PL	-0.028	0.009***	-0.026	0.010***	0.167	1,152
PT	-0.031	0.009***	-0.029	0.010***	0.174	1,125
SE	-0.031	0.009***	-0.028	0.010***	0.174	1,168
SI	-0.031	0.009***	-0.029	0.010***	0.173	1,155
SK	-0.031	0.009***	-0.028	0.010***	0.173	1,173
GB-ENG	-0.020	0.007***	-0.017	0.007**	0.123	1,000
DE-E	-0.035	0.010***	-0.034	0.013***	0.169	947
GB-WLS	-0.031	0.009***	-0.028	0.010***	0.173	1,151

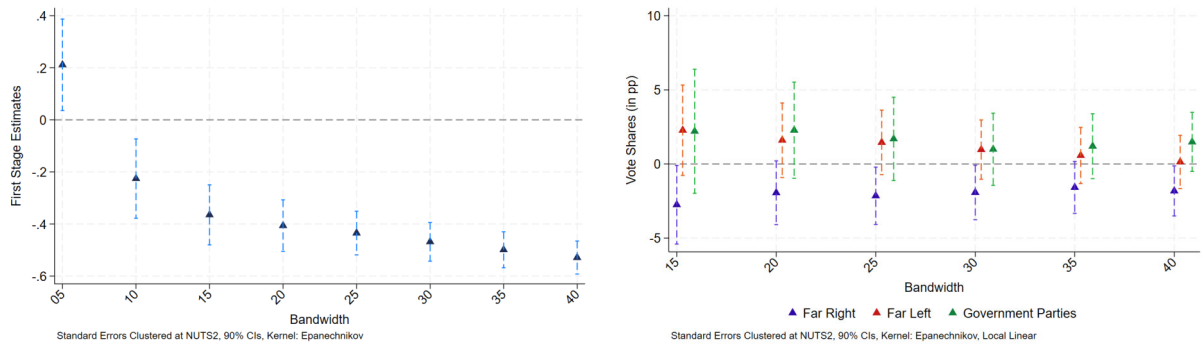
Notes: This table shows the results from the baseline FRDD specification estimated on a range of +/-15 around the 75% threshold. The units of observation are NUTS3 regions. The treatment dummy is instrumented with a dummy that indicates eligibility based on the GDP per capita criterion. The specifications include country-election and country-region-type fixed effects and regional controls (employment share, industry share, log population density and GDP/capita). Each row shows results from subsamples after dropping the county specified in Column 1. We report results from a specification with first and second-order polynomials of the forcing variable. The shape of the polynomial is allowed to vary on each side of the threshold. We also show the mean of the dependent variable for untreated regions in the respective subsamples. Standard errors are clustered at the NUTS2 level. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

B.4 Robustness: Non-parametric RDD

In Figure A4, we present the first and second-stage estimates based on a non-parametric approach to RDD estimation (cf. Calonico et al., 2014; Calonico et al., 2017). The critical parameter in this approach is the bandwidth. Therefore, we plot the first and second-stage estimates along with their 90% confidence intervals for various bandwidths. Subfigure 5(a) shows that for a very small bandwidth (5 pp), the first-stage coefficient has the wrong sign. For the 10 pp bandwidth, the coefficient is well-behaved but estimated with low precision. Consequently, Subfigure 5(b) reports second-stage estimates only for bandwidths ranging from 15 pp to 40 pp. All estimates include the same fixed effects and controls as our baseline specification.

The point estimates that capture the effect on far-right parties' vote shares (blue triangles) are very stable across bandwidths, indicating a drop in respective parties' vote shares by ≈ 2 pp, which is somewhat smaller than the baseline estimates in the paper's main part. All point estimates capturing the effect of transfers on vote shares for far-left (red) and government parties (green) are positive, but none is statistically significant. For far-left parties, the point estimates become smaller for large bandwidth, almost hitting zero for a bandwidth of 40, whereas for government parties, the coefficients tend to be more stable.

Figure A4: Robustness: First- and Second-Stage Estimates Using Local Linear Regressions

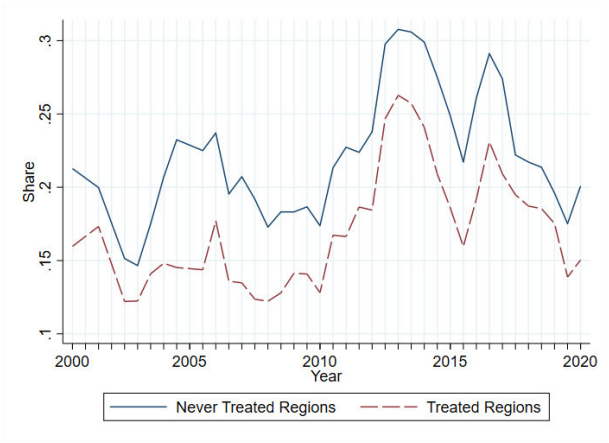


(a) First-Stage (b) Second-Stage: Vote Shares

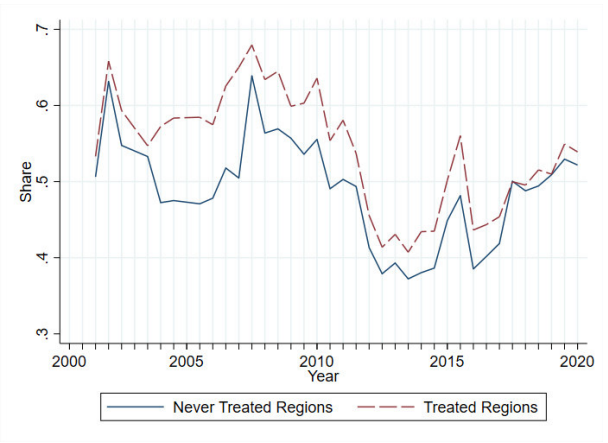
Notes: Figure 5(a) plots the first stage coefficients and 90% confidence intervals using local linear regressions the epanechnikov kernel for weighting. The estimation is performed for various bandwidths indicated on the x-axis. Controls are the same as in the main specification, i.e., country-election fixed effects and regional controls at the level of NUTS3 regions. Figure 5(b) plots the second stage coefficients for far-right, far-left, and government parties on the left-hand side.

Appendix C Additional Individual-Level Material

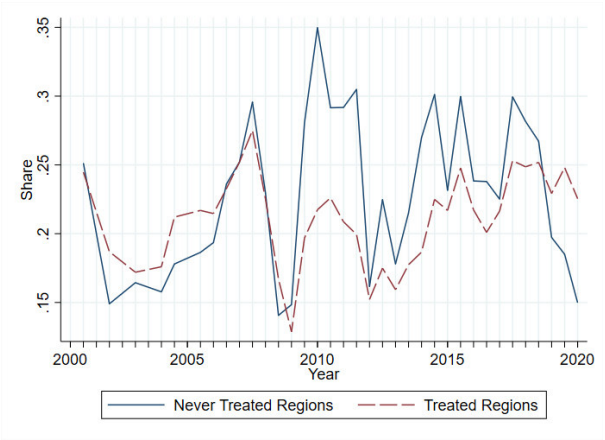
Figure A5: Evolution of EU Image, Trust in EU and Economic Expectations



(a) Negative Image of the EU



(b) Trust in the EU



(c) Expecting the Economy to do Better

Notes: The figures plot the evolution of the share of individuals with a negative image of the EU (a), with trust in the EU (b), and the share of individuals who expect their economic situation to improve (c). The solid blue lines plot respective shares among individuals living in regions that never received Objective-1 treatment and the dashed red lines for individuals whose region of residence was treated at least once between 2000 and 2020. Source: Eurobarometer, Own calculations.

Table A10: Effect of Treatment on Individual's Attitudes: Split by Education Level

	Ctry. Benefits		Neg. EU-Image		Sat. Dem. EU		Unsat. Dem. EU	
	(Low)	(High)	(Low)	(High)	(Low)	(High)	(Low)	(High)
Panel A. – Attitudes								
Treatment	0.039	0.039	-0.048***	-0.028	0.053*	-0.014	-0.018	0.006
	(0.030)	(0.043)	(0.018)	(0.027)	(0.028)	(0.037)	(0.024)	(0.027)
Mean of Y	0.54	0.72	0.29	0.20	0.47	0.56	0.16	0.11
# Individuals	26,917	8,684	63,692	19,574	47,734	15,780	47,734	15,780
Adj. R-Squared	0.005	0.008	0.001	0.001	0.002	0.004	0.003	0.004
K-P-F Stat.	138.19	107.27	216.93	170.17	184.29	147.15	184.29	147.15
	Trust in EU		Trust in EU-COM		Trust in EU-EP		Trust in Nat. Gov.	
	(Low)	(High)	(Low)	(High)	(Low)	(High)	(Low)	(High)
Panel B. – Trust								
Treatment	0.054**	-0.008	0.040*	0.042	0.047*	0.008	0.043**	0.009
	(0.021)	(0.031)	(0.022)	(0.031)	(0.025)	(0.032)	(0.019)	(0.028)
Mean of Y	0.37	0.48	0.45	0.59	0.47	0.61	0.29	0.35
# Individuals	59,318	18,478	58,914	19,019	61,464	19,614	63,157	19,046
Adj. R-Squared	0.003	0.002	0.002	0.003	0.003	0.002	0.002	0.003
K-P-F Stat.	217.11	172.23	214.19	158.51	212.23	163.75	219.16	163.76
	Econ. Better		Econ. Worse		Empl. Better		Empl. Worse	
	(Low)	(High)	(Low)	(High)	(Low)	(High)	(Low)	(High)
Panel C. – Expectations								
Treatment	-0.007	-0.022	0.024	0.035	-0.011	-0.027	-0.011	0.011
	(0.018)	(0.029)	(0.020)	(0.029)	(0.018)	(0.027)	(0.018)	(0.030)
Mean of Y	0.18	0.21	0.41	0.36	0.18	0.21	0.18	0.37
# Individuals	63,289	19,362	63,289	19,362	63,152	19,276	63,152	19,276
Adj. R-Squared	0.001	0.002	0.001	0.001	0.000	0.001	0.000	0.001
K-P-F Stat.	217.70	168.46	217.70	168.46	218.05	165.74	218.05	165.74
1^{st} Order Poly.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ctry-Year-FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regional Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table reports the point estimates from the FRDD, focusing on a range of +/-15% around the threshold. The effects are estimated separately for individuals with high and low education (education at least until age 21 or not). The estimates are obtained from individual-level data from the last three years of a funding period. All outcomes are 0-1 dummies. The specifications include a linear polynomial of the forcing variable with different shapes on each side of the threshold. Regressions include country-time fixed effects and the employment share, the share of industrial workers, population density, individuals' gender, marital status, dummies for age categories, and their community type (rural, suburban, urban) by country as further controls. Standard errors are clustered at the region-year level (NUTS2 or larger). The table further reports the mean of dependent variables in each estimation sample. Source: Eurobarometer and Ardeco.* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.