Ca' Foscari
University
of Venice

Master's degree in Economics and Finance

Final Thesis

The impact of EU cohesion policy on populist voting

Supervisor

Prof. Marco Di Cataldo

Graduand

Lorenzo Rossi

861568

Academic Year

2022/2023

Abstract

Does redistribution lower populism? The main causes of increasing populism in Europe are related to increasing economic insecurity. European cohesion policy is a large redistribution program that aims to improve the economic conditions of lagging regions, so this thesis wants to investigate if this redistributive program is able to lower support for populist parties and increase the opinion towards the EU. Using data on national parliamentary elections and parties' scores for populism, position towards the EU and position towards EU regional policy for every Member State from 2011 to 2020 and using an RDD apporach to exploit the 75% of European per capita GDP allocation rule, this thesis shows that EU cohesion policy is able to lower support for populist parties and increase support towards the EU and EU regional policy.

Contents

List of Figures

List of Tables

1 Introduction

After the Great Recession many new populist and eurosceptic parties were created in Europe: Alternative für Deutschland in Germany was founded in 2013 and achieved 12,6% of votes in 2014 Bundestag election; in France La France Insoumise, created in 2016, achieved 19,6% of votes in the 2017 presidential election; in Italy Movimento 5 Stelle founded in 2009 achieved 25,55% of votes at the parliamentary election in 2013; in Spain Vox founded in 2013 achieved 10,26% of votes in 2019 and Podemos created in 2014 achieved 20,68% of votes in the 2015 elections. Other existing parties became more relevant in other EU countries after years of marginality: Golden Dawn in Greece, Finns Party in Finland, Jobbik in Hungary.
In 2016 two events changed the political landscape: Trump's presidential election and Brexit. This events were unexpected, polls for both elections were going in the opposite direction of the actual results[1]. These elections resulted in an increasing political instability. Trump supporters stormed Capitol Building (seat of the US Congress) on January 6, 2021 to prevent the formalization of Biden's election[2], causing the death of five people[3]. In the UK, from 1945 to 2016 there have been 24 governments, 1 every 3 years; from 2016 to 2023, 6 governments, including the shortest one in UK history (Liz Truss in 2022, 49 days in office).

The main effect of rising populism is the increase of political instability and lower economic performance: Dustmann et al. (2017) found a decrease in trust towards national and European parliaments, Funke et al. (2021) argued that populism is costly, lowering GDP growth, Julio and Yook (2012) and Baker et al. (2016) showed

[1]For 2016 US presidential election: `https://en.wikipedia.org/wiki/Nationwide_opinion_polling_for_the_2016_United_States_presidential_election`. For 2016 United Kingdom European Union membership referendum: `https://en.wikipedia.org/wiki/Opinion_polling_for_the_United_Kingdom_European_Union_membership_referendum`

[2]Barry, Dan; McIntire, Mike; Rosenberg, Matthew (January 9, 2021). "Our President Wants Us Here: The Mob That Stormed the Capitol". The New York Times. `https://www.nytimes.com/2021/01/09/us/capitol-rioters.html`

[3]Evelyn, Kenya (January 9, 2021). "Capitol attack: the five people who died". The Guardian. `https://www.theguardian.com/us-news/2021/jan/08/capitol-attack-police-officer-five-deaths`

that increasing political instability lowers investments, Bellodi et al. (2021) found that electing populist mayors in Italy lead to lower government performance, with a lower quality of bureaucrats.

As it will be discussed below, Populism developed more in those areas "left behind" from the globalization, so it might be that redistributive policies can pay back these regions and lower populist sentiment.
This thesis aims to investigate if redistributive policies can pay back the losers of globalization and be effective in reducing populist sentiment. Since investigating this in a single country would limit the research to a specific political landscape and given that populism has been on the rise in the whole European Union, this thesis aims to target every Member State. Since no common redistribution policy exist for European Member States, only European funds can be used to check this relation. In Becker et al. (2010) and Pellegrini et al. (2013) is shown that EU funds are able to foster growth in those areas receiving funds, so it makes sense that these redistribution policies can lead to improved conditions in the treated areas lowering populist sentiment, even if this is not their aim.
In summary, the aim of this thesis is to investigate the relationship between EU funds and political voting, in particular, the effects of funding on political voting with respect to the position towards EU integration, EU cohesion policy and populism.

Given that every European region benefits from structural funds, but with different intensity, this heterogeneity will allow to assess the effect of funds on political voting. Since the biggest fund, the ERDF, is mainly allocated to those regions whose GDP per capita is lower than 75% of the European average, the best empirical model that fits with this allocation rule is a Regression Discontinuity Design exploiting the 75% threshold.
The variables of interest will be scores built through the actual votes that parties received in national parliamentary elections and parties' position evaluated on a continuous score system by political surveys that will later be explained in depth. This setup will be applied to every European NUTS 2 region from 2011 to 2020, in

order to account for different political landscapes and change in parties' positions during the years.

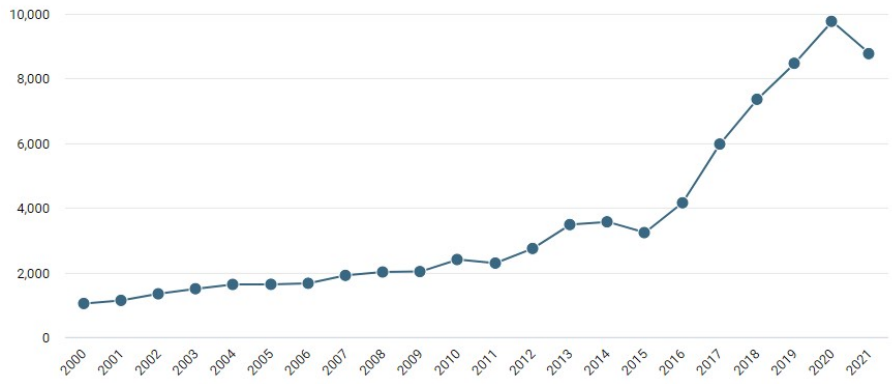
The main results of this analysis is that EU funds are able to increase the general opinion towards the EU and towards EU cohesion policy and that they are able to lower populist voting. This is true when using the Convergence Objective status and also when using actual payments as treatment. These findings hold when using different specifications, when removing Eastern European countries (the major receivers of funds) from the analysis and when classifying parties with dummies instead of a continuous score.
In addition, this thesis shows that when funds are lost, there is no increase in populist voting or decrease in opinion of the EU, but only a decrease in the opinion of cohesion policy.
These findings suggest that cohesion policy can be used as an instrument to increase support towards the EU and reduce the influence of extremist parties, in order to create more political unity inside the Union.

The rest of this thesis is structured as follows: Section 2 will review the knowledge on the causes of rising populism and the effects on EU funds on populism; Section 3 explains the questions this thesis aims to answer and the reasoning behind them; Section 4 will explain the construction of the dataset used and the institutional context; Section 5 will explain the empirical strategy used; Section 6 will report the results achieved; Section 7 concludes.

2 Literature review

In the last years there has been a booming interest in the research on Populism, as highlighted by Figure 1 below.

Figure 1: Number of publications on populism



Notes: Number of publications with at least 1 citation.

Source: https://app.dimensions.ai

Looking at the boom starting in 2016, two events pushed this trend: Brexit and Trump's presidential election.

2.1 Defining populism

There is not a clear definition of populism, but rather a series of characteristics that are common to parties labelled as populist. The main characteristic is that populist parties are anti-elitist: they claim to represent the will of the people (Mudde (2007), Müller (2017)). In Norris and Inglehart (2019) populist parties are said to make two claims on how societies should be governed: populism challenges the legitimate authority of the 'establishment' and populist leaders claim that the only legitimate source of political and moral authority in a democracy rests with the 'people'.
To measure populist voting, a scoring system is needed. To do so, following Norris and Inglehart (2016) and Norris and Inglehart (2019), the CHES database will be used, in particular the variable of interest will be Anti-elite salience[4]. A few things

[4]See section 4.1 for a more detailed explanation.

should be noticed: the variable used will not be a actual measure of populism, but rather a proxy; populism is not tight to authoritarianism, but it is allowed to move on the authoritarian/libertarian dimension; populism is not right nor left, it is free to move on the economic right/left scale.

2.2 The economic causes of populism

A first series of papers have investigated the economic causes of rising populism. Starting from the consequences of globalization, Rodrik (2018) argue that extreme globalization led to uneven benefits, thus giving birth to centrifugal political forces. Autor et al. (2020) find evidence in the US of growing extreme political positions in the regions most exposed to Chinese trade competition; similar results with respect to trade exposure to China are in Colantone and Stanig (2018) looking at the rise of nationalism and right parties in Europe and in Barone and Kreuter (2021) finding increasing Populism in Italy. Malgouyres (2017) found increasing votes for right-wing parties in France as a consequence of low-wage countries import competition and similarly Dippel et al. (2021) for Germany.

Barone et al. (2016) found that immigration had a positive impact on right-wing parties in Italy and reduced vote participation with an increase in protest vote. Similarly, Caselli et al. (2020) showed that immigration supported the success of right-wing and authoritarian parties in Italy. Halla et al. (2017) showed this effect also in Austria.

Algan et al. (2017) found a relationship between increase in unemployment and increase in non-mainstream parties voting in Europe, accompanied by a decrease in trust towards the EU and national institutions. Guiso et al. (2017) showed that economic insecurity drives the demand for populist policies and that populist parties emerge more likely in countries faced by a systemic crisis.

2.3 The effects of EU regional policy on populism

A second series of papers focused on the effects of redistribution policies, in particular EU funds, on populism. Becker et al. (2017) didn't find impact of funds on the Brexit vote, but instead found that people characteristics were drivers of the Leave vote. Bachtrögler and Oberhofer (2018) found that effectiveness of EU funds

in treated firms led to a decrease in Le Pen votes in the 2017 French Presidential elections. Crescenzi et al. (2020) show that EU finds are not directly able to increase citizens' support towards the EU, but they are able to lower Euroscepticism when they are linked with improvements in the labour market. Rodríguez-Pose and Dijkstra (2021) found that EU cohesion policy investments are linked with lower anti-EU vote.

Two central papers for this thesis are Borin et al. (2021) and Albanese et al. (2022). In the first, using an RDD approach exploiting the 75% allocation rule, they show that EU funds have mitigated the rise of Eurosceptical attitudes and lowered support for anti-EU parties. In the second, using a spatial RDD and scores based on parliamentary elections and political surveys, they show that EU funds were able to lower populism voting in 2013 Italian parliamentary elections.

3 The research question

The purpose of this thesis is to investigate whether EU cohesion policy has an impact on voting, in particular on these 3 dimensions:

- EU position: how funding affects voters' general opinion towards the European Union? Can funds move voters in support of more European integration?

- EU cohesion: how funding affect voters' opinion towards EU cohesion policy? Can funds make cohesion policy more politically sustainable through an higher opinion of it?

- Populism: do funds have an impact on Populist preferences? In particular, can funds reduce populist voting?

The hypothesis behind this work are the following:

- One one hand, regions that suffered the most from the globalization and the Great Depression should show a lower sentiment towards the EU, as it has been seen as an obstacle to recovery and sometimes also as the cause of economic insecurity. On the other hand, regions that joined the EU recently should show an higher opinion of the EU.
  This might manifest in such a way: regions receiving funds might have an higher opinion of the EU because are those that recently joined and also because they see the Union as an instrument to improve their conditions. In general, funded regions should show an higher opinion towards European integration because the EU is the institution allocating the funds.

- With regard to the opinion towards cohesion policy, the hyopothesis is that voters should show an opportunistic behaviour: those receiving the funding should show an higher opinion of it with respect to those not receiving them. Also, this opportunistic behaviour should manifest when regions lose the funds: if they receive funds in one programming period and lose the funds in the following one, because they improved their economic condition or because the entrance of poorer countries in the EU increased their GDP per capita relatively to the EU average, they should now decrease the opinion of it.

- As mentioned before, one of the causes of the rise of Populism is the increasing economic insecurity. Given that one of the main aim of EU cohesion policy is to improve the economic conditions of the treated areas, it seems logical that treated areas should exhibit a lower level of Populism. If this is true, it would point in the direction of the effectiveness of redistribution in reducing populist voting.

In the spirit of Borin et al. (2021) and Albanese et al. (2022), to find evidence to answer these questions, the idea is to use actual elections combined with party scores and apply this framework to every EU Member State and to multiple elections for each country.

4 Data and institutional context

4.1 Elections and parties

The use of elections instead of opinion survey, such as the Eurobarometer used by Borin et al. (2021), allows to verify the actual preference voters manifested. Combined with scores assigned to parties involved in the elections, this can lead to a measure of the variables of interest.

Data on elections are based on the European NUTS level election database[5]. It contains data on national parliamentary elections at NUTS2 level. Almost all the European countries are present, the only two missing are Croatia and Slovakia. The elections used will be those between 2011 and 2020[6] and, given that at the longest term will be 5 years, every region will appear at least twice.
A complete information on the elections used is available in Table 15 in the appendix.

Data on parties are based on the Chapel Hill Expert Survey[7] (from now on CHES), estimating party positions on various issues for every EU member state[8]. This dataset contains waves from 1999 to 2019, but the only waves used in the following analysis will be those conducted in 2014 and 2019; in this way, party positions are allowed to change.
Three party positions will be considered:

- *People vs. elite*: Some political parties take the position that 'the people' should have the final say on the most important issues, for example, by voting directly in referendums. At the opposite pole are political parties that believe that elected representatives should make the most important political decisions. Ranging from 0 to 10, where 0 means that elected office holders should make the most important decisions and 10 means that 'the people',

[5] Schraff et al. (2023).

[6] Later, will be used as dependent variable the percentage difference from previous election. For the first election, in general between 2011 and 2015, will be used the data on the immediately previous election.

[7] Jolly et al. (2022).

[8] Not every party is present in this dataset, but all major parties are present.

not politicians, should make the most important decisions.

- *EU position*: overall orientation of the party leadership towards European integration. Ranging from 1 to 7, where 1 means strongly opposes European integration and 7 means strongly in favor of European integration.

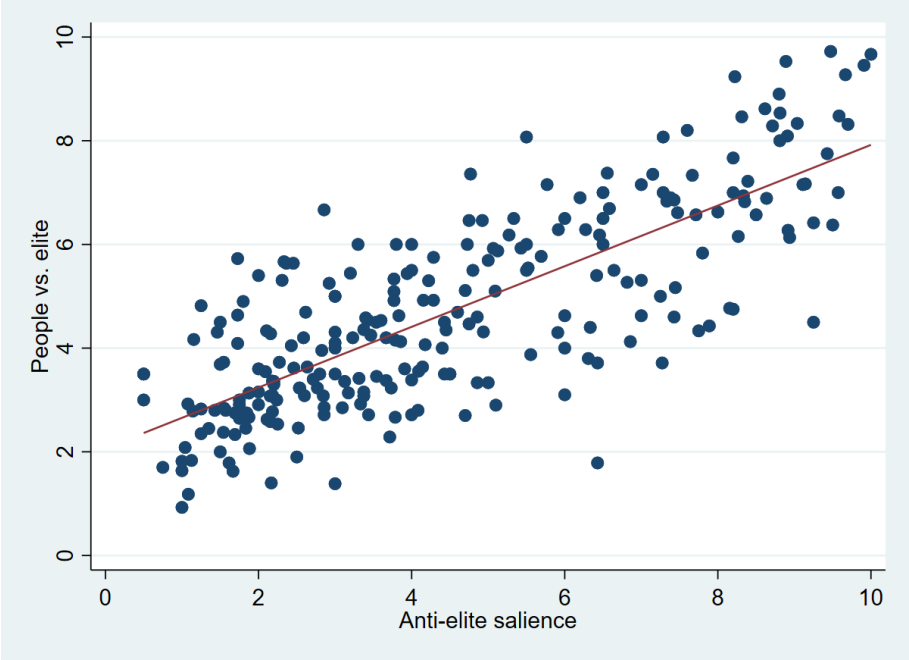
- *EU cohesion*: position of the party leadership on EU cohesion or regional policy. Ranging from 1 to 7, where 1 means strongly opposes EU cohesion and 7 means strongly in favor of EU cohesion.

People vs. elite position was asked only in 2019 so, due to the lack of this observation in 2014, the variable used will be *Anti-elite salience*, measuring the salience of anti-establishment and anti-elite rhetoric. It ranges from 0 to 10, where 0 means not important at all and 10 means extremely important. The use of this variable seems consistent, given the high correlation with *People vs. elite*, see Table 1 and Figure 2 below.

Table 1: People vs. elite / Anti-elite salience cross-correlation table

Variables	People vs. elite	Anti-elite salience
People vs. elite	1.000	
Anti-elite salience	0.782	1.000
	(0.000)	

Figure 2: People vs. elite / Anti-elite salience correlation



Summary statistics on parties are shown in Table 2 below[9].

Table 2: Parties summary statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
EU position	4.989	1.701	1	7	492
EU cohesion	5.446	1.289	1	7	492
Anti-elite salience	4.721	2.606	0.5	10	492

As it would be immediate to think, there might be a problem of correlation between these variables. As it can be seen from Table 3 there is high correlation between the three variables: positive between EU position and EU cohesion and negative between EU position and Anti-elite salience. So, since the institution allocating the funds is the EU, it might be that what will follow will not directly assess the effect of funds on populist voting, but only the effect of funds on the opinion of the European Union and as a consequence the impact on populism.

However, this problem should be removed by the use of national parliamentary elections, in which voters are not directly asked to vote on how to direct European politics, but rather how to administrate their country.

[9] Additional information is available in Figures 19 - 24 in the appendix.

Creating this "asymmetry" between the target of the elections and the treatment allocator should allow to analyse the pure effect of funds on voting.

Table 3: Party positions cross-correlation table

Variables	EU position	EU cohesion policy	Anti-elite salience
EU position	1.000		
EU cohesion	0.735	1.000	
	(0.000)		
Anti-elite salience	-0.735	-0.414	1.000
	(0.000)	(0.000)	

For each region, a score for every of these three positions is built in the following way:

$$Score_{i,t} = \sum_{p} Voteshare_{p,i,t} * Score_{p,t},$$

where $Score_{i,t}$ is the score assigned to region i in year t, $Voteshare_{p,i,t}$ is the share of votes taken by party p in region i in year t and $Score_{p,t}$ is the score of party p in year t. *Score* will be the three variables described above and it will be standardized on a scale 0-100.

Summary statistics of the scores defined above are shown in Table 4 below.

Table 4: Scores summary statistics

Variable	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**N**
EU position	69.90	14.43	31.71	96.69	693
EU cohesion	74.14	14.39	32.79	100.00	693
Anti-elite salience	43.48	14.54	10.78	75.85	693

The results of these calculations are mapped in Figures 3 - 8 below, dividing the time span in two tranches of 5 years each, from 2011 to 2015 and from 2016 to 2020[10].

[10]If an anticipated election is held in the short time, only one is shown in the maps.

Figure 3: EU position in 2011-2015 elections

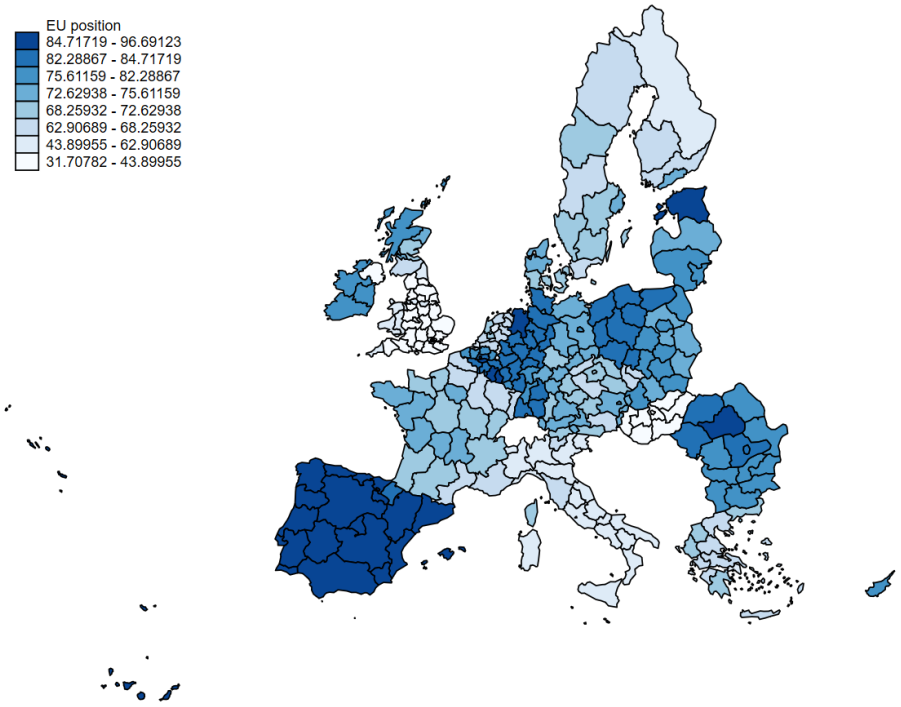


Figure 4: EU position in 2016-2020 elections

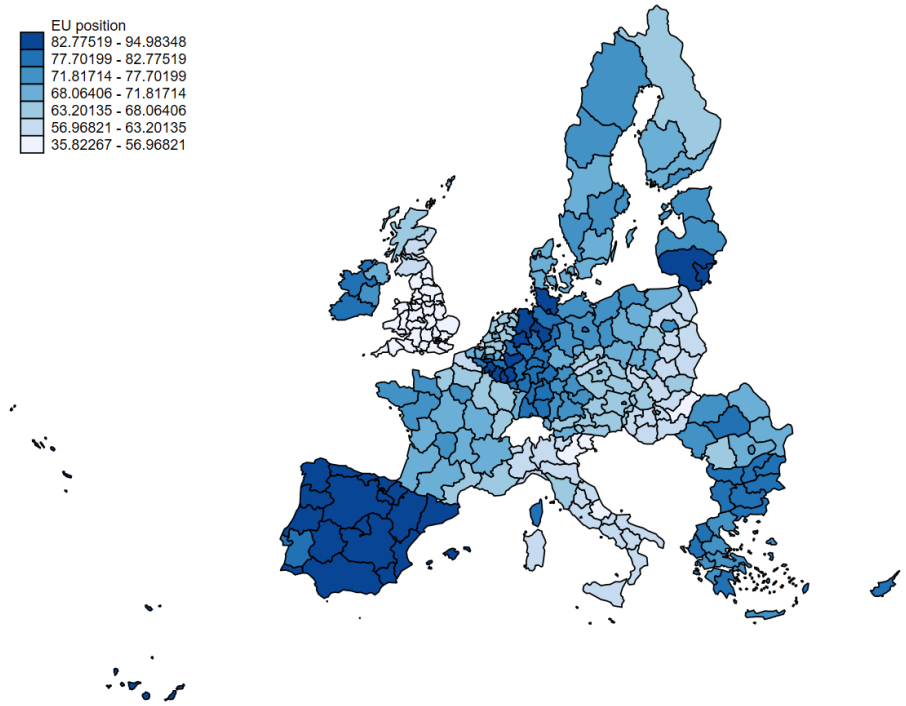


Figure 5: EU cohesion in 2011-2015 elections

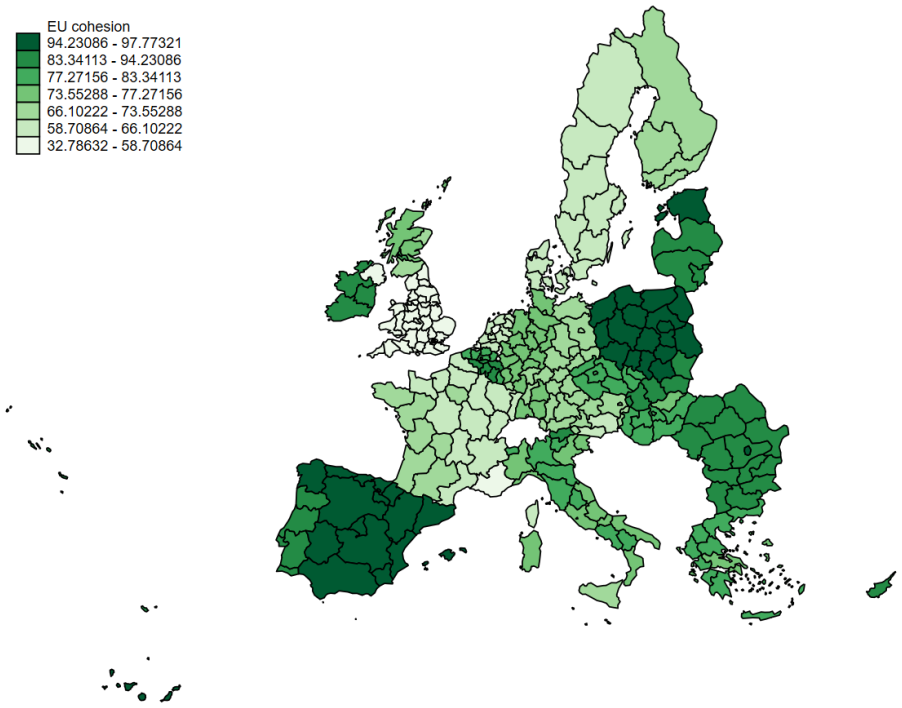


Figure 6: EU cohesion in 2016-2020 elections

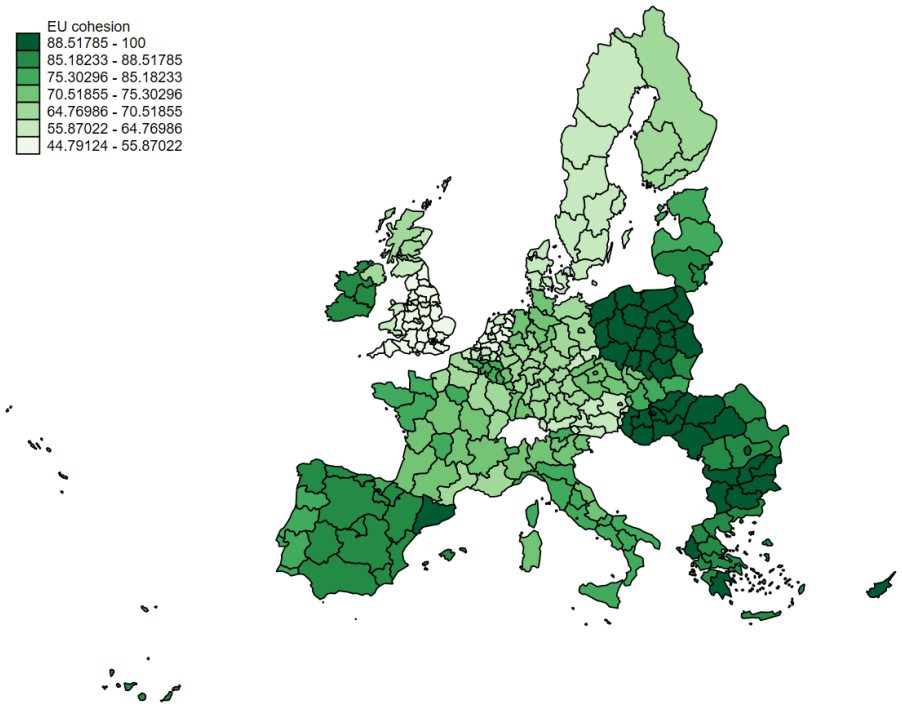


Figure 7: Anti-elite salience in 2011-2015 elections

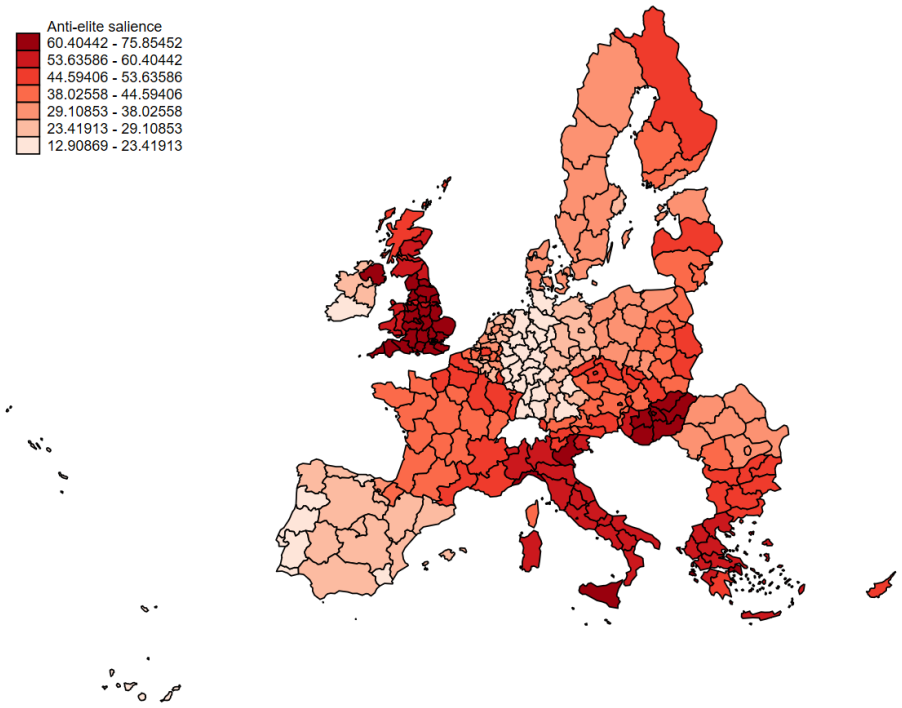
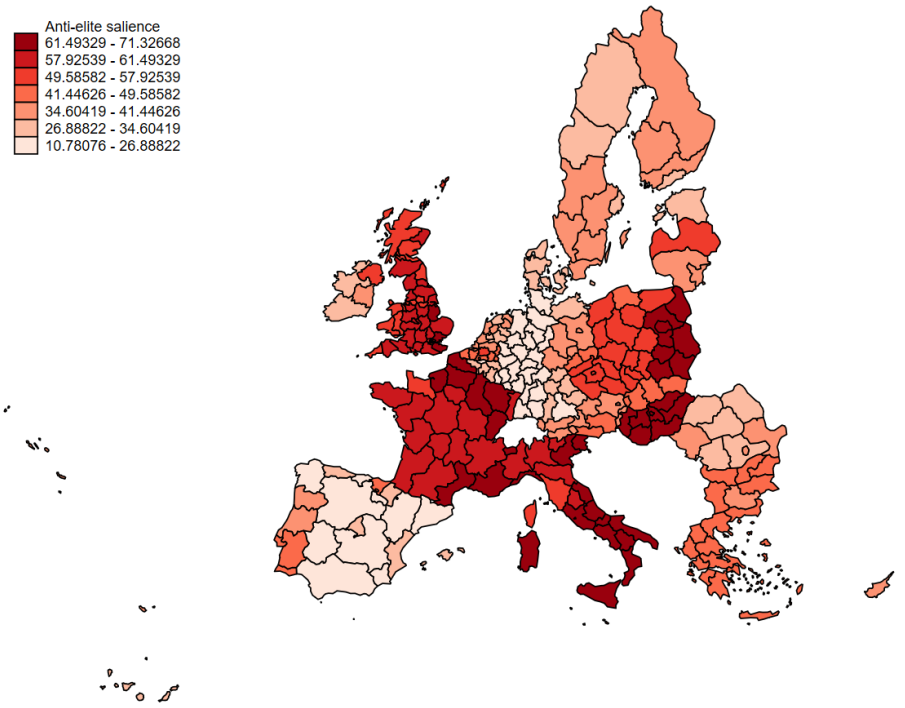


Figure 8: Anti-elite salience in 2016-2020 elections



4.2 EU regional policy

The EU regional policy is the main EU investment policy and has the aim of promoting "job creation, business competitiveness, economic growth, sustainable development, and improve citizens' quality of life" in order to reduce regions disparities. It targets every region in the Union and consists in almost one third of the EU budget.

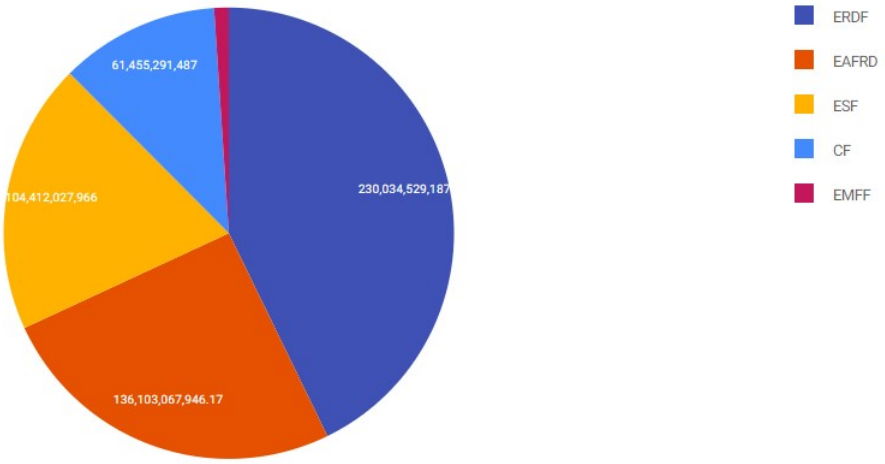
Funding programs last 7 years and the decision on the location of the regions is based on the average GDP per capita of the three years before the decision is implemented (for example, for the programming period 2007-2013, the years considered are 2003, 2004 and 2005).

The instruments used to pursue these objectives are the European Structural and Investment Funds (ESIF), consisting in 5 different funds and 3 different policies:

- Cohesion Policy:
    1. European Regional Development Fund (ERDF): it "aims to strengthen economic, social and territorial cohesion in the European Union by correcting imbalances between its regions".
    2. European Social Fund (ESF): it "supports employment-related projects throughout Europe and invests in Europe's human capital".
    3. Cohesion Fund (CF): it "funds transport and environment projects in countries where the gross national income (GNI) per inhabitant is less than 90% of the EU average".
- Common Agricultural Policy (CAP):
    4. European Agricultural Fund for Rural Development (EAFRD).
- Common Fisheries Policy (CFP):
    5. European maritime and fisheries fund (EMFF).

Total funds amounted to €347bn in program period 2007-2013 and to €352bn in program period 2014-2020. As it can be seen by Figure 9 the ERDF is the largest fund.

Figure 9: Funds amounts in 2014-2020 programming period



Source: Cohesion Open Data Platform

These 5 funds have different assignment rules. In particular, for the ERDF, the areas of the EU are divided in three classes:

- Less developed regions: those regions whose GDP per capita is less than 75% of the EU average (almost 52% of total ESIF resources in 2014-2020).

- Transition regions: those regions whose GDP per capita is between 75% and 90% of the EU average (less than 10% of total ESIF resources in 2014-2020).

- More developed regions: those regions whose GDP per capita is above 90% of the EU average (15% of total ESIF resources in 2014-2020).

Most funds are awarded to the less developed regions: according to the 2014-2020 program official documents, "around half of all resources have been allocated to less developed regions, around 10% of the resources are allocated to transition regions and just over 15% of the resources is allocated to more developed regions".
For the following analysis 2 programming period will be considered: 2007-2013 and 2014-2020. In Figures 10 and 11 below are reported the maps of the distribution of regions according to the above ERDF definitions in the two programming periods.

Figure 10: Regions ERDF classification in 2007-2013 programming period

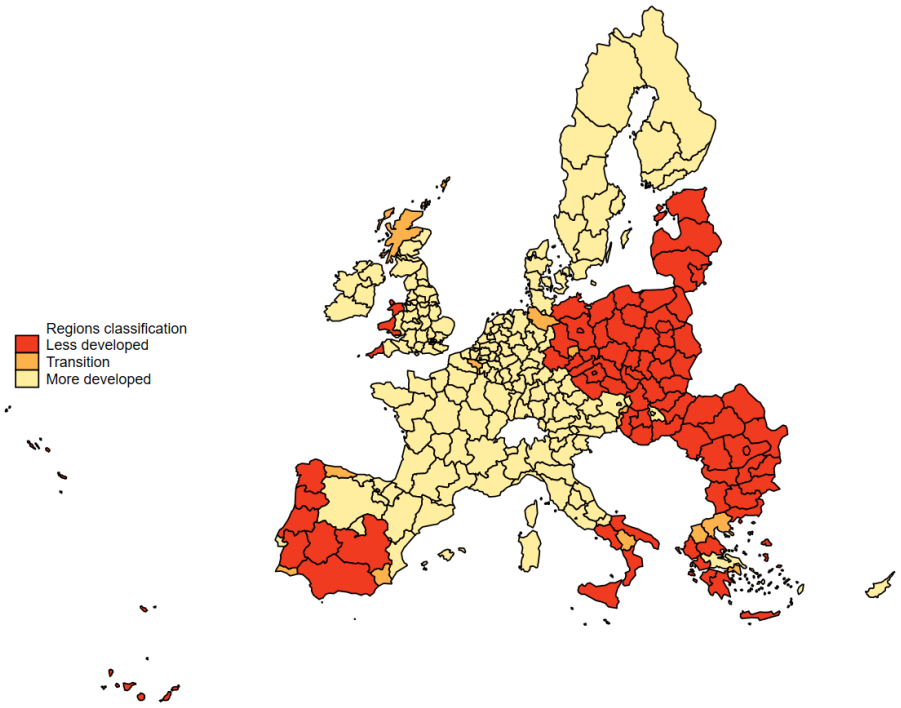
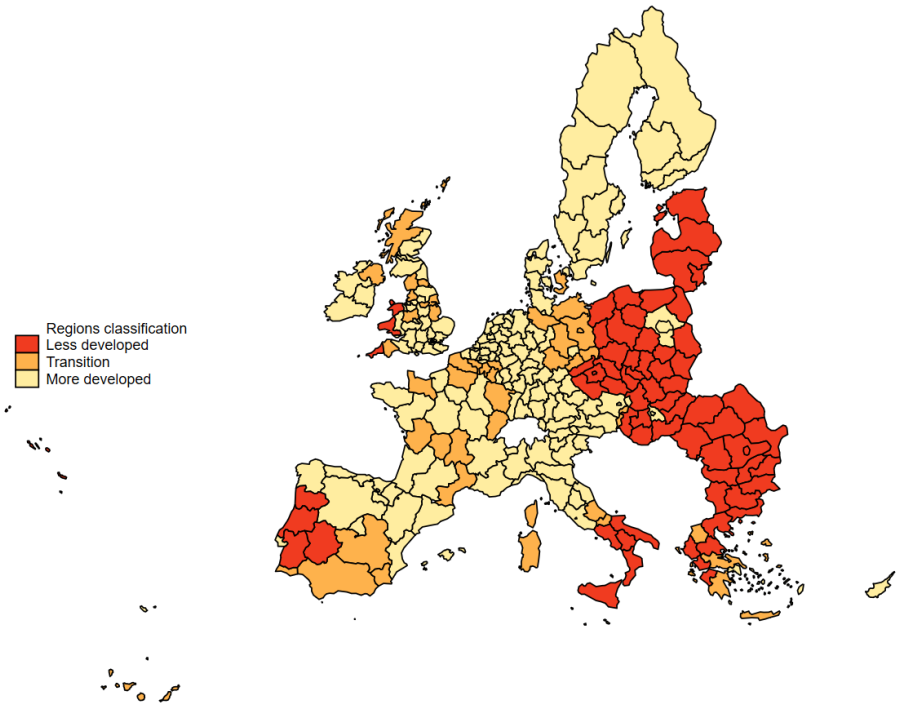


Figure 11: Regions ERDF classification in 2014-2020 programming period



In the following analysis total payments will be used when investigating the role of payments in general. When looking for the discontinuity in the RDD approach, given that the 75% threshold counts only for the ERDF, only this fund will be

considered.

4.3 Payments

Data on EU payments are taken from the database Historic EU payments - regionalised and modelled, available on the Cohesion Open Data Platform[11]. This dataset contains payments made from the EU to the member states for every NUTS2 region and divided for the different funds from 1989 to 2018[12].

The payments considered are not the funds allocated, but the actual payments given by the EU as a reimbursement of expenditures undertaken by Member States. Because of this, the payment occurs after the actual expenditure. In order to have a more precise idea of the impact of funds, Cohesion Open Data Platform elaborated an estimate of when the actual expenditure took place. These modelled payments typically take place and end earlier than EU payments[13].

Payments pro capita from all different funds for each of the 2 programming periods are mapped in Figures 12 and 13 below.

[11] Historic EU payments - regionalised and modelled, available at `https://cohesiondata.ec.europa.eu/Other/Historic-EU-payments-regionalised-and-modelled/tc55-7ysv`.

[12] Not all funds allocated for the programming period 2014-2020 are considered in this thesis.

[13] A comparison of EU payments and modelled payments is available in Figure 25 the appendix.

Figure 12: Modelled ERDF payments per capita between 2007 and 2013

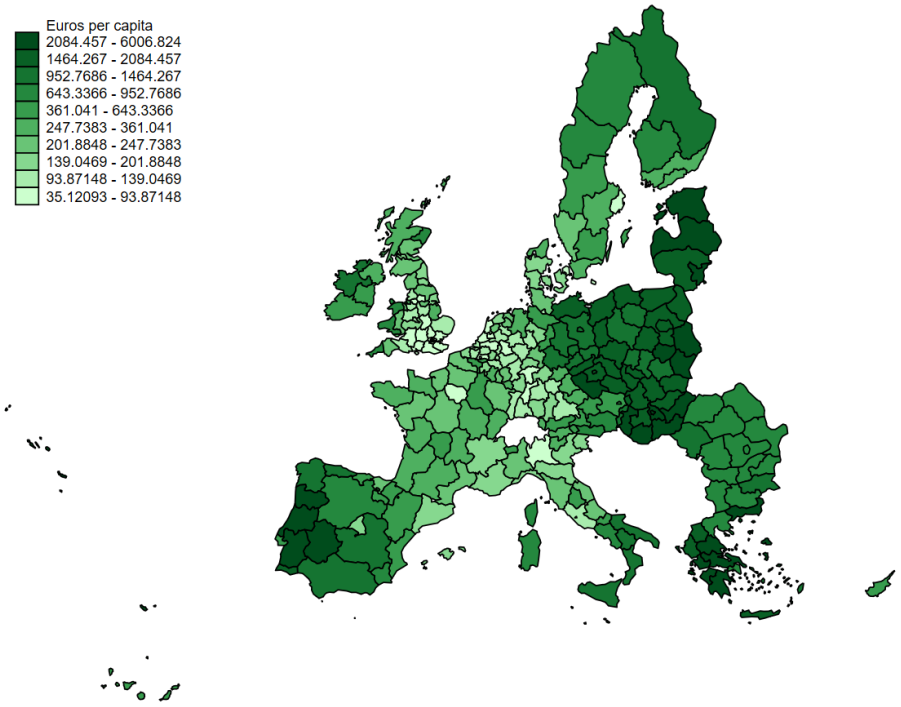
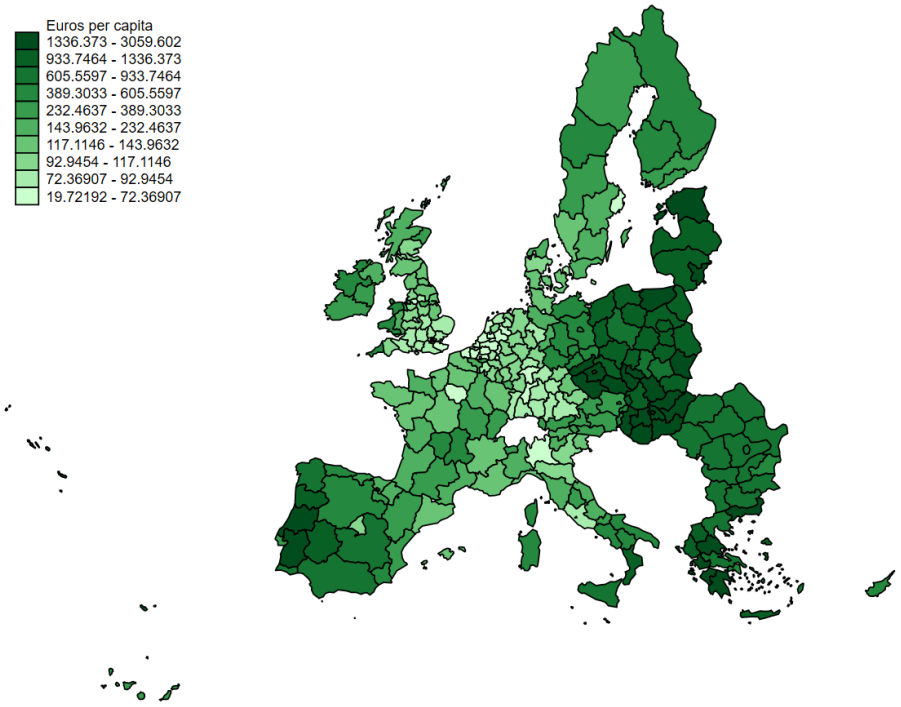


Figure 13: Modelled ERDF payments per capita between 2014 and 2020 [14]



[14]Less payments were done in the second period because the database stops in 2018

4.4 Regional data

The remaining data used in the following analysis are taken from the Eurostat database[15]. Some observations are missing for certain years so, in order to have a complete dataset, missing observations will be replaced will the closest observation available.

In Tables 5 and 6 below, there is the full list of variables used and some summary statistics.

[15] `https://ec.europa.eu/eurostat/data/database`.

Table 5: Description of variables

	Description
GDP percentage	GDP per capita percentage relative to the EU average
Log density	Log of population density
Young share	Percentage of people 20-24 relative to population
Unemployment	Unemployment rate
Young unemployment	Unemployment rate for people aged 15-24
Long unemployment	Percentage of people who have been unemployed for 12 months or more
Motorways per km^2	Motorways kilometers per squared kilometers of region
Railways per km^2	Railways kilometers per squared kilometers of region
Roads per km^2	Roads kilometers per squared kilometers of region
Doctors	Medical doctors per 1000 inhabitants
Tertiary education	Percentage of population that achieved tertiary education
Agricolture	Percentage of people employed in agricolture, forestry and fishing relative to total employment
Industry	Percentage of people employed in industry (except construction) relative to total employment
Construction	Percentage of people employed in construction relative to total employment
Trade	Percentage of people employed in wholesale and retail trade, transport, accommodation and food service activities relative to total employment
Public administration	Percentage of people employed in public administration, defence, education, human health and social work activities relative to total employment
Immigrants	Percentage of non-European immigrants arrived between 2000 and 2011 relative to population
EQI	European Quality of Government Index

Table 6: Regional summary statistics

	Mean	SD	Min	Max	N
GDP percentage	99.53	56.55	9.33	589.00	3794
Log density	5.09	1.25	1.12	9.36	5691
Young share	0.06	0.01	0.03	0.10	5691
Unemployment	8.47	5.27	1.20	37.00	5691
Young unemployment	20.26	11.92	2.00	79.20	5628
Long unemployment	3.83	3.46	0.30	22.90	5607
Motorways per km^2	0.03	0.03	0.00	0.19	4410
Railways per km^2	0.07	0.08	0.00	0.71	3801
Roads per km^2	1.36	1.46	0.00	11.67	4410
Doctors	342.64	109.39	120.85	911.04	3906
Tertiary education	26.49	10.52	3.60	74.70	5691
Agricolture	0.05	0.06	0.00	0.47	5355
Industry	0.18	0.07	0.03	0.43	5691
Construction	0.08	0.02	0.02	0.19	5691
Trade	0.24	0.04	0.13	0.55	5691
Public administration	0.26	0.06	0.10	0.57	5691
Immigrants	0.02	0.02	0.00	0.15	4578
EQI	-0.08	1.01	-2.69	1.89	3654

5 Empirical strategy

To asses the impact of EU regional policy on voting behaviours, given the allocation rule of the ERDF, it seems a consistent choice to adopt a Regression Discontinuity Design (RDD) approach, using the 75% rule as a threshold. Following Becker et al. (2010) and Borin et al. (2021) the RDD strategy exploits an exogenous variation in transfers: those regions with GDP per capita below 75% of the EU average are included in the "less developed regions" and thus are receiving more funds than those regions with GDP per capita just above 75% of the EU average.

This allocation difference is not perfectly determined, in fact some regions that shouldn't have received the Converge Objective status received it and some regions that should have received it didn't received it. So, the 75% threshold doesn't perfectly determine treatment status, but it creates a discontinuity in the probability of getting the treatment (see Figure 29 in the appendix). This situation calls for the use of a fuzzy RDD, which can be thought as a two-stage least squares (2SLS) method, in which the treatment is instrumented by a dummy replicating the allocation rule. The 2SLS method will be used in this way:

First stage: $T_i = \alpha_0 + \alpha_1 D_i + f(X_i) + \epsilon_i$

Second stage: $Y_i = \beta_0 + \beta_1 T_i + f(X_i) + u_i$

where: Y_i is the outcome for individual i, $T_i = 1$ if individual i receives the treatment and $T_i = 0$ otherwise, $D_i = 1$ if individual i is assigned to the treatment following the allocation rule and $D_i = 0$ otherwise, $f(X_i)$ is a function of the forcing variable X_i for individual i, ϵ_i and u_i are the error terms in the two stages.

In the following setup, T_i will be the actual classification given by the EU Commission on the "Less developed region" status for region i, $D_i = 1$ if region i has GDP per capita below 75% of the EU average and $D_i = 0$ if region i has GDP per capita above 75% of the EU average. The forcing variable X_i will be GDP per capita relative to the EU average as calculated by the Commission in 2006 and 2012[16], so

[16]Given that the official estimate of the Commission is not available, the variable used will be calculated in the same way using Eurostat data on GDP, but it might suffer of posterior data revision.

that using as an example the programming period 2007-2013:

$$X_{i,2007-2013} = \frac{(X_{i,2003} + X_{i,2004} + X_{i,2005})}{3}$$

in this way, the forcing variable will remain constant for each programming period. Given the limited amount of observations available all observations below 150 of the running variable will be included, so that, given the 75% threshold, there is an equal bandwidth on both sides of the threshold. Following Jacob et al. (2012) parametric specifications (allowing the slope to change at the cut-off and second degree polynomial for the running variable) will be used to reduce the bias generated by observations far from the threshold.
Three assumptions must hold in order for the RDD to be consistent:

1. The distribution of regional characteristics, except for the funds allocation, must be continuous at the cutoff;

2. There is no possibility for regions to manipulate their assignment variable;

3. Monotonicity: crossing the cutoff cannot simultaneously cause some units to take up and others to reject the treatment (Imbens and Angrist (1994)).

Regarding the first assumption, a balancing test is available in Section 6.2 and no other policy uses the same threshold (Borin et al. (2021)). For the second assumption, following the literature (Becker et al. (2010) Pellegrini et al. (2013) and Borin et al. (2021)), it seems unreasonable that regions are able to manipulate Commission estimates in order to fall below the 75% threshold and become funds recipients and also a McCrary test (McCrary (2008)) confirms the continuity of the running variable at the cut-off[17]. Finally, for the third assumption "there is no evidence of regions which refuse Convergence Objective payments" (Borin et al. (2021)).
Thus, the RDD seems to be a valid approach.

This design allows to investigate the difference of voting behaviour for regions that are very similar for the baseline characteristics but differ for the fact of being target of cohesion policy and funds received. The results of the following estimates will represent the different effect on voting of being fund recipients or not. Also later,

[17]The graph of the McCrary test is available in Figure 30 in the appendix.

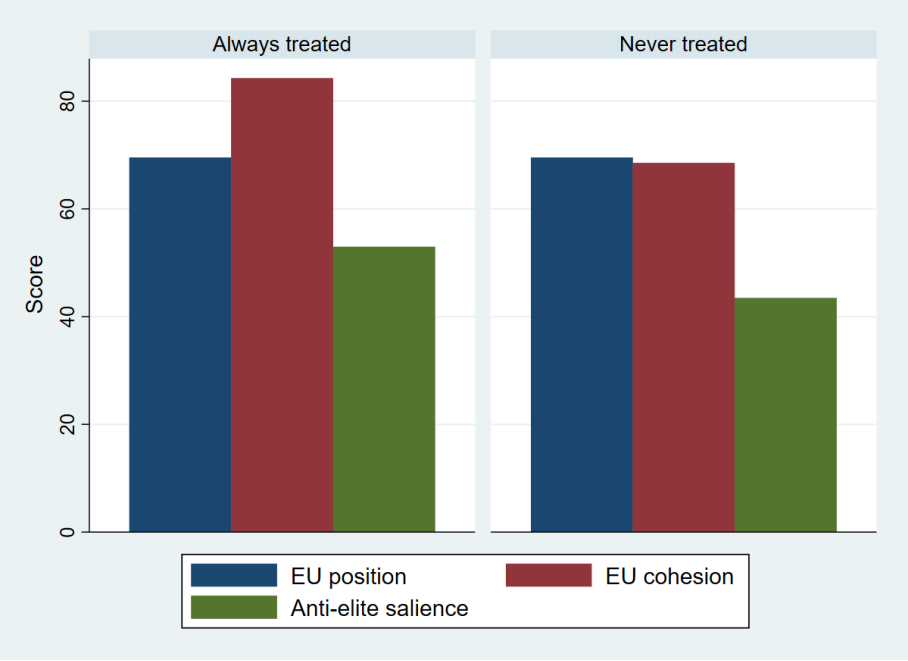
to investigate more deeply the direct effects of funds, an instrumental variable (IV) setup using funds as a continuous treatment variable will be tested.

6 Results

6.1 Preliminary tests

The first test conducted is to check if there is a different level in the scores at the end of the examined time span. In particular, it is to check if the fact of being always treated or never treated led to different level in the interested scores[18]. From Figure 14 below it is possible to see that there almost difference regarding the EU position, but there is a difference with respect to the two other variables: in the always treated regions there is a higher mean in the EU cohesion and in the Anti-elite salience.

Figure 14: Mean scores in the always treated and never treated regions



Notes: Scores range from 0 to 100. Sample based on regions always supported by the Convergence Objective throughout the period 2007–2020 and on regions that never received funding. Outcomes are measured on the last election available, in general after 2017.

These results are also confirmed by the two sample t-test in Table 7.

[18] A map of the regions considered is available in Figure 26 in the appendix.

Table 7: Two sample t-test

	Always treated	Never treated	Difference	S.E.	N
EU position	69.5	69.5	0.0	(1.7)	242
EU cohesion	84.3	68.5	15.7***	(1.6)	242
Anti-elite salience	53.0	43.4	9.5***	(2.1)	242
N	56	186			

Notes: Scores range from 0 to 100. Sample based on regions always supported by the Convergence Objective throughout the period 2007–2020 and on regions that never received funding. Outcomes are measured on the last election available, in general after 2017.
Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The explanation of this pattern could be that, given that the regions that have always been treated are the poorest regions, they perceive EU cohesion policy as an instrument to improve their economic conditions, so they have a higher opinion of it with respect to the never treated regions; but, at the same time, they have a higher Anti-elite sentiment because of their poorer position.

6.2 Effect of payments

Following Rodríguez-Pose and Dijkstra (2021), to check the direct link between payments and voting, the following OLS model is tested:

$$Y_{i,t} = \alpha + \beta \log Payments_{i,t-1\sim t-5} + X_{i,t} + u_{i,t}$$

where $Y_{i,t}$ is the score of interest in region i in year t, $\log Payments_{i,t-1\sim t-5}$ measures the intensity of modelled payments, including all 5 funds, received by region i in the 5 years before the election[19], $X_{i,t}$ is a vector of controls[20] and $u_{i,t}$ is the error term.

[19] A 5 years time span is selected because it is the maximum interval between one election and the following in the same country.

[20] As in Rodríguez-Pose and Dijkstra (2021), the controls included are: Tertiary education, Log GDP per capita, Young share, Log Population density, GDP growth, Immigrants, Unemployment, Unemployment change, Abstention.

As in the paper above, a second similar OLS model is tested:

$$Y_{i,2014-2020} = \alpha + \beta \log Payments_{i,2000-2013} + X_{i,t} + u_{i,t}.$$

The main difference between the two models is that in the second model only the elections falling in the 2014-2020 programming period are considered, and, as for the fundings, the programming periods 2000-2006 and 2007-2013 are used.
The results are shown in Table 8. The main findings are that funds are positively related to the opinion towards the EU and toward EU cohesion policy, and this relation becomes larger when more funds are involved, as shown by the larger coefficient on *lmodpay*14*_pp* with respect to *lmodpay*5*_pp*. The relation with Anti-elite salience is not clear: in the first model there is no significance even if the coefficient is negative, while the second shows a significant negative coefficient. The explanation could be that, to be linked a lower populist sentiment, the amount of funds awarded in five years is not sufficient, but rather, as for the previous two dependent variables, more time and more funds are needed for a stronger relationship.

Table 8: Effects of payments

	EU Position		EU cohesion		Anti-elite salience	
	(1)	(2)	(3)	(4)	(5)	(6)
lmodpay5_pp	2.865***		4.076***		-0.608	
	(0.724)		(0.552)		(0.812)	
lmodpay14_pp		5.283***		6.006***		-1.684*
		(0.887)		(0.744)		(0.889)
Observations	558	398	558	398	558	398

Notes: Scores range from 0 to 100. Columns 1, 3 and 5 use every election available. Columns 2, 4 and 6 use only elections from 2014 to 2020.
Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Up to this point, there is some evidence that indeed cohesion policy is able to influence voting preferences, increasing the opinion towards EU integration and cohesion policy and lowering populist voting, but more investigation is needed.

6.3 RDD analysis

Following Imbens and Lemieux (2008) and Jacob et al. (2012), the succeeding analysis will be conducted in the following way: first, in order to check that there is no difference in the baseline characteristics of treated and untreated regions at the cut-off, a balancing test is performed; then, in order to have a preliminary idea, the basic graphs of the RDD are plotted; finally, the actual estimation is explained and reported, in order to comment causal relation between cohesion policy and voting preferences; to conclude, in order to assess the validity of the results, the robustness tests are explained and reported.

6.3.1 Balancing test

To check the continuity in the baseline characteristics at the cut-off, for every variable the following model is tested:

First stage: $Obj1_i = \alpha_0 + \alpha_1 Rule_i + f(X_i) + \epsilon_i$

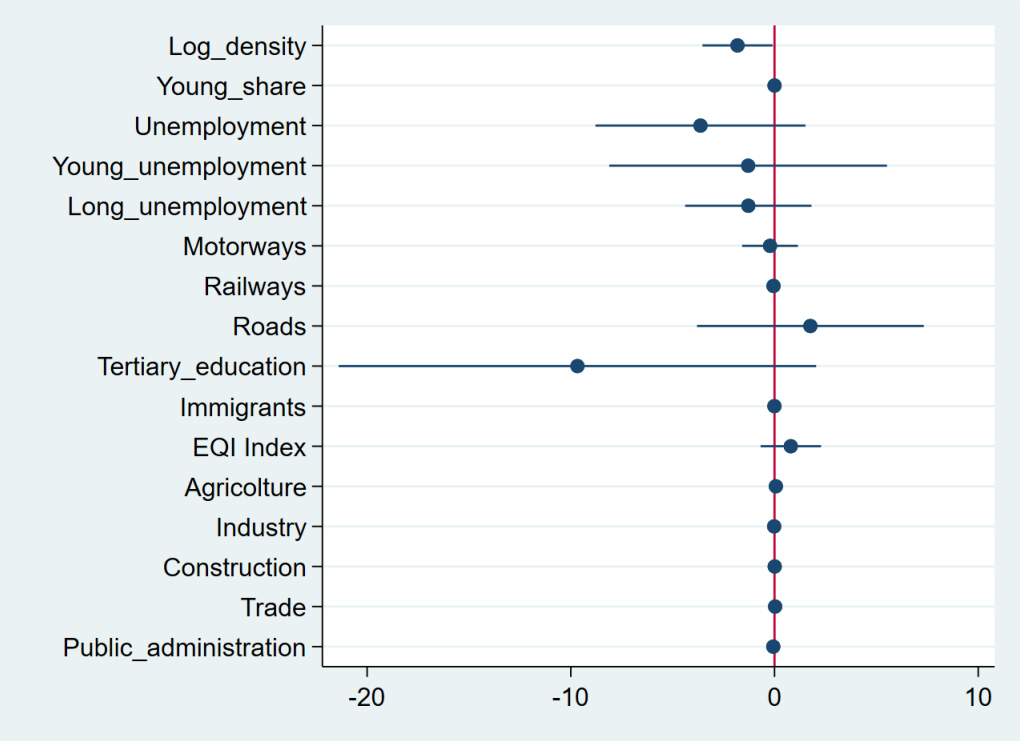
Second stage: $Y_i = \beta_0 + \beta_1 Obj1_i + f(X_i) + u_i$

where Y_i is the dependent variable, $Obj1_i$ is a dummy equal to 1 if region i was treated, $Rule_i$ is a dummy variable equal to 1 if the GDP per capita is lower than the 75% of the EU average, X_i is the running variable and ϵ_i and u_i are the error terms. $f(X)$ is a linear function of the running variable. The dependent variables used are those in Table 6 and measured in year 2007, the beginning of the first programming period considered.

The results of the balancing test are summed up in Figure 15[21].

[21] A complete table of this balancing test is available in Table 16 in the appendix.

Figure 15: Balancing test



Notes: Confidence intervals at the 95% significance level.

Only *Log density* shows a significant difference at the cut-off, so it will be used as a control in the RDD analysis. For the other variables, the sample is balanced.
It has already been shown that the probability of getting treated changes at the cut-off. Now it remains to shown that ERDF payments changes at the threshold. To do so the model used above is tested, the results are reported in Table 9.

Table 9: ERDF payments balancing test

	ERDF 7	ERDF 7	Annual ERDF
Obj1	1543.401***	510.003***	120.232***
	(442.425)	(86.072)	(12.560)
Observations	237	242	3353
Program period	2007-2013	2014-2020	2007-2020

Notes: Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

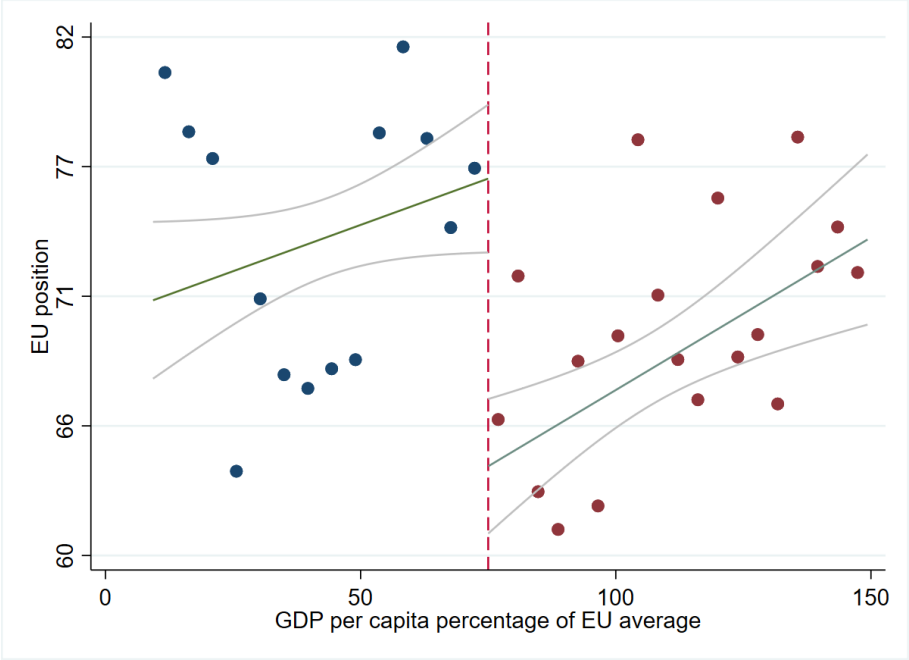
The variable ERDF 7 refers to the sum of modelled ERDF payments per capita received in 7 years (the duration of a programming period), while the variable Annual ERDF refers to the modelled ERDF payments per capita received every year. In the first two columns are shown the two programming periods, while in the third column the measurement is repeated every year from 2007 to 2020.
It can be seen that crossing the threshold implies an higher amounts of funds received, independently on when this measurement happens [22]. In particular, looking at the third column it can be seen that crossing the threshold implies receiving €120 more per capita every year.
As already discussed, given this findings, the RDD approach looks consistend with the aim of this research.

6.3.2 Graphical analysis

In the following figures the scores for every variable of interest are plotted on the running variable as calculated in the way described at the beginning of every programming period, with the dashed line representing the cut-off. This means that the observations are referred to repeating regions, since for every country at least two elections are considered. Remembering the fuzzy RDD setup, being on one side of the cut-off does not automatically means that regions are treated or not treated, because there are fuzzy regions on both sides.
Figure 16 shows the impact of being eligible for funding on EU position and, confirming previous literature, the finding is that being eligible is associated with a higher opinion towards EU integration.

[22] Less funds are found in the second column because the data availability ends in 2018

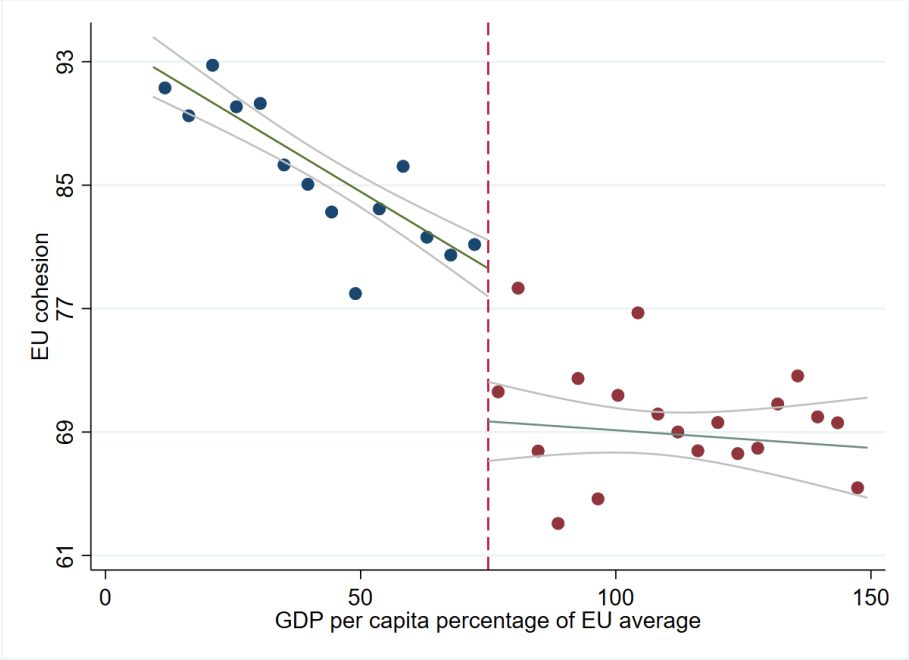
Figure 16: EU position in treated and untreated regions



Notes: Averages of EU position score in treated (blue) and untreated (red) regions. The x-axis reports the running variable as calculated by the European Commission in 2006 and 2012. The red dashed vertical line represents 75% of the EU average per capita GDP in PPS as defined by the EU Commission. Grey curves represent the 95% confidence interval.

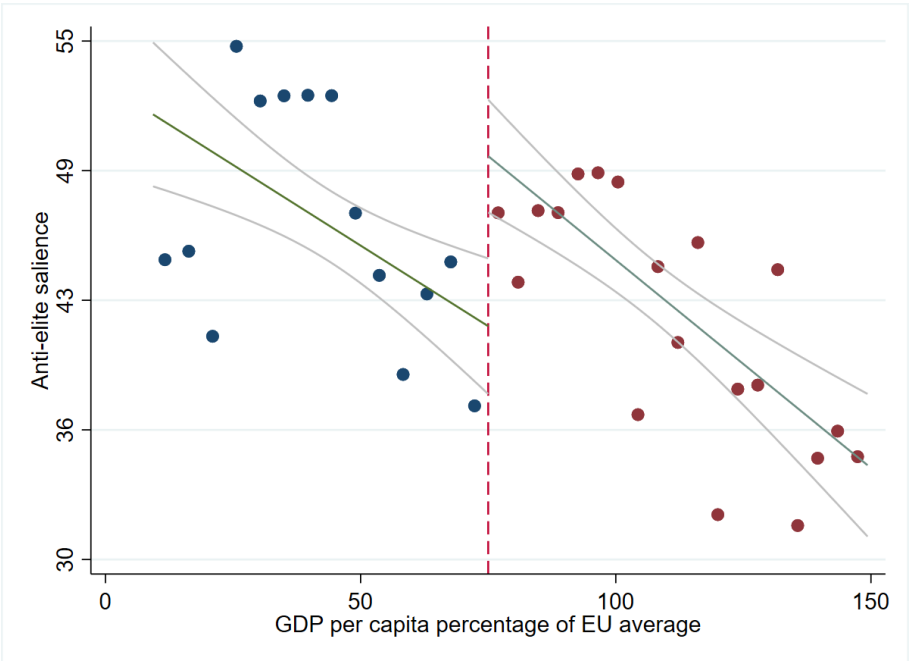
Figure 17 shows the impact of being eligible for funding on EU cohesion and the result is that eligibility is associated with a higher opinion of EU cohesion policy. Figure 18 shows the impact of being eligible for funding on Anti-elite salience and the result is that being eligible for funding is connected with a lower level of Populism.

Figure 17: EU cohesion in treated and untreated regions



Notes: Averages of EU cohesion score in treated (blue) and untreated (red) regions. The x-axis reports the running variable as calculated by the European Commission in 2006 and 2012. The red dashed vertical line represents 75% of the EU average per capita GDP in PPS as defined by the EU Commission. Grey curves represent the 95% confidence interval.

Figure 18: Anti-elite salience in treated and untreated regions



Notes: Averages of anti-elite salience score in treated (blue) and untreated (red) regions. The x-axis reports the running variable as calculated by the European Commission in 2006 and 2012. The red dashed vertical line represents 75% of the EU average per capita GDP in PPS as defined by the EU Commission. Grey curves represent the 95% confidence interval.

All these results are also confirmed using a quadratic fit[23].

6.3.3 Estimation

To estimate the effect of being treated at the cut-off, the following fuzzy RDD model is estimated:

$$Y_{i,t} = \beta_0 + \beta_1 Obj1_{i,t} + f(X_{i,t}) + Z_{i,t} + \delta_{i,t} + u_{i,t},$$

where $Y_{i,t}$ is the variable of interest (EU position score, EU cohesion score, Anti-elite salience score) for region i in year t, $Obj1_{i,t}$ is a dummy equal 1 if for region i had the "Less developed region" status in year t, $X_{i,t}$ is the running variable as defined in section 5 at the beginning of programming period corresponding to year t, $Z_{i,t}$ is a vector of controls[24], $\delta_{i,t}$ are programming periods dummies and $u_{i,t}$ the error term. The function $f(X)$ is a linear function of the running variable, but also a quadratic function is used and the results are confirmed.
The treatment status $Obj1_{i,t}$ is instrumented with $Rule_{i,t}$ in the following model:

$$Obj1_{i,t} = \alpha_0 + \alpha_1 Rule_{i,t} + f(X_{i,t}) + Z_{i,t} + \gamma_{i,t} + \epsilon_{i,t},$$

where $Rule_{i,t}$ is a dummy equal 1 if region i had a GDP per capita below 75% of the EU average at the beginning of the programming period comprehending year t, $\gamma_{i,t}$ are programming periods dummies and $\epsilon_{i,t}$ the error term.
A second model is estimated to assess the effective impact of funds:

$$Y_{i,t} = \beta_0 + \beta_1 Funds_{i,t} + f(X_{i,t}) + Z_{i,t} + \delta_{i,t} + u_{i,t},$$

where $Funds_{i,t}$ is the amount of Modelled ERDF payments per capita divided by 100 in the 7 years before the election[25] awarded to region i in the five years before the election in year t and it is instrumented by:

$$Funds_{i,t} = \alpha_0 + \alpha_1 Rule_{i,t} + f(X_{i,t}) + Z_{i,t} + \gamma_{i,t} + \epsilon_{i,t}.$$

[23] The graphs are available in Figures 33 - 35 in the appendix.

[24] As in Borin et al. (2021), the controls used are population density and if the region was treated in the previous period.

[25] Modelled ERDF payments per capita divided by 100 is selected as the variable of interest because it is almost the amount of money that treated regions receive more with respect to untreated ones.

Only ERDF payments are considered in this setup because ERDF is the only fund following the 75% allocation rule.
For both models, three specifications will be tested: in the first controls and interaction between the running variable and the dummy variable are not included; in the second one only controls are included; in the third one also the interaction between the running variable and the dummy variable ($Rule \times f(X)$) is included to allow the slope of the regression line to change at the cut-off.

A similar specification is tested to assess the influence of unemployment. In this specification Unemployment is added as a control variable and interacted with the variable of interest.
For the first model:
First stage: $Obj1_{i,t} = \alpha_0 + \alpha_1 Rule_{i,t} + f(X_{i,t}) + Z_{i,t} + \gamma_{i,t} + \epsilon_{i,t}$,
Second stage: $Y_{i,t} = \beta_0 + \beta_1 Obj1_{i,t} \times Unemployment_{i,t} + f(X_{i,t}) + Z_{i,t} + \delta_{i,t} + u_{i,t}$.
For the second model:
First stage: $Funds_{i,t} = \alpha_0 + \alpha_1 Rule_{i,t} + f(X_{i,t}) + Z_{i,t} + \gamma_{i,t} + \epsilon_{i,t}$.
Second stage: $Y_{i,t} = \beta_0 + \beta_1 Funds_{i,t} \times Unemployment_{i,t} + f(X_{i,t}) + Z_{i,t} + \delta_{i,t} + u_{i,t}$.
Again, the three specifications explained above will be tested for these two models.

The results are summarized in Tables 10 - 12, with the estimates of the first model in the first panel and the estimates of the second model in the second panel. The results of the estimates using a second degree polynomial are shown in the comprehensive Tables 17 and 18 in the Appendix and confirm the estimates shown below.

EU position The results using EU position as outcome variable are shown in Table 10. Being fund receiver leads to a significant higher opinion of the EU relative to the non recipient regions in the first two specification, also when using a second degree polynomial for the running variable. This result does not hold when the slope of the regression line is allowed to change at the cut-off, in the third specification.
The same result is found when instrumenting actual funds with the Convergence Objective status in the second panel, again positive significant effect in the first two specification, but not in the third.
Adding unemployment as a control and interacting it with the treatment variable,

the results point in the same direction. When using Objective 1 status as the treatment variable, the effect is statistically significant and positive for the three specifications. The interaction term shows a significant negative coefficient, meaning that the positive effect of being fund receiver is mitigated by higher levels of unemployment.

The same is found when using funds as treatment variable, but the result does not hold when the slope is allowed to change at the cut-off.

Table 10: RDD estimates: EU position

Treatment variable	Convergence objective			Funds		
EU position	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	28.750***	28.748**	7.901	2.256***	2.595***	45.979
	(7.132)	(11.197)	(4.949)	(0.472)	(0.838)	(234.439)
Observations	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes
Treatment variable	Convergence objective			Funds		
EU position	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	50.626***	46.258***	52.499 ***	6.146***	9.153***	52.274
	(15.503)	(13.896)	(10.115)	(1.536)	(3.018)	(64.121)
Treatment ×						
Unemployment	-1.719***	-2.332***	-2.595***	-0.325***	-0.458***	-2.477
	(0.653)	(0.633)	(0.457)	(0.091)	(0.156)	(3.017)
Observations	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes

Notes: All the specifications include a time dummy. Columns 1 and 4 use a linear specification in the running variable; columns 2 and 5 include external controls for population density and treatment status in previous programme; columns 3 and 6 allow the function's slope to change at the cut-off.

Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

EU cohesion The results using EU cohesion as outcome variable are shown in Table 11. Looking at the impact of funds on the opinion of the cohesion policy, voters seem to show an opportunistic behaviour: those receiving funds are much more favourable to cohesion policy with respect to those not receiving them. In the first model, the treatment coefficient is positive and statistically significant in all specifications, but, when looking at the second model, the coefficient is not significant in the third specification.

The results remain the same when adding unemployment as a control and interacting it with the treatment variable and, as before, higher unemployment mitigates the effect of being fund receiver.

The suggestion of this findings is that receiving fund is a reason to politically support regional policy in order to keep receiving those funds or better to push politicians to increase the financial resources dedicated to cohesion policy.

Table 11: RDD estimates: EU cohesion

Treatment variable	Convergence objective			Funds		
EU cohesion	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	26.377***	27.041***	18.372***	2.069***	2.441***	106.913
	(6.012)	(9.375)	(4.301)	(0.403)	(0.688)	(532.448)
Observations	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes
Treatment variable	Convergence objective			Funds		
EU cohesion	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	46.137***	43.262***	73.769***	5.625***	8.614***	76.778
	(13.268)	(11.738)	(9.825)	(1.285)	(2.469)	(91.338)
Treatment ×						
Unemployment	-1.552***	-2.164***	-3.447***	-0.298***	-0.431***	-3.621
	(0.549)	(0.531)	(0.447)	(0.079)	(0.132)	(4.301)
Observations	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes

Notes: All the specifications include a time dummy. Columns 1 and 4 use a linear specification in the running variable; columns 2 and 5 include external controls for population density and treatment status in previous programme; columns 3 and 6 allow the function's slope to change at the cut-off.

Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Anti-elite salience The results using Anti-elite salience as outcome variable are shown in Table 12. Using the first model, populist voting is lower in regions that receive funds, for both treatment variables Convergence Objective and Funds. This results though, as in the previous cases, is not significant using the specification where the slope is allowed to change at the cut-off.

When using the second model with unemployment, this result becomes significant also for the third specification when using Convergence Objective as treatment vari-

able, but not for Funds. Looking at the interaction term, as before, unemployment mitigates the effect of cohesion policy, so that higher unemployment is associated with higher Anti-elite sentiment in the recipient regions.

The evidence is that indeed cohesion policy is able to reduce populist voting. The reason behind this is that, given that populism rooted in those regions that felt betrayed by the establishment when facing economic shocks, when voters get compensated for those losses they reduce the support to populist parties with respect to similar regions that did not took advantage from European cohesion policy.

Table 12: RDD estimates: Anti-elite salience

Treatment variable	Convergence objective			Funds		
Anti-elite salience	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	-19.513***	-20.323**	-4.374	-1.531***	-1.834**	-25.453
	(6.173)	(9.731)	(4.643)	(0.435)	(0.780)	(132.639)
Observations	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes
Treatment variable	Convergence objective			Funds		
Anti-elite salience	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	-37.442***	-35.177***	-30.849***	-4.345***	-6.545**	-28.472
	(12.765)	(12.473)	(8.818)	(1.364)	(2.715)	(35.837)
Treatment ×						
Unemployment	1.409***	1.830***	1.648***	0.228***	0.325**	1.351
	(0.541)	(0.560)	(0.422)	(0.075)	(0.135)	(1.685)
Observations	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes

Notes: All the specifications include a time dummy. Columns 1 and 4 use a linear specification in the running variable; columns 2 and 5 include external controls for population density and treatment status in previous programme; columns 3 and 6 allow the function's slope to change at the cut-off.

Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

To sum up, cohesion policy is able to increase the support in favour of the European Union and cohesion policy and reduce the support of populist parties. This effect is found both when using the beneficiary status and actual funds received. When adding unemployment to the regression, unemployment mitigates the effect of cohesion policy.

These results are in support of the usage of cohesion policy as a political instrument: in order to limit the populist and Eurosceptic wave that hit Europe after the Great Recession, cohesion policy can be used to reinforce trust towards the EU and lower voters' populist preferences. This would also lower political tensions that are harmful for economic development, thus making cohesion policy successful firstly for its direct effect on growth and secondly for its indirect effect on political stability.

6.3.4 Robustness tests

Placebo threshold To check that no other significant effect happens at different thresholds, the models are tested on the true threshold (75%) and two fake thresholds: 60% and 90%, the . These estimates are reported in Figures 36 - 38 in the appendix. For all the three dependent variables, the major effect is found at the true threshold, while no effect is found on the fake thresholds. So, the jump in the dependent variables is in correspondence of the true allocation rule threshold.

Removing Eastern European countries Since the most funded regions are the former socialist Eastern countries that joined the EU in 2004 and 2007[26], it could be that the results found are driven by these countries. To check if the results still hold, these regions are removed from the analysis. As it can be seen from Table 19[27], removing these observations, the results confirm what found before.

Dummy parties' scores Up until now, parties' positions have been measured on a continuous scale. A different way of doing this would be to use dummy variables to

[26]These countries are: Bulgaria, Czech Republic, Hungary, Estonia, Lithuania, Latvia, Poland, Romania and Slovakia

[27]The models tested are the same used before, but Log Density is not included in the regression as there is no discontinuity in the balancing test.

say if a party is Populist or anti-EU. To do so, a party will be labelled as "extreme" for each of the three dimensions if its scores will be in the most extreme 25% of the distribution.

Table 13 below reports the detailed distributions of these scores[28].

Table 13: Scores summary statistics

Variable	Mean	Std. Dev.	25%	75%	N
EU position	4.99	1.70	3.79	6.43	492
EU cohesion	5.45	1.29	4.80	6.39	492
Anti-elite salience	4.72	2.61	2.44	6.84	492

So, a party will be labelled as Anti-EU if its EU position score will be lower than 3.79, will be labelled as Anti-cohesion if its EU cohesion score will be lower than 4.80 and will be labelled as Populist if its anti-elite salience score will be higher than 6.84. After generating these dummies, regional scores will be computed as shown in Section 4.1.

The results obtained using these modifications are shown in Tables 20 and 21. The results are consistent with what found before.

6.4 Losing and gaining Objective 1

Every programming period, regions may lose or gained the convergence objective status. This has a huge impact on the funds received and could change voters' behaviour. With respect to the 2 programming periods considered, only the countries that joined the EU in 2004 and 2007 (plus Basilicata in Italy and Central Macedonia in Greece) gained this status, while the areas losing funds are spread all across Europe. A map of the regions considered is available in the appendix. Given the dynamic nature of losing or gaining the status, all the variables involved will be percentage differences. The model tested is the following:

$$\Delta Y_{i,t} = \alpha + \beta Lost(Gained)_{i,t} + \gamma Lost(Gained)_{i,t} \times \Delta Unemployment_{i,t} + X_{i,t} + \delta_t + u_{i,t},$$

[28] As a remainder, EU position and EU cohesion range from 1 to 7, anti-elite salience ranges from 0 to 10.

where $\Delta Y_{i,t}$ are the percentage differences of each of the three scores in region i from one election in year t to the previous before, $Lost(Gained)_{i,t}$ is a dummy equal 1 if region i lost (or gained) Objective 1 status in year t with respect to the previous programming period and 0 if the status didn't change[29], $\Delta Unemployment_{i,t}$ is the percentage difference in unemployment in year t with respect to five years before the election, $X_{i,t}$ is a series of controls measured in year t as the percentage difference in each control variable with respect to five years before[30], δ_t are program period fixed effects and $u_{i,t}$ is the error term.

There results of this estimation are reported in the Table 14, in the odd columns are reported the results from losing funds and in the even columns the results from gaining funds.

When losing funds the only significant effect is to reduce the opinion towards cohesion policy with respect to the previous election, thus confirming a utilitaristic behaviour of voters. With regard to the other two variables, the effect is not significant, but in the direction of the previous findings: lower EU position and higher populist sentiment.

When gaining funds, the results are in line of the previous results: increase opinion of the EU, increase the opinion of EU cohesion policy and lower populist voting. Given that, except new European Member States, very few regions gained funds, this result might be applied only to those new countries, suggesting that these changes might be related more with the entrance in the EU, rather than with the access to cohesion policy.

For both models, the interaction between the treatment and unemployment change is not significant and very close to zero, meaning that the change in unemployment does not impact on the difference in voting preferences for those regions that gained or lost Convergence Objective status.

[29]The results would not change if considering also a loss the change from Less developed to Transition region and vice versa for gaining.

[30]The dynamic controls include: unemployment, tertiary education, share of young people. Two static controls are added: logarithm of population density and abstention.

Table 14: Losing and gaining Objective 1 status

	Δ EU Position		Δ EU cohesion		Δ Anti-elite salience	
	(1)	(2)	(3)	(4)	(5)	(6)
Lost	-2.060		-2.048**		3.572	
	(1.465)		(0.961)		(5.796)	
Lost ×						
Δ Unemployment	0.001		0.002		0.049	
	(0.020)		(0.013)		(0.049)	
Gained		9.413***		4.151***		-25.131***
		(2.026)		(1.100)		(4.464)
Gained ×						
Δ Unemployment		-0.002		0.021*		-0.013
		(0.016)		(0.011)		(0.036)
Observations	693	693	693	693	693	693

Notes: All the specifications include a time dummy. All the specifications include dynamic controls for unemployment, tertiary education, share of young people and static controls for population density and abstention. Columns 1, 3 and 5 report the results for losing Convergence objective status; columns 2, 4 and 6 report the results for gaining Convergence objective status.
Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

6.5 Politicians' awareness

Supposing that the relations find above are truly explaining the effects of cohesion policy of voting, a question rises: are politicians aware of this? The implications of the previous results are that funds are able to direct the opinion of voters towards higher support from more European integration and lower support to extremist parties. Then, one may say that the debate around cohesion policy is not a matter of opportunities for development, but rather a way to influence voters to follow the desired path.

From the point of view of the European "establishment", structural funds can be

a way to sustain the development of lagging areas and, at the same time, limit the strength of centrifugal forces, creating more support towards EU integration.

From the point of view of populist parties, fighting against cohesion policy could be a way to become more powerful because more funds are related to less votes. So, these parties might be willing to trade an opportunity for development in exchange for political gains.

Aside from politicians' intentions, the previous findings suggest that cohesion policy can be used as a political instrument. Recalling that the official aim of EU regional policy is to promote "job creation, business competitiveness, economic growth, sustainable development, and improve citizens' quality of life", then it could be a worthy goal to add "and create more political unity" and declare this as an official aim of cohesion policy, if this is the true aim of the European "establishment".

7 Conclusion

In the last 10 years, after the economic shocks that hit Europe, voters that felt abandoned by traditional politics supported populist parties hoping to find solutions to economic insecurity. Would they reduce their support to these parties if they are compensated through redistribution? This thesis studied the effect of EU cohesion policy on populist voting, using a Regression Discontinuity Design exploiting the 75% allocation rule and applying this setup to all European NUTS 2 regions from 2011 to 2020.

The main findings are that cohesion policy is able to reduce populist voting in recipient regions and increase the opinion of voters towards EU integration and of the cohesion policy itself. In addition, losing the funds has no effect on the opinion of the EU and populist voting, but only lowers the opinion towards cohesion policy

This findings suggest that in order to maintain the support for the current political system and limit the influence of extremist parties, EU funds are an effective instrument. Clearly they cannot be the only one: from a financial point of view, "buying" voters' support might be not sustainable and, from a political point of view, relying only on structural funds could push those regions that receive less or no money to find this unfair and thus reduce their support towards cohesion policy and the European Union.

The limitations of this research is that when looking at the effect of EU funds on populist voting, this impact could be mainly driven by the opinion of the European Union, since the EU is the institution allocating the funds. In order to remove the influence of the European Union, one should focus on national redistributive policies, possibly finding a similar policy across countries in order to include many countries and remove the limitation of a specific political landscape. Doing this would possibly allow to find a true causation between redistribution and the reduction of populist voting.

References

Historic EU payments - regionalised and modelled. https://cohesiondata.ec.europa.eu/Other/Historic-EU-payments-regionalised-and-modelled/tc55-7ysv.

EUR-Lex - 12012E/TXT - EN - EUR-Lex — eur-lex.europa.eu. https://eur-lex.europa.eu/eli/treaty/tfeu_2012/oj, a.

EUR-Lex - 32006D0769 - EN - EUR-Lex — eur-lex.europa.eu. https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32006D0769, b.

EUR-Lex - 32007D0188 - EN - EUR-Lex — eur-lex.europa.eu. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32007D0188, c.

EUR-Lex - 32014D0099 - EN - EUR-Lex — eur-lex.europa.eu. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.050.01.0022.01.ENG, d.

Antonio Accetturo, Guido de Blasio, and Lorenzo Ricci. A tale of an unwanted outcome: Transfers and local endowments of trust and cooperation. *Journal of Economic Behavior Organization*, 102:74–89, 2014. ISSN 0167-2681. doi: https://doi.org/10.1016/j.jebo.2014.03.015. URL https://www.sciencedirect.com/science/article/pii/S0167268114000857.

Giuseppe Albanese, Guglielmo Barone, and Guido de Blasio. Populist voting and losers' discontent: Does redistribution matter? *European Economic Review*, 141:104000, 2022. ISSN 0014-2921. doi: https://doi.org/10.1016/j.euroecorev.2021.104000. URL https://www.sciencedirect.com/science/article/pii/S0014292121002749.

Yann Algan, Sergei Guriev, Elias Papaioannou, and Evgenia Passari. The european trust crisis and the rise of populism. *Brookings Papers on Economic Activity*, pages 309–382, 2017. ISSN 00072303, 15334465. URL http://www.jstor.org/stable/90019460.

Joshua D Angrist and Jörn-Steffen Pischke. *Mostly harmless econometrics: An empiricist's companion*. Princeton university press, 2009.

Joshua D Angrist and Jörn-Steffen Pischke. *Mastering'metrics: The path from cause to effect*. Princeton university press, 2014.

David Autor, David Dorn, Gordon Hanson, and Kaveh Majlesi. Importing Political Polarization? The Electoral Consequences of Rising Trade Exposure. *American Economic Review*, 110(10):3139–83, October 2020. doi: 10.1257/aer.20170011. URL https://www.aeaweb.org/articles?id=10.1257/aer.20170011.

Julia Bachtrögler and Harald Oberhofer. Euroscepticism and EU Cohesion Policy: The Impact of Micro-Level Policy Effectiveness on Voting Behavior. Department of Economics Working Papers wuwp273, Vienna University of Economics and Business, Department of Economics, November 2018. URL https://ideas.repec.org/p/wiw/wiwwuw/wuwp273.html.

Scott R. Baker, Nicholas Bloom, and Steven J. Davis. Measuring Economic Policy Uncertainty*. *The Quarterly Journal of Economics*, 131(4):1593–1636, 07 2016. ISSN 0033-5533. doi: 10.1093/qje/qjw024. URL https://doi.org/10.1093/qje/qjw024.

Guglielmo Barone and Helena Kreuter. Low-wage import competition and populist backlash: The case of italy. *European Journal of Political Economy*, 67:101970, 2021. ISSN 0176-2680. doi: https://doi.org/10.1016/j.ejpoleco.2020.101970. URL https://www.sciencedirect.com/science/article/pii/S017626802030118X.

Guglielmo Barone, Alessio D'Ignazio, Guido de Blasio, and Paolo Naticchioni. Mr. rossi, mr. hu and politics. the role of immigration in shaping natives' voting behavior. *Journal of Public Economics*, 136:1–13, 2016. ISSN 0047-2727. doi: https://doi.org/10.1016/j.jpubeco.2016.03.002. URL https://www.sciencedirect.com/science/article/pii/S0047272716000414.

Sascha O. Becker, Peter H. Egger, and Maximilian von Ehrlich. Going nuts: The effect of eu structural funds on regional performance. *Journal of Public Economics*,

94(9):578–590, 2010. ISSN 0047-2727. doi: https://doi.org/10.1016/j.jpubeco.2010.06.006. URL https://www.sciencedirect.com/science/article/pii/S004727271000071X.

Sascha O Becker, Thiemo Fetzer, and Dennis Novy. Who voted for Brexit? A comprehensive district-level analysis. *Economic Policy*, 32(92):601–650, 10 2017. ISSN 0266-4658. doi: 10.1093/epolic/eix012. URL https://doi.org/10.1093/epolic/eix012.

Luca Bellodi, Massimo Morelli, and Matia Vannoni. The costs of populism for the bureaucracy and government performance: Evidence from italian municipalities. *BAFFI CAREFIN Centre Research Paper*, (2021-158), 2021.

Alessandro Borin, Elisa Macchi, and Michele Mancini. EU transfers and euroscepticism: can't buy me love? *Economic Policy*, 36(106):237–286, 2021. URL https://ideas.repec.org/a/oup/ecpoli/v36y2021i106p237-286..html.

Mauro Caselli, Andrea Fracasso, and Silvio Traverso. Globalization and electoral outcomes: Evidence from italy. *Economics & Politics*, 32(1):68–103, 2020. doi: https://doi.org/10.1111/ecpo.12147. URL https://onlinelibrary.wiley.com/doi/abs/10.1111/ecpo.12147.

Italo Colantone and Piero Stanig. The trade origins of economic nationalism: Import competition and voting behavior in western europe. *American Journal of Political Science*, 62(4):936–953, 2018. doi: https://doi.org/10.1111/ajps.12358. URL https://onlinelibrary.wiley.com/doi/abs/10.1111/ajps.12358.

Italo Colantone and Piero Stanig. The surge of economic nationalism in western europe. *Journal of Economic Perspectives*, 33(4):128–51, November 2019. doi: 10.1257/jep.33.4.128. URL https://www.aeaweb.org/articles?id=10.1257/jep.33.4.128.

Riccardo Crescenzi, Marco Di Cataldo, and Mara Giua. It's not about the money. eu funds, local opportunities, and euroscepticism. *Regional Science and Urban Economics*, 84:103556, 2020. ISSN 0166-0462. doi: https://doi.org/10.1016/j.regsciurbeco.2020.103556. URL https://www.sciencedirect.com/science/article/pii/S0166046219304296.

Scott Cunningham. *Causal Inference: The Mixtape*. Yale University Press, 2021. ISBN 9780300251685. URL http://www.jstor.org/stable/j.ctv1c29t27.

Christian Dippel, Robert Gold, Stephan Heblich, and Rodrigo Pinto. The Effect of Trade on Workers and Voters. *The Economic Journal*, 132(641):199–217, 05 2021. ISSN 0013-0133. doi: 10.1093/ej/ueab041. URL https://doi.org/10.1093/ej/ueab041.

Christian Dustmann, Barry Eichengreen, Sebastian Otten, André Sapir, Guido Tabellini, and Gylfi Zoega. Europe's trust deficit. *Causes and Remedies. London: Centre for Economic Policy Research*, 2017.

Manuel Funke, Moritz Schularick, and Christoph Trebesch. The cost of populism: Evidence from history. Technical report, ECONtribute Policy Brief, 2021.

Luigi Guiso, Helios Herrera, Massimo Morelli, and Tommaso Sonno. Populism: Demand and supply. 2017.

Martin Halla, Alexander F Wagner, and Josef Zweimüller. Immigration and Voting for the Far Right. *Journal of the European Economic Association*, 15(6):1341–1385, 03 2017. ISSN 1542-4766. doi: 10.1093/jeea/jvx003. URL https://doi.org/10.1093/jeea/jvx003.

Guido W. Imbens and Joshua D. Angrist. Identification and estimation of local average treatment effects. *Econometrica*, 62(2):467–475, 1994. ISSN 00129682, 14680262. URL http://www.jstor.org/stable/2951620.

Guido W. Imbens and Thomas Lemieux. Regression discontinuity designs: A guide to practice. *Journal of Econometrics*, 142(2):615–635, 2008. ISSN 0304-4076. doi: https://doi.org/10.1016/j.jeconom.2007.05.001. URL https://www.sciencedirect.com/science/article/pii/S0304407607001091. The regression discontinuity design: Theory and applications.

Robin Jacob, Pei Zhu, Marie-Andrée Somers, and Howard Bloom. A practical guide to regression discontinuity. *MDRC*, 2012.

Seth Jolly, Ryan Bakker, Liesbet Hooghe, Gary Marks, Jonathan Polk, Jan Rovny, Marco Steenbergen, and Milada Anna Vachudova. Chapel hill expert survey trend

file, 1999–2019. *Electoral Studies*, 75:102420, 2022. ISSN 0261-3794. doi: https://doi.org/10.1016/j.electstud.2021.102420. URL https://www.sciencedirect.com/science/article/pii/S0261379421001323.

Brandon Julio and Youngsuk Yook. Political uncertainty and corporate investment cycles. *The Journal of Finance*, 67(1):45–83, 2012. doi: https://doi.org/10.1111/j.1540-6261.2011.01707.x. URL https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1540-6261.2011.01707.x.

David S. Lee. Randomized experiments from non-random selection in u.s. house elections. *Journal of Econometrics*, 142(2):675–697, 2008. ISSN 0304-4076. doi: https://doi.org/10.1016/j.jeconom.2007.05.004. URL https://www.sciencedirect.com/science/article/pii/S0304407607001121. The regression discontinuity design: Theory and applications.

David S. Lee and Thomas Lemieux. Regression discontinuity designs in economics. *Journal of Economic Literature*, 48(2):281–355, June 2010. doi: 10.1257/jel.48.2.281. URL https://www.aeaweb.org/articles?id=10.1257/jel.48.2.281.

Cllment Malgouyres. Trade shocks and far-right voting: Evidence from french presidential elections. *SSRN Electronic Journal*, 2017. doi: 10.2139/ssrn.2942173. URL https://doi.org/10.2139/ssrn.2942173.

Justin McCrary. Manipulation of the running variable in the regression discontinuity design: A density test. *Journal of Econometrics*, 142(2):698–714, 2008. ISSN 0304-4076. doi: https://doi.org/10.1016/j.jeconom.2007.05.005. URL https://www.sciencedirect.com/science/article/pii/S0304407607001133. The regression discontinuity design: Theory and applications.

C Mudde. *Populist radical right parties in Europe*. Cambridge: Cambridge university press, 2007.

Jan-Werner Müller. *What is populism?* Penguin UK, 2017.

Pippa Norris and Ronald Inglehart. Trump, Brexit, and the Rise of Populism: Economic Have-Nots and Cultural Backlash. *HKS Faculty Research Working Paper Series RWP16-026*, 2016.

Pippa Norris and Ronald Inglehart. *Cultural Backlash: Trump, Brexit, and Authoritarian Populism*. Cambridge University Press, 2019.

Lubos Pastor and Pietro Veronesi. Inequality aversion, populism, and the backlash against globalization. Working Paper 24900, National Bureau of Economic Research, August 2018. URL http://www.nber.org/papers/w24900.

Guido Pellegrini, Flavia Terribile, Ornella Tarola, Teo Muccigrosso, and Federica Busillo. Measuring the effects of european regional policy on economic growth: A regression discontinuity approach. *Papers in Regional Science*, 92(1):217–233, 2013. doi: https://doi.org/10.1111/j.1435-5957.2012.00459.x. URL https://rsaiconnect.onlinelibrary.wiley.com/doi/abs/10.1111/j.1435-5957.2012.00459.x.

Dani Rodrik. Populism and the economics of globalization. *Journal of International Business Policy*, 1:12–33, 2018. ISSN 2522-0705. doi: 10.1057/s42214-018-0001-4. URL https://doi.org/10.1057/s42214-018-0001-4.

Andrés Rodríguez-Pose and Lewis Dijkstra. Does cohesion policy reduce eu discontent and euroscepticism? *Regional Studies*, 55(2):354–369, 2021. doi: 10.1080/00343404.2020.1826040. URL https://doi.org/10.1080/00343404.2020.1826040.

Dominik Schraff, Ioannis Vergioglou, and Buket Buse Demirci. The european NUTS-level election dataset: A tool to map european electoral geography. *Party Politics*, 29(3):570–579, May 2023.

Appendix

A Elections

Table 15: List of elections

Country	Year
Austria	2013
	2017
	2019
Belgium	2014
	2019
Bulgaria	2013
	2014
	2017
Cyprus	2011
	2016
Czech Republic	2013
	2017
Denmark	2011
	2015
	2019
Estonia	2011
	2015
	2019
Finland	2011
	2015
	2019
France	2012
	2017

Country	Year
Germany	2013
	2017
Greece	2012
	2015
	2019
Hungary	2014
	2018
Ireland	2011
	2016
	2020
Italy	2013
	2018
Latvia	2011
	2014
	2018
Lithuania	2012
	2016
	2020
Luxembourg	2013
	2018
Malta	2013
	2017

Country	Year
Netherlands	2012
	2017
Poland	2011
	2015
	2019
Portugal	2011
	2015
	2019
Romania	2012
	2016
Slovakia	2012
	2016
	2020
Spain	2011
	2015
	2016
	2019
Sweden	2014
	2018
United Kingdom	2015
	2017
	2019

B Party data

Figure 19: EU position in 2014 CHES wave

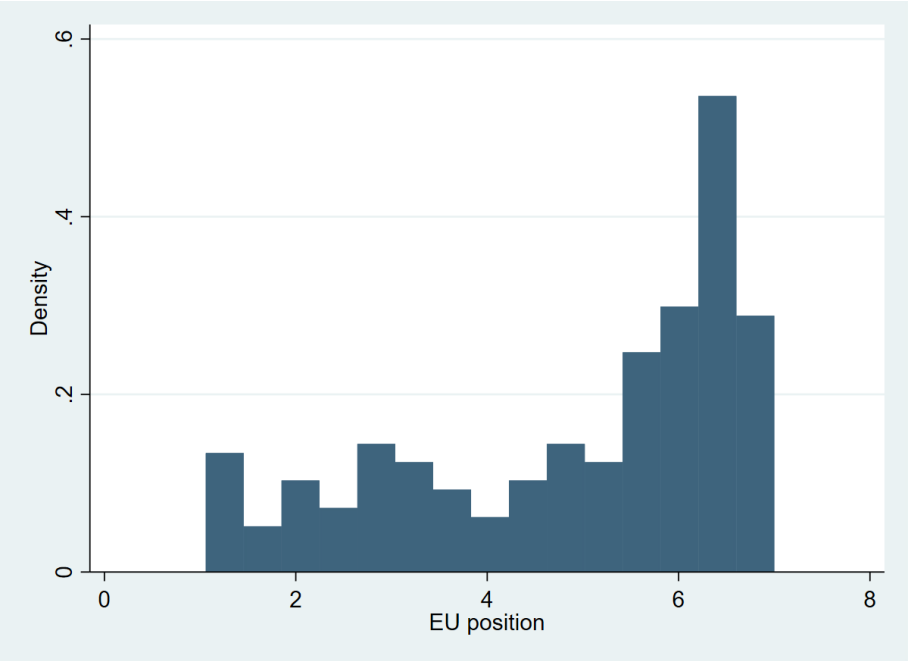


Figure 20: EU position in 2019 CHES wave

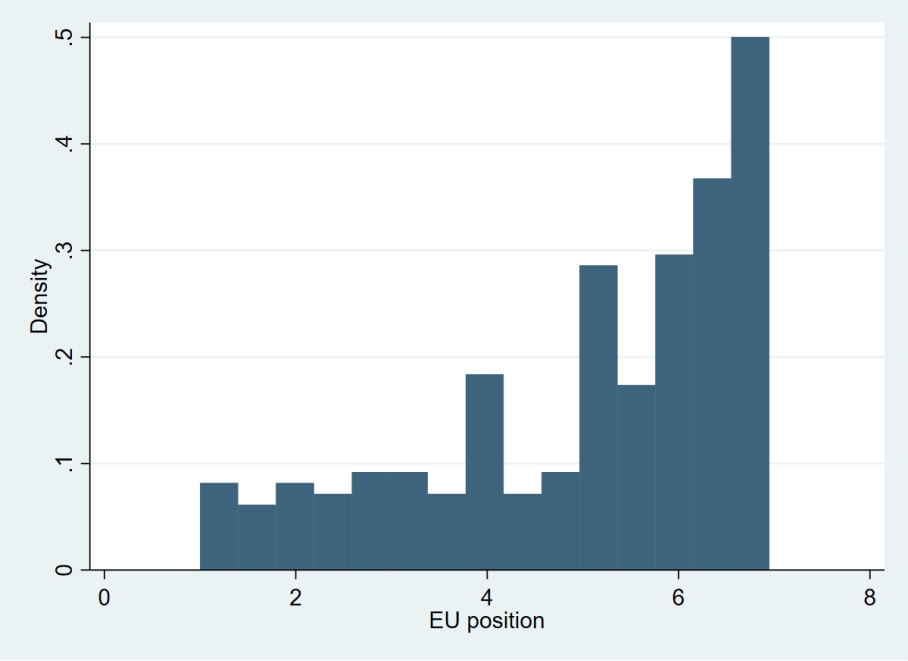


Figure 21: EU cohesion in 2014 CHES wave

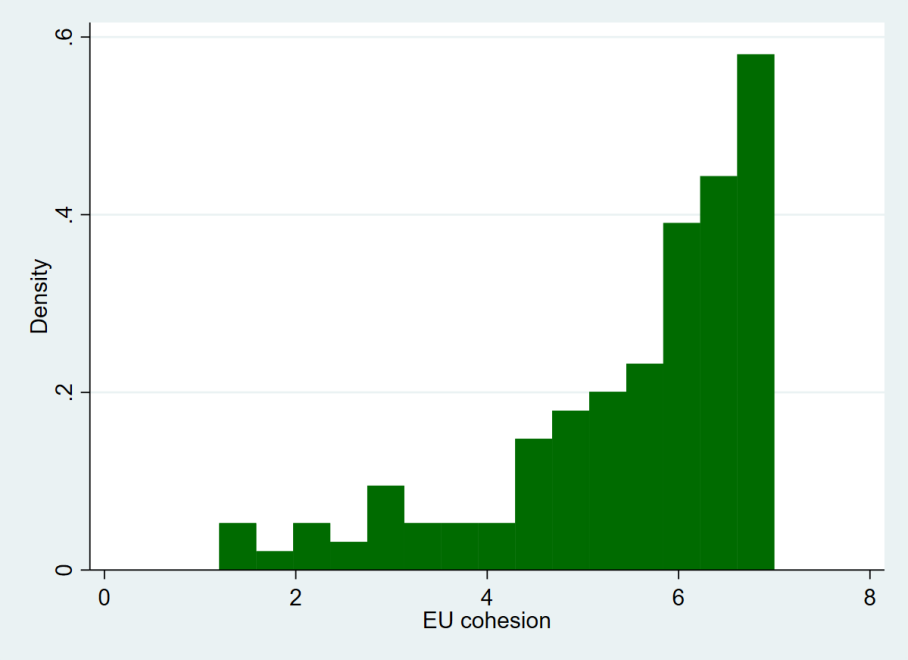


Figure 22: EU cohesion in 2019 CHES wave

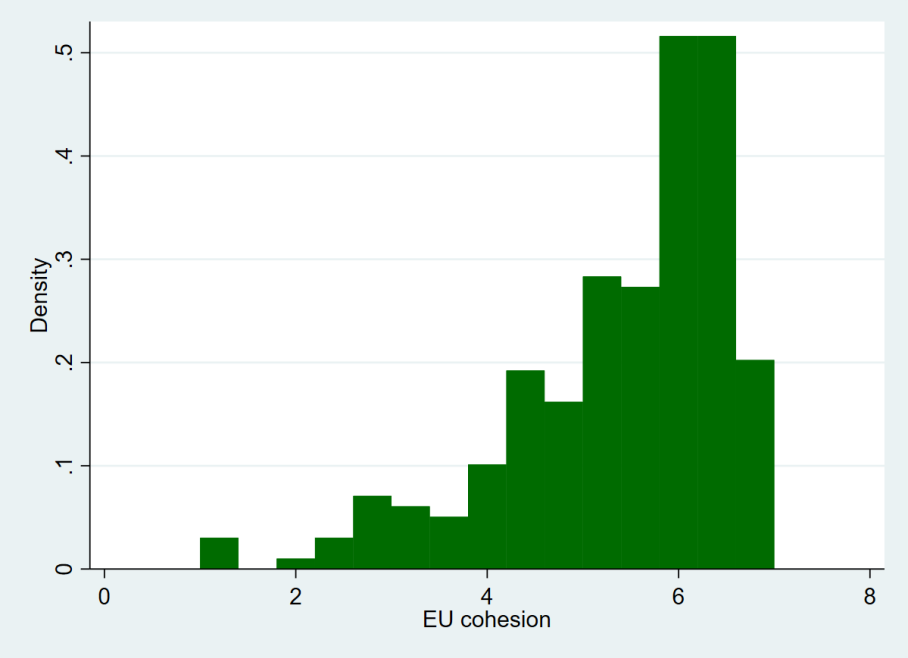


Figure 23: Anti-elite salience in 2014 CHES wave

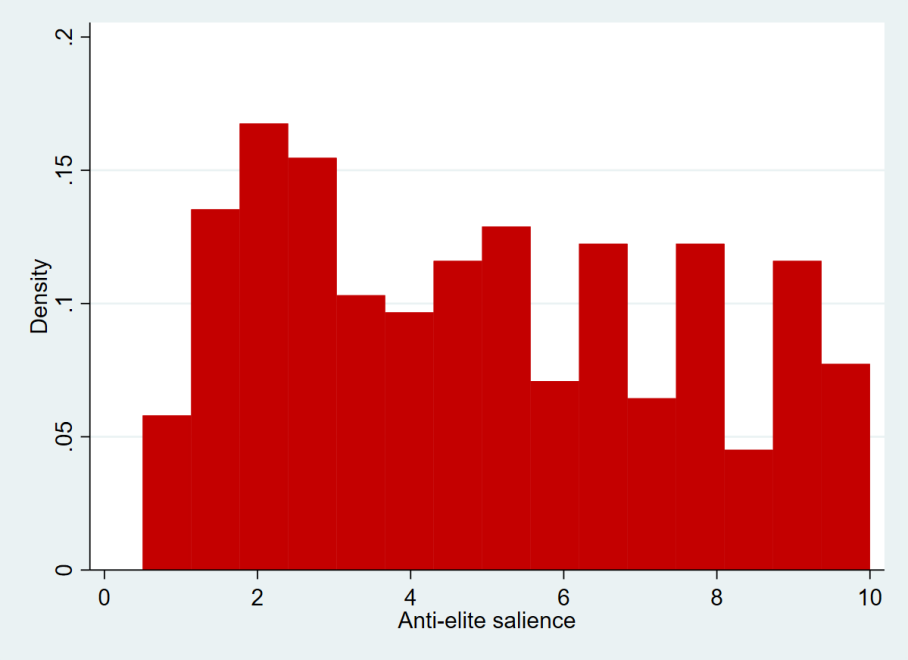
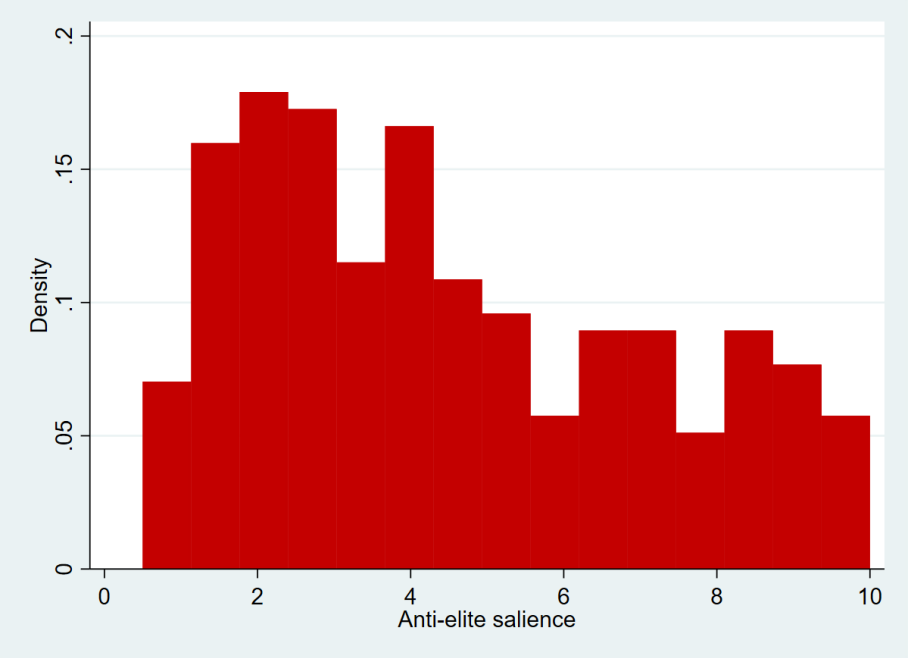
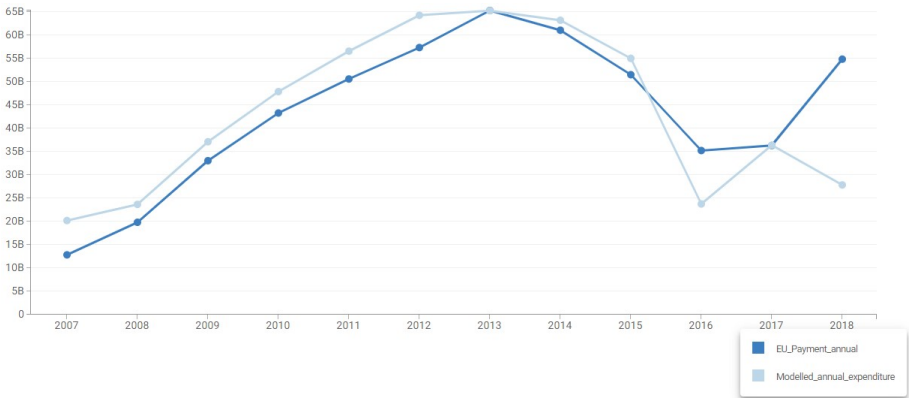


Figure 24: Anti-elite salience in 2019 CHES wave



C Payments

Figure 25: EU payments vs. modelled expenditure



Source: Cohesion Open Data Platform

D Treatment

Figure 26: Treatment status in 2020

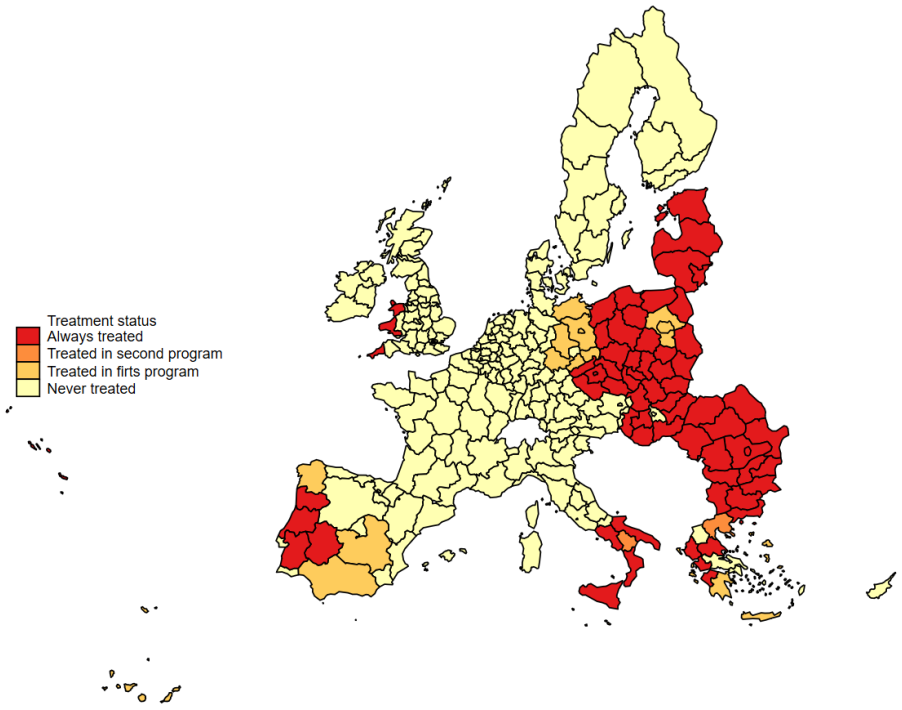


Figure 27: Regions that changed Objective 1 status in 2007-2013 programming period

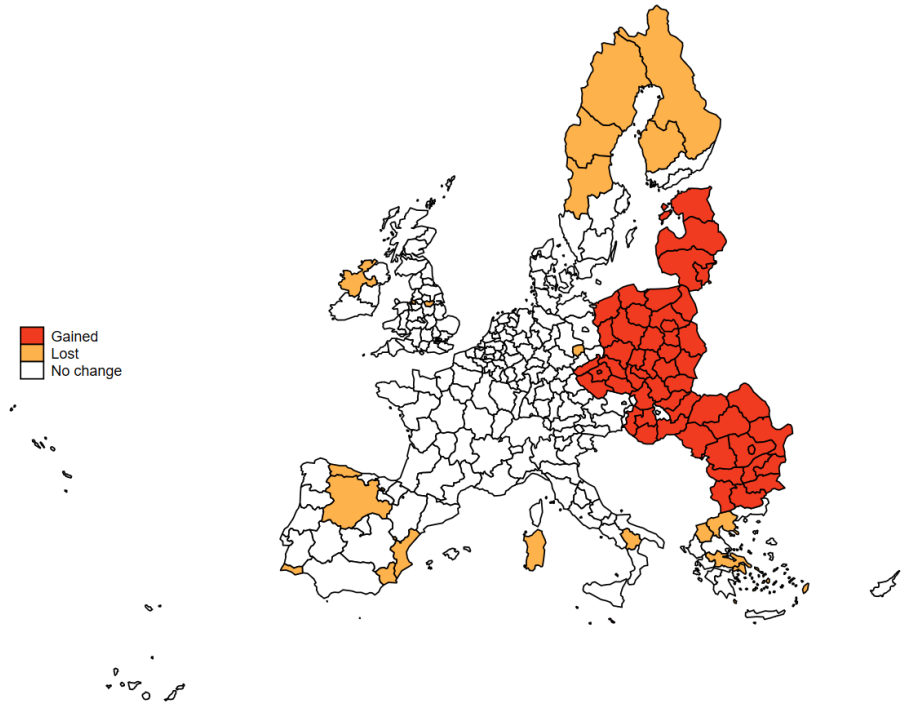
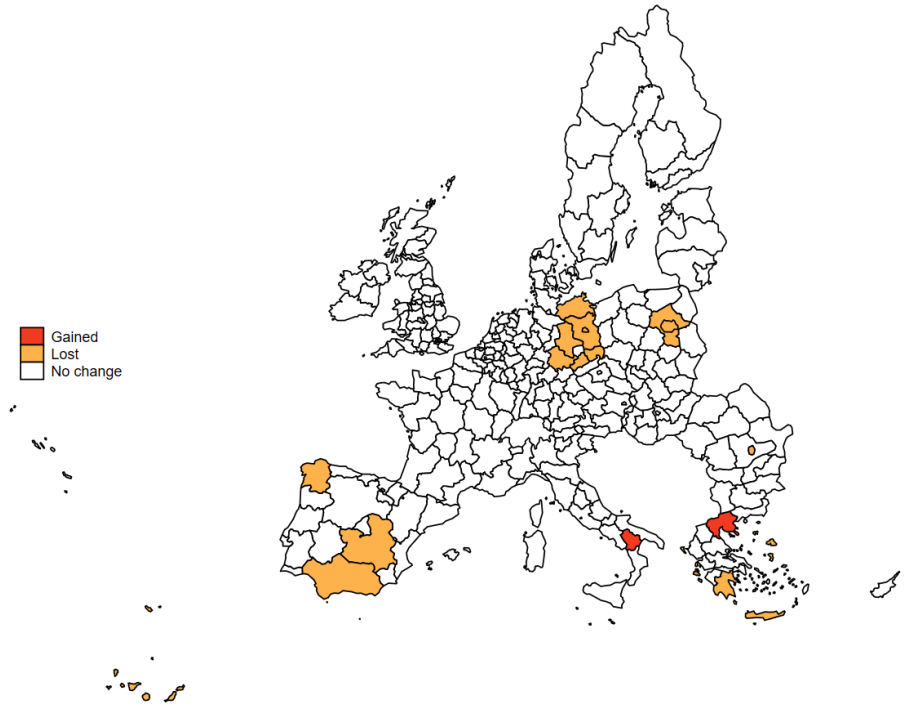
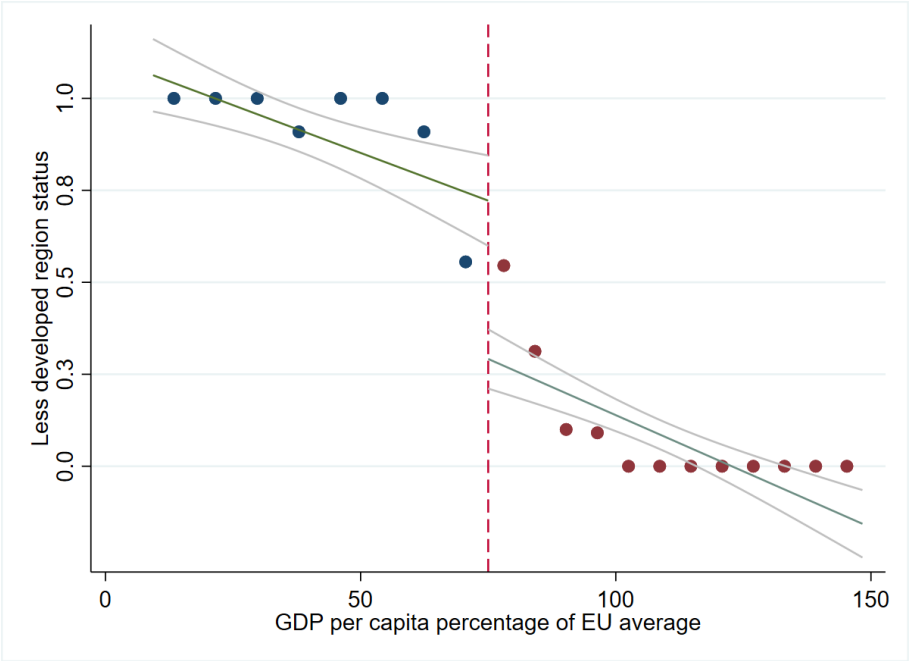


Figure 28: Regions that changed Objective 1 status in 2014-2020 programming period



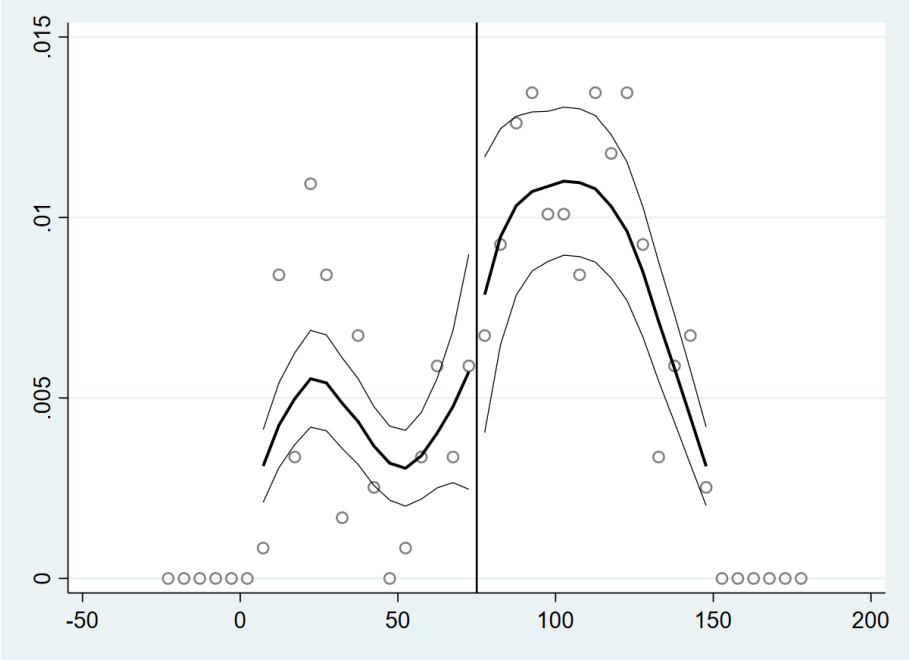
E RDD

Figure 29: Probability of being treated



Notes: Probability of being treated in treated (blue) and untreated (red) regions. The x-axis reports the running variable as calculated by the European Commission in 2006 and 2012. The red dashed vertical line represents 75% of the EU average per capita GDP in PPS as defined by the EU Commission. Grey curves represent the 95% confidence interval.

Figure 30: McCrary test



Notes: The x-axis reports the running variable as calculated by the European Commission in 2006. The y-axis reports the probability density. The vertical line represents 75% of the EU average per capita GDP in PPS as defined by the EU Commission. Density on the vertical axis.

Figure 31: Regions considered in RDD between 2011 and 2013

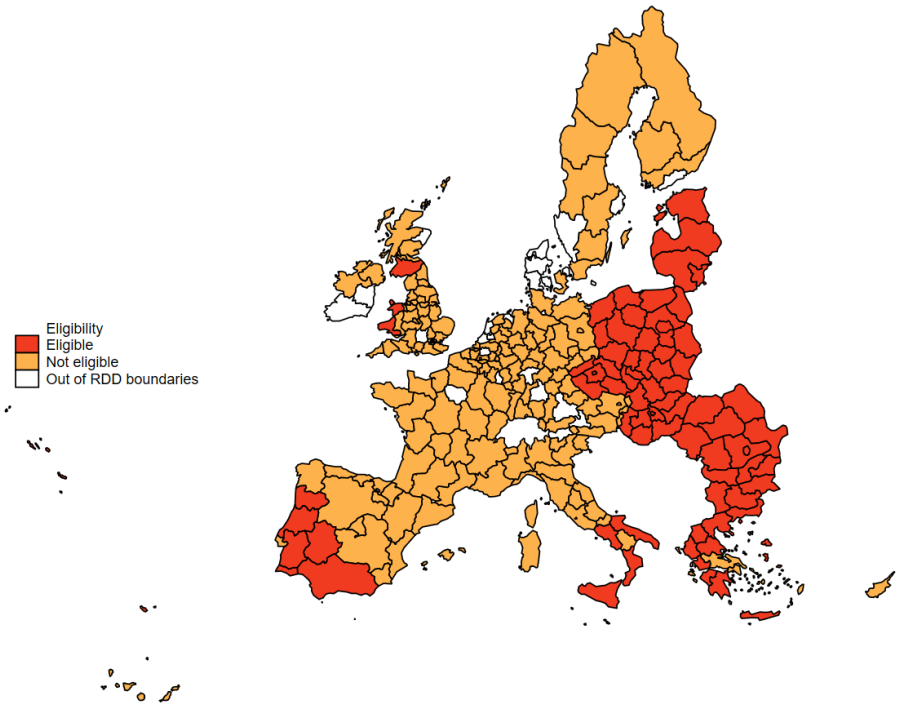


Table 16: Balancing test

	Log density	Young share	Unemployment	Young unemployment	Long unemployment	Motorways per km^2
Obj1	-1.817**	-0.000	-3.635	3.242	-1.286	-0.008
	(0.875)	(0.007)	(2.616)	(6.377)	(1.574)	(0.019)
Observations	237	237	237	235	235	181

	Railways per km^2	Roads per km^2	Doctors	Tertiary education	Immigrants	EQI
Obj1	-0.050	1.762	98.364	-9.676	-0.007	0.799
	(0.064)	(2.821)	(97.232)	(5.949)	(0.012)	(0.751)
Observations	161	181	164	237	188	153

	Employment in:				
	Agricolture	Industry	Construction	Trade	Public administration
Obj1	0.066	-0.017	0.009	0.029	-0.061
	(0.057)	(0.044)	(0.019)	(0.032)	(0.042)
Observations	225	237	237	237	237

Notes: Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure 32: Regions considered in RDD between 2014 and 2020

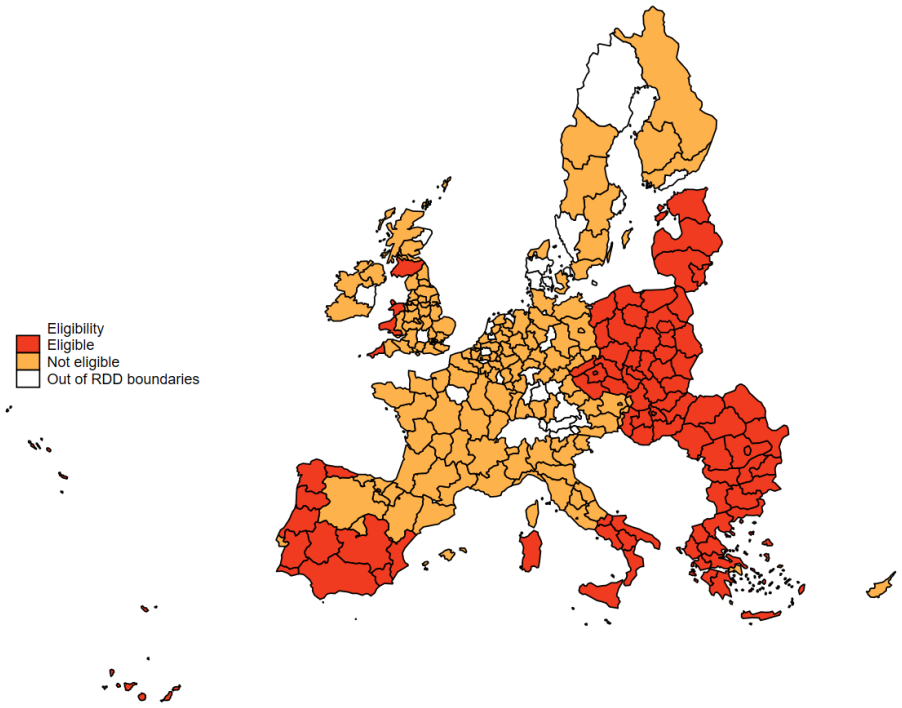
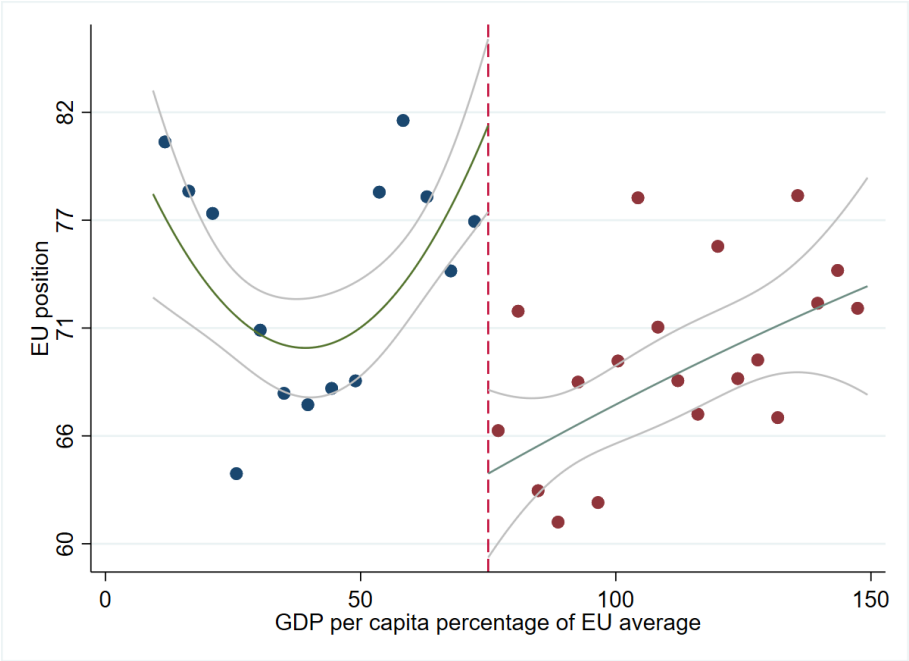
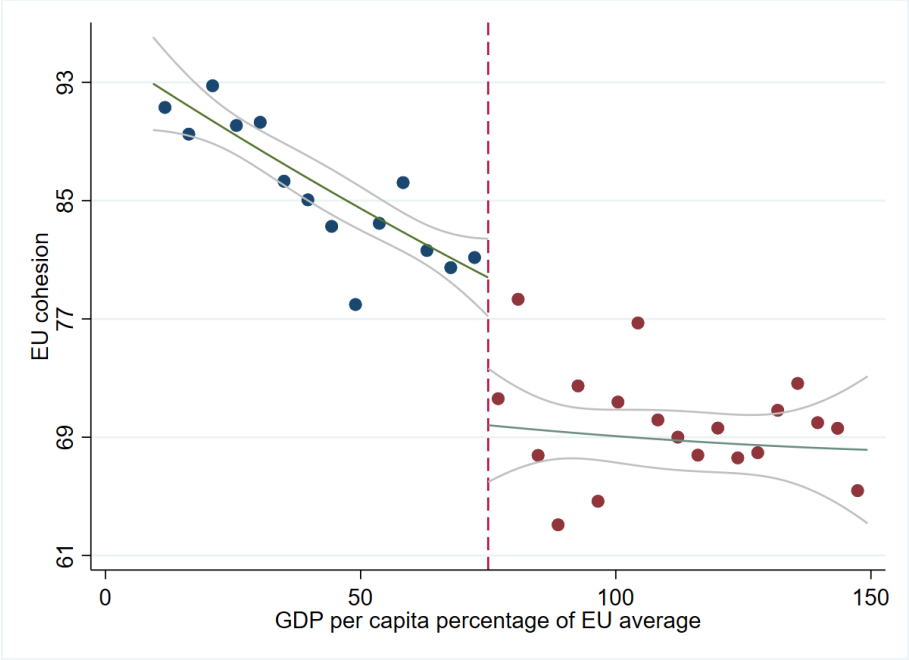


Figure 33: EU position in treated and untreated regions, quadratic fit



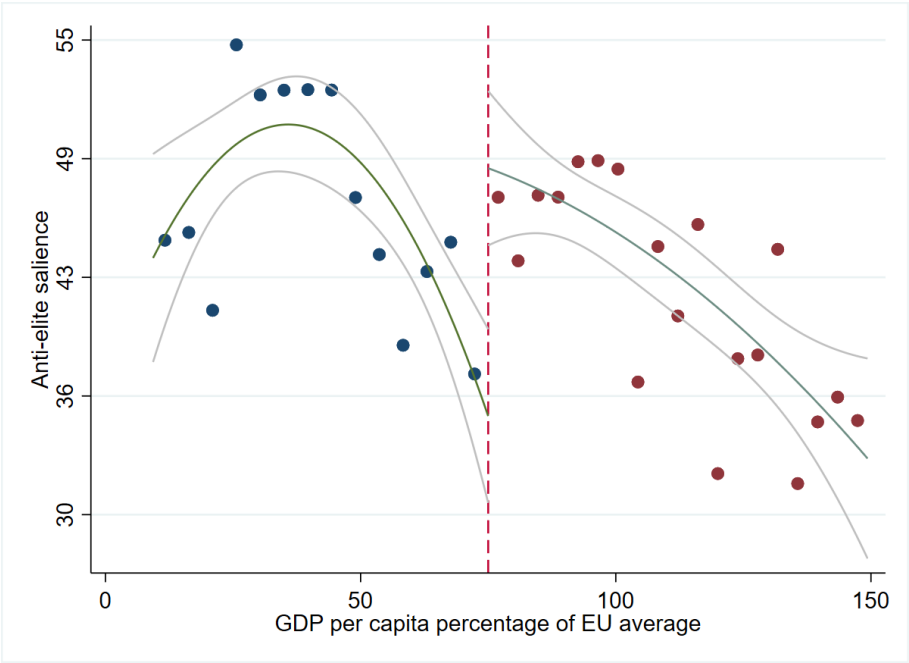
Notes: Averages of EU position score in treated (blue) and untreated (red) regions. The x-axis reports the running variable as calculated by the European Commission in 2006 and 2012. The red dashed vertical line represents 75% of the EU average per capita GDP in PPS as defined by the EU Commission. Grey curves represent the 95% confidence interval.

Figure 34: EU cohesion in treated and untreated regions, quadratic fit



Notes: Averages of EU cohesion score in treated (blue) and untreated (red) regions. The x-axis reports the running variable as calculated by the European Commission in 2006 and 2012. The red dashed vertical line represents 75% of the EU average per capita GDP in PPS as defined by the EU Commission. Grey curves represent the 95% confidence interval.

Figure 35: Anti-elite salience in treated and untreated regions, quadratic fit



Notes: Averages of anti-elite salience score in treated (blue) and untreated (red) regions. The x-axis reports the running variable as calculated by the European Commission in 2006 and 2012. The red dashed vertical line represents 75% of the EU average per capita GDP in PPS as defined by the EU Commission. Grey curves represent the 95% confidence interval.

Table 17: RDD estimation with quadratic polynomial

	EU Position			EU cohesion			Anti-elite salience		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Obj1	34.981***	50.091*	-58.936	28.642***	35.989*	-42.691	-23.496***	-34.944	-34.724
	(10.280)	(27.791)	(90.543)	(8.191)	(20.305)	(78.327)	(8.770)	(22.488)	(85.814)
Observations	617	609	609	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
	EU Position			EU cohesion			Anti-elite salience		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Funds	2.256***	2.595***	45.979	2.069***	2.441***	106.913	-1.531***	-1.834**	-25.453
	(0.472)	(0.838)	(234.439)	(0.403)	(0.688)	(532.448)	(0.435)	(0.780)	(132.639)
Observations	617	609	609	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

Notes: Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 18: RDD estimation with quadratic polynomial and interaction

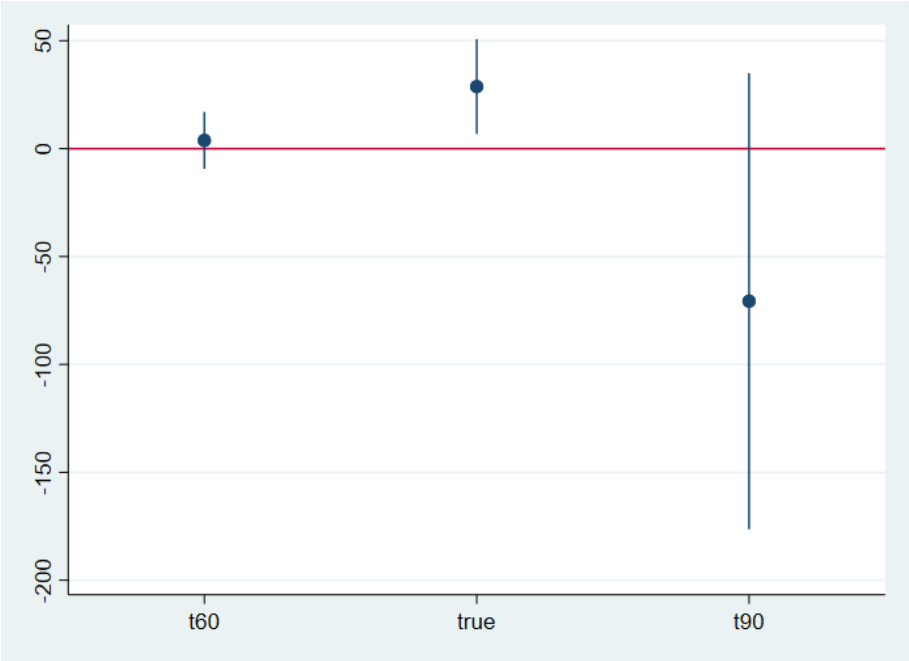
	EU Position			EU cohesion			Anti-elite salience		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Obj1	78.126**	42.259*	-343.516	63.187**	22.072	-324.789	-57.379**	-35.615*	-19.719
	(32.929)	(22.603)	(578.903)	(26.663)	(15.496)	(553.684)	(25.715)	(20.393)	(191.516)
Obj1 × Unemployment	-2.695**	-2.184**	12.812	-2.158**	-1.377**	12.045	2.116**	1.846**	1.194
	(1.286)	(0.943)	(22.447)	(1.032)	(0.647)	(21.454)	(1.002)	(0.838)	(7.435)
Observations	617	609	609	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

	EU Position			EU cohesion			Anti-elite salience		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Funds	6.146***	9.153***	52.274	5.625***	8.614***	76.778	-4.345***	-6.545**	-28.472
	(1.536)	(3.018)	(64.121)	(1.285)	(2.469)	(91.338)	(1.364)	(2.715)	(35.837)
Funds × Unemployment	-0.325***	-0.458***	-2.477	-0.298***	-0.431***	-3.621	0.228***	0.325**	1.351
	(0.091)	(0.156)	(3.017)	(0.079)	(0.132)	(4.301)	(0.075)	(0.135)	(1.685)
Observations	617	609	609	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

Notes: Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

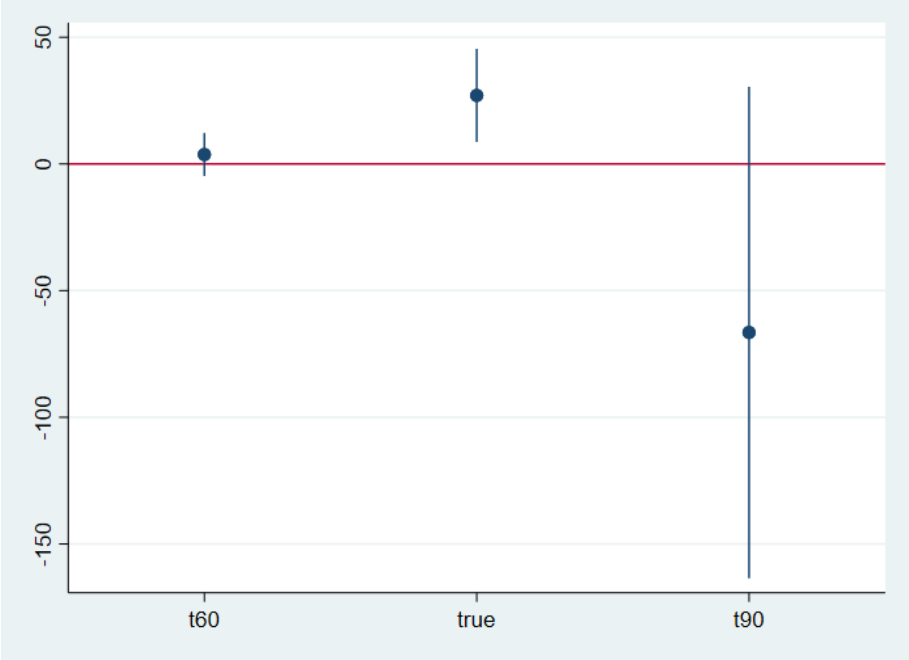
F Robustness tests

Figure 36: EU position placebo estimates



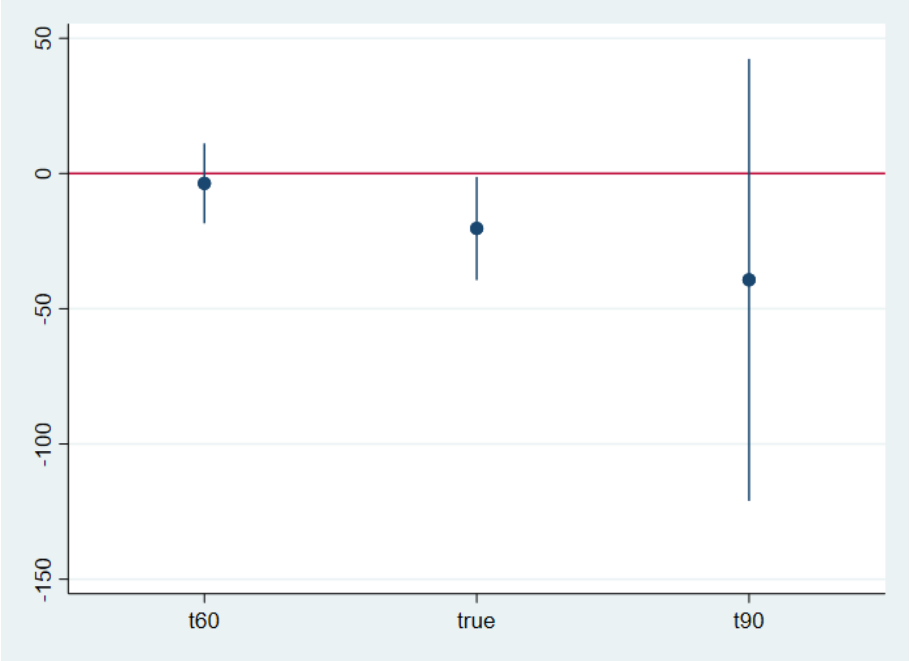
Notes: Confidence intervals at the 95% significance level. EU position score ranges ranges between 0 (anti-EU) and 100 (pro-EU).

Figure 37: EU cohesion placebo estimates



Notes: Confidence intervals at the 95% significance level. EU position score ranges ranges between 0 (against EU cohesion policy) and 100 (pro EU cohesion policy).

Figure 38: Anti-elite salience placebo estimates



Notes: Confidence intervals at the 95% significance level. Anti-elite salience score ranges ranges between 0 and 100 (higher score means higher populism voting).

Table 19: RDD estimates, removing East EU countries

	EU Position			EU cohesion			Anti-elite salience		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Obj1	37.213***	40.390**	17.505**	31.460***	33.878**	13.724**	-25.501***	-23.759	-3.501
	(9.429)	(20.179)	(8.552)	(7.799)	(16.417)	(6.947)	(8.002)	(16.055)	(7.611)
Observations	476	476	476	476	476	476	476	476	476
Interaction	No	No	Yes	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

	EU Position			EU cohesion			Anti-elite salience		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Funds	2.683***	2.793**	0.873*	2.268***	2.306**	0.629	-1.838***	-1.743*	-0.189
	(0.550)	(1.144)	(0.513)	(0.460)	(0.943)	(0.391)	(0.503)	(1.040)	(0.477)
Observations	476	476	476	476	476	476	476	476	476
Interaction	No	No	Yes	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

Notes: Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 20: RDD estimates, dummy parties scores

	Anti-EU			Anti-cohesion			Populist		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Obj1	-4.067***	-5.746**	-2.378**	-3.619***	-3.385*	-1.641	-3.408***	-3.519***	-1.779***
	(1.316)	(2.319)	(1.145)	(1.166)	(1.732)	(1.008)	(0.822)	(1.258)	(0.626)
Observations	617	609	609	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

	Anti-EU			Anti-cohesion			Populist		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Funds	-0.319***	-0.519***	-13.839	-0.284***	-0.306**	-9.547	-0.267***	-0.318***	-10.350
	(0.091)	(0.178)	(70.749)	(0.082)	(0.137)	(47.628)	(0.056)	(0.097)	(52.386)
Observations	617	609	609	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

Notes: Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 21: RDD estimates with unemployment interaction, dummy parties scores

	Anti-EU			Anti-cohesion			Populist		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Obj1	-7.793***	-9.408***	-11.187***	-6.641***	-5.631**	-10.618***	-6.249***	-5.936***	-5.807***
	(2.754)	(3.027)	(2.322)	(2.440)	(2.231)	(2.014)	(1.740)	(1.749)	(1.343)
Obj1 × Unemployment	0.293**	0.468***	0.543***	0.237**	0.321***	0.531***	0.223***	0.283***	0.277***
	(0.119)	(0.139)	(0.108)	(0.098)	(0.098)	(0.087)	(0.075)	(0.079)	(0.062)
Observations	617	609	609	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

	Anti-EU			Anti-cohesion			Populist		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Funds	-0.887***	-1.828***	-11.291	-0.712**	-1.111**	-10.454	-0.761***	-1.145***	-5.935
	(0.332)	(0.674)	(14.233)	(0.294)	(0.452)	(12.365)	(0.203)	(0.371)	(7.417)
Funds × Unemployment	0.034**	0.091***	0.533	0.026**	0.058**	0.495	0.030***	0.056***	0.280
	(0.014)	(0.035)	(0.670)	(0.013)	(0.023)	(0.582)	(0.009)	(0.019)	(0.349)
Observations	617	609	609	617	609	609	617	609	609
Interaction	No	No	Yes	No	No	Yes	No	No	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

Notes: Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.