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Euroscepticism in times of crisis

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Abstract

Euroscepticism has moved from margins to mainstream over the past two decades. Different scholars have studied this phenomenon, however the reasons why the Euroscepticism perspective has been picked up by the general public are complex and not always uniform. This study set out to address the role of the financial crisis in this trend. Interview-data from Eurobarometer and regional data from Eurostat are employed for the analysis. Through an event study and difference in difference model, it is studied whether the post-crisis attitude towards the European Union significantly differs from the pre-crisis trend. Moreover, three potential moderators of this effect are included to the model, being economic prosperity, number of migrants in a region and whether the region received financial support after the crisis. The results indicate no significant change in attitudes associated with the financial crisis. In addition, the first two moderators do not significantly moderate this effect, however support receiving regions are associated with higher levels of Euroscepticism. This implies potential discontent by citizens of the support programs. Whether a causal link between receiving financial support and higher levels of Euroscepticism is recommended for future research.

Contents

1	Introduction	4
2	Conceptual Framework	6
2.1	Euroscepticism: Definition and Structural Trend	6
2.1.1	Definition of Euroscepticism	6
2.1.2	Structural Trend of Euroscepticism	8
2.2	Three main sources of Euroscepticism	9
2.3	Euroscepticism and the financial crisis	10
2.4	Hypothesis construction	12
3	Data & Methodology	13
3.1	Data	13
3.2	Dependent Variable	13
3.2.1	Analysis of the Euroscepticism Trend	14
3.3	Treatment operationalization	16
3.4	Moderators of the treatment effect on EU-attitudes	17
3.4.1	Economic Factor	17
3.4.2	Cultural Factor	18
3.4.3	European Support Factor	18
3.5	Individual control variables	19
3.6	Model Estimation	20
3.6.1	Matching	20
3.6.2	Event study	21
3.6.3	Diff-in-Diff model	21
4	Results	23
4.1	Matching	23
4.2	Event study: analysing the pre-crisis trend	25
4.3	Difference in difference model	26
4.4	Robustness Checks	29
4.4.1	Robustness check of the dependent variable	29
4.4.2	Robustness check of the crisis start timing	30
4.4.3	Robustness check of the regional dimension	30
4.4.4	Robustness check of the crisis timing and regional dimension combined	31
5	Discussion	32
6	Conclusion	34
7	Bibliography	35

8	Appendices	38
8.1	Appendix 1: Descriptive Statistics	38
8.2	Robustness check of the dependent variable	41
8.3	Robustness check of the crisis start timing	44
8.4	Robustness check of the regional dimension	47
8.5	Robustness check of the crisis timing and regional dimension combined . .	50

1 Introduction

Over the past two decades, Euroscepticism has moved from margins to mainstream (Usherwood & Startin, 2013). Critical opinions with regards to the European Union (EU) as an institution and the European integration project have been picked up by the general public. The perspective of Euroscepticism has existed ever since the European Union was established, however the size and scope of this view have grown over time.

The reason more people take this view is not always clear and uniform (Hooghe & Marks, 2007). For some, the economic threats associated with the enlargement of the free market are reasons to be sceptical about this integration project. For others, the perceived loss of one's own identity as a result of growing migration flows is a trigger to be sceptical about the European Union.

A potential additional reason for the rise in Euroscepticism is that Europe has been subject to different crises during the past two decades. The structural trend of increased levels of Euroscepticism is probably shaped and affected by the occurrence of these crises (Kneuer, 2018).

This idea in mind, the central question in this thesis is to investigate how attitudes towards the European Union have changed as a result of the financial crisis. Additionally, it will be studied which sources of Euroscepticism are significant driving factors of this change in attitude. The reason the financial crisis is of interest for this study, is because the European Union played an important role in the aftermath of this crisis, during which several EU-member states experienced sovereign debt problems.

The main research question will contribute to the strand of literature that aims at providing insights on how crises influence the attitudes towards the European Union. The follow up research question will deepen the understanding on the specific sources that are significant drivers of changes in attitudes. Answering these two questions can help in understanding the development of Euroscepticism over time, and subsequently contribute in constructing predictions on how future European crises might shape attitudes. This will be especially relevant for policy-making at the level of the European Union. Examples of policy-making that is served with a deeper understanding of the effect of the crisis on EU-attitudes, is policy regarding financial support programs in the aftermath of a crisis, or more general, policy-making with regards to the integration project itself.

This paper uses a data set consisting of 2005 to 2014 NUTS 2 level regional data from Eurostat and individual interview data of EU-citizens from the Eurobarometer. Through an event study and difference-in-difference modelling, it is investigated whether the financial crisis has significantly changed attitudes towards the European Union. The nature of analysis enables to identify whether a causal linkage exists between a change in EU-attitudes and the financial crisis. No previously conducted research has been able to analyse this, hence this study is leading in this respect.

The main findings are the following. While the analysis provides no proof for any significant causal effect of the financial crisis in the development of attitudes towards the EU, the results do indicate some discontentment by individuals living in regions being

affected by the crisis while receiving support by the EU.

The paper is structured in the following manner. In section 2, a conceptual framework is constructed. Section 3 deals with the methodology. In section 4, the results of the analysis are presented. Section 5 is concerned with discussing the results and providing implications. Lastly, section 6 presents the overall conclusions.

2 Conceptual Framework

Throughout this section, the concept of Euroscepticism and dynamics of this phenomenon are reviewed. Moreover, the already available knowledge concerning the relationship between Euroscepticism and the financial crisis are presented. These different elements form the basis for the empirical analysis. In the last subsection the hypothesis and sub-hypotheses are presented.

2.1 Euroscepticism: Definition and Structural Trend

2.1.1 Definition of Euroscepticism

In the accumulated literature for the purpose of this study, the concept of Euroscepticism is described and defined in various ways. Different types of Euroscepticism are introduced and used for analysing trends, sources and effects. Throughout this section, a clear-cut definition for Euroscepticism is put forward, as well as the specification of which type of Euroscepticism is the subject of analysis for this thesis.

According to the Oxford dictionary, a Eurosceptic is described as “A person who is opposed to increasing powers of the European Union”. The term scepticism is defined as “an attitude of doubt or disposition of disbelief”. Euroscepticism therefore specifically refers to scepticism with regards to the European Integration or Europe as a whole (Hooghe & Marks, 2007). The term first appeared in print in the Economist in 1992, according to the Oxford English Dictionary (Hooghe & Marks, 2007).

The most common definition for Euroscepticism was introduced in 1998 by Taggart. Specifically, party-based Euroscepticism ‘expresses the idea of contingent, or qualified opposition, as well as incorporating outright and unqualified opposition to the process of European integration’ (Taggart, 1998). As mentioned by Flood (2002), the Eurosceptic view should not be confused with reformist positions that are critical on particular aspects of the EU, but are on average sympathetic towards the aims and achievements of integration, hereby accepting the process of further European integration.

In later publications, this conceptualisation of Euroscepticism by Taggart (1998) is further developed in two categories, “soft” and “hard” Euroscepticism (Taggart & Szczerbiak, 2001). The following distinction is denoted: “Hard Euroscepticism implies outright rejection of the entire project of European political and economic integration and opposition to their country joining or remaining members of the EU” (Taggart & Szczerbiak, 2001, p. 9). Alternatively, “soft Euroscepticism involves contingent or qualified opposition to European integration” (Taggart & Szczerbiak, 2001, p. 10).

Of this last category, a conceptual weakness can be indicated, as the term for soft Euroscepticism can be regarded as being too broad (Krouwel & Abts, 2007). An alternative way of viewing Euroscepticism is as one out of four ideal types of support or opposition of the European Union (Kopecký & Mudde, 2002). Two dimensions lead to a matrix of four categories of party positions. These dimensions distinguish between diffuse and specific support for European integration.

Yet, the given two conceptual frameworks for specifying types of Euroscepticism are incomplete, and therefore there is need for another defining framework to paint the bigger picture. These frameworks focus on party position, and therefore do not tap into the diversity of attitudes at the mass level (Krouwel & Abts, 2007). Moreover, it is implicitly assumed that all parties can be classified into one category, which is too strict (Flood, 2009). Underlying motives and reasons to oppose the EU and European integration can differ widely.

The current analysis is especially interested at the mass level attitudes instead of party positioning. Therefore, no distinction will be made between soft or hard Euroscepticism as conceptualised by Taggart and Szczerbiak (2001), as well as the dimensions of support as proposed by Kopecký and Mudde (2002).

Instead, so-called public Euroscepticism will be part of the analysis. This term distinguishes between 'authorities', 'regime' and 'community', and includes two modes of opposition, 'specific' and 'diffuse' (Kopecký & Mudde, 2002; Krouwel & Abts, 2007; Wessels, 2007). Essentially, a distinction lies between mass attitudes on opposition towards the current workings of the EU and mass attitudes towards the European integration project (Serrichio, Tsakatika, & Quaglia, 2013). In this research, the focus is on attitudes towards the current workings of the EU by following Kopecký and Mudde (2002), studying the level of 'diffuse' support.

Two other reasons why a focus on the current workings of the EU is convenient in this study are introduced. First, as pointed out by McLaren (2006, p. 21), mass attitudes towards the European Union and towards the integration project are conceptually distinct but empirically closely connected; she expects that at the mass level, negative attitudes towards the EU partly reflect negative attitudes towards integration efforts. Second, public Euroscepticism towards the current workings or 'regime' undermines support for the integration project generally (Serrichio et al., 2013), and can therefore also be considered a reason why studying attitudes towards the current workings of the EU is already convenient.

Lastly, in some papers a variation is used to describe Euroscepticism in terms of political or instrumental discontentment (Boomgaarden, Schuck, Elenbaas, & De Vreese, 2011; Lubbers & Scheepers, 2010; Taggart & Szczerbiak, 2001). The former indicates the attitudes towards the EU as a political institution, for instance on how the reduction of sovereignty of the nation-state in deciding on certain policy domains is perceived by the public (Lubbers & Scheepers, 2010). The latter aims at describing attitudes towards structural changes as a result of European integration and the European Union. For instance, instrumental Euroscepticism takes into account whether membership of the EU brought benefits or disadvantages at the country-level. Both these classifications of Euroscepticism will be taken into account in the analysis.

In short, public Euroscepticism reflecting mass attitudes towards the European Union, both in terms of political and instrumental discontentment, is of main interest in this analysis.

2.1.2 Structural Trend of Euroscepticism

Euroscepticism is a dynamic phenomenon, and in order to understand the effect of the financial crisis on this trend, it is important to look at existing literature regarding the trend pre-crisis. Therefore, the development and evolution of Euroscepticism is presented here, in order to provide context for the position of the financial crisis in this trend.

According to Flood (2002), the Eurosceptic view has always existed. For instance, states such as Britain, Denmark and Greece have always experienced divided public opinions on the disadvantages or advantages of the membership of the EU and its prosecutors, before as well as after accession (Flood, 2002). Nevertheless, the speech by Margaret Thatcher in 1988 is considered to be a critical point at which Euroscepticism moved from the margins to the mainstream, as she critically addressed the direction of which the integration project was going (Usherwood & Startin, 2013). During the 1990s, the term 'Euroscepticism' started to be deployed by the public, media and politicians in the United Kingdom (Flood, 2002; Usherwood & Startin, 2013).

The Maastricht treaty in 1992 acted as a catalyst as Euroscepticism spread across the EU (Mudde, 2011; Usherwood & Startin, 2013). The treaty is one of the most fundamental bases for the constitution of the European Union, and is considered a pillar for further European integration, beyond goals solely tackling economic matters (Usherwood & Startin, 2013). In return, member states had to renounce several aspects of national sovereignty after the Maastricht Treaty (Hooghe & Marks, 2007), potentially triggering Euroscepticism.

In addition, the Maastricht Treaty can be considered a key turning point as referenda became a more regular event from this point onwards (Usherwood & Startin, 2013; Werts, Scheepers, & Lubbers, 2013). Although referenda have historically been viewed as a means of bringing EU inhabitants closer to the European Union, in reality they have served to further embed Euroscepticism (Usherwood & Startin, 2013). Especially since referendums on different treaties in member states have rejected significant moves forward (Taggart & Szczerbiak, 2002), which can be regarded as a clear indication of rising Euroscepticism and a way for EU-citizens to put the brakes on and potentially derail the integration process (Brack & Startin, 2015; Usherwood & Startin, 2013).

In some strands of literature, this movement of Euroscepticism from margin to mainstream is considered a structural conflict stemming from the liberalisation, unbundling and opening of the nation-state borders (Kneuer, 2018; Kriesi et al., 2006). As argued by Kriesi (2005), this conflict both includes structural components such as economic competition and cultural competition.

However, as argued by Kneuer (2018), Euroscepticism is not just a structural process, but also event driven. In the context of the European Crises of the past decades, Eurosceptic attitudes together with right-wing populism have gained in popularity. Moreover, it is argued that European integration itself has always been contested and shaped by events and crises (Brack & Startin, 2015; Crespy & Verschueren, 2009), thereby affecting Euroscepticism.

2.2 Three main sources of Euroscepticism

One could question where these growing levels over time of sceptical attitudes towards the European Union come from. Different studies have been carried out in order to identify sources of Euroscepticism. In this section, the three main driving factors are presented, being the economic, cultural and political-institutional perceptions. These three sources are used as moderators in studying the effect of the financial crisis in this research.

Initial research focused on cost-benefit analyses or the utilitarian approach in order to explain sources of Euroscepticism. For instance, the evaluation of economic effects and economic performance such as unemployment, inflation and economic growth affect attitudes towards integration (Kneuer, 2018). As argued by Gabel (1998), different attitudes towards European integration arise from differences in personal economic welfare. Support of EU-citizens is positively related to their personal welfare gains from the policy of further European integration. The liberalisation of the European labour market creates economic opportunities for those with relatively high educational levels or for those with skills that are specific and advanced, while for others economic threats arise as a result of the enlargement of free market mechanisms (Gabel, 1998; Gabel & Palmer, 1995). People who are increasingly exposed to foreign competition and experiencing lacking qualifications, higher levels of Eurosceptic attitudes are more likely to occur (Kriesi et al., 2006). These groups were traditionally protected by the nation-state, but due to market liberalisation they experience economic challenges (Kneuer, 2018).

As pointed out by McLaren (2002), the previously mentioned analyses on sources of Euroscepticism miss an essential element, the nature of hospitality towards the idea of European integration. Therefore, it is argued that one should look at one's individual cultural context instead of economically explaining discontent (McLaren, 2002). This is especially valuable if you take into account that the groups that experience economic benefits are often citizens of cosmopolitan areas that blossom due to market liberalisation, open to other cultures and international competition (Kneuer, 2018).

The cultural source of Euroscepticism mainly entails the fear of loss of one's 'own' identity due to the integration (Kneuer, 2018), or a perceived cultural threat by other cultures (McLaren, 2002). An important reason for Euroscepticism arises from identity politics (Taggart, 1998). Identity politics describe the importance of inhabitants to identify themselves with their own country, since they see their nationality as point of reference for their own identity (Fukuyama, 2018; Taggart, 1998). In the same line of thought, Euroscepticism is found to be more present when there is a lack of European identity (Wessels, 2007).

As a result, the European integration project and therefore the free flow of people causes some people to grasp on to national culture as a reaction to the settlement of ethnic minorities (Hooghe & Marks, 2007). Moreover, exclusive national identities are more likely to stimulate Eurosceptic attitudes (McLaren, 2002). In addition, as researched by Hainmueller and Hopkins (2014), attitudes towards immigration are mainly shaped by concerns about cultural impacts on the country-level.

Another main source of Euroscepticism next to economic and cultural perceptions,

is the political-institutional aspect of European integration (McLaren, 2002). As theoretically explained by Krouwel and Abts (2007), political scepticism and distrust can be main sources of scepticism towards the European Union as political entity. However, this distrust is often rooted in broader political discontent (Hooghe & Marks, 2007; Krouwel & Abts, 2007), hence the often found link between populism and European discontent (Kneuer, 2018). Moreover, it is found that those distrustful respondents are likely to prefer the one they know best, which is the national government (McLaren, 2002). Moreover, EU-funding as institutional instrument is stated to act as a source, where positive attitudes towards the EU are positively associated with received EU-funds (Carrubba, 1997).

As mentioned by different scholars, these three main drivers for Euroscepticism are not mutually exclusive, and are therefore both included separately and as combination in the upcoming analysis. It cannot be stated that exclusive nationalists, economic losers and distrusting are one and the same (Hooghe & Marks, 2007). The complexity of Euroscepticism causality is not solved yet, and is highly influenced by media framing and coverage (Lubbers & Scheepers, 2010; Usherwood & Startin, 2013). On top of this, research on the different degrees in Euroscepticism among member states and candidate states shows that membership longevity is a significant explanation as well (Kopecký & Mudde, 2002; Taggart & Szczerbiak, 2001).

2.3 Euroscepticism and the financial crisis

As mentioned at the end of the Subsection 2.1.2, Euroscepticism should not be considered as an increasing structural trend only, but is affected and shaped by crises and events (Kneuer, 2018) directly, and indirectly as the integration project itself is affected and shaped by crises and events (Brack & Startin, 2015; Crespy & Verschueren, 2009). Different researchers have already investigated the relationship between attitudes towards the European Union and some prominent crises in the past two decades. An overview of this research is offered now.

The financial crisis, starting in 2008, has evolved into a European sovereign debt crisis in 2010, in which the European Union and European Central Bank (ECB), together with the International Monetary Fund (IMF) had to provide help to those countries facing high government deficits in order to prevent a financial bailout (Hobolt & De Vries, 2016). The debtor countries, for instance Greece, Cyprus, Portugal and Spain, had to engage in structural reforms and significant retrenchment to prevent this from happening again. Moreover, this crisis has caused falling growth rates and high unemployment rates across the continent, and for some countries these unemployment rates reached pre-war levels (Hobolt & De Vries, 2016; Serrichio et al., 2013).

By investigating the effects of the financial crisis on the levels of Euroscepticism, Hobolt and De Vries (2016) look at Eurosceptic votes during the European Parliament Elections. They find that the amount of Eurosceptic votes has increased. As argued by Hobolt and De Vries (2016), this can be explained in two ways. Direct effects from the economic situation form a source of increasing Euroscepticism, and indirect effects from the perception

regarding the EU's involvement in the crisis, as people are sceptical towards the way the European institutions have operated during the financial crisis (Hobolt & De Vries, 2016).

The change in Eurosceptic attitudes is not uniform across all countries, as demonstrated by Serrichio et al. (2013). Through the estimation of two logistic regression models clustered per country, one in 2007 pre-crisis and one in 2010, Serrichio et al. (2013) aim at looking which sources of Euroscepticism have the highest explanatory power in explaining changes in attitudes towards the EU. It demonstrates that those countries that have been hardest hit by the crisis are the ones that have the most significant rise in Euroscepticism as well (Serrichio et al., 2013). However, it is also shown by Serrichio et al. (2013) that the economic factor is not the most important source for this increasing Euroscepticism. Meanwhile, national identity and political institutions have been found to play an increasingly important role in explaining public Euroscepticism. In addition, the crisis seems to have enhanced the role of mass confidence in national institutions and identity (Serrichio et al., 2013).

The changing attitudes towards the European Union can be divided into the two stages of the crisis. During the initial banking crisis, solutions were mainly looked for at the national level, creating a significant role for national institutions to rescue banks from going bankrupt. Therefore, during this period, confidence in national institutions is an important factor for the degree of Euroscepticism (Serrichio et al., 2013; Usherwood & Startin, 2013). During the subsequent eurozone crisis or sovereign debt crisis however, EU institutions became more involved. New institutions were created for that purpose as well. Therefore, confidence in EU institutions became more important in order to account for the Euroscepticism trend (Serrichio et al., 2013).

As mentioned by Usherwood and Startin (2013), the role of the EU during the sovereign debt crisis could indeed be a significant explanation for increasing Euroscepticism. They state that "the seeming inability of European Council meetings to produce comprehensive solutions to the eurozone crisis have all propelled the EU into an unprecedented phase of uncertainty, contributing to deeper and more embedded Euroscepticism with the potential to cause irreparable damage to the EU's quest for legitimacy and stability" (Usherwood & Startin, 2013, p. 2). Furthermore, the European Council, which took most initiative during the crisis, is made up of heads of government that should represent their respective national interests in Brussels, however there exists a bridge between the political debate nationally and the important decisions taken in Brussels (Grozelier et al., 2013). This creates space for negative perception by EU-citizens, as there exists a gap between their personal opinion and policies adopted.

To conclude, Hobolt and De Vries (2016) and Serrichio et al. (2013) are not able to demonstrate any causal linkages between the financial crisis and changes in attitudes, due to the nature of their analyses. The modelling in the current research allows for investigating causality, building upon the findings of the previously performed research.

2.4 Hypothesis construction

All previously mentioned literature have led to the following proposition of hypothesis and sub-hypotheses. As argued before, the financial crisis is expected to have had a negative influence on attitudes towards the European Union.

As explained in Subsection 2.2 there are three different sources of Euroscepticism, therefore three sub-hypotheses are proposed. The economic source of Euroscepticism will be measured by the economic context of an individual, where economic prosperity is expected to positively affect attitudes towards the EU.

In addition, the cultural source is arguably affecting any change in attitudes towards the European Union as well, as a result of the financial crisis. Individuals living in regions where there are relatively high rates in yearly migration, are expected to perceive more of a loss with respect to one's 'own' identity, and therefore probably have a negative attitude towards the European Union.

The last source of Euroscepticism introduced in Subsection 2.2 relates to the political-institutional aspect of the European union. In order to measure this source, regional support in terms of EU-funding is added to the model. Individuals living in regions that received support as a result of the financial crisis and European sovereign debt crisis are assumed to be more supportive and positive about the European Union.

Hypothesis 1: The financial crisis has had an influence on the trend of negative attitudes towards the European Union.

- 1a *This effect is moderated by regional economic prosperity.*
- 1b *This effect is moderated by the regional migration rate.*
- 1c *This effect is moderated by the regional support in terms of EU-funds.*

The following section presents the operationalization of these hypotheses and an explanation of the performed analysis in order to test the validation of these hypotheses.

3 Data & Methodology

3.1 Data

Two different data sources are combined in order to create a data set appropriate for analysis. First, interview-data from Eurobarometer ranging from 2005 to 2014 will account for the attitudes of EU citizens towards the European Union, as well as control variables at the individual level, such as demographics. This dataset also includes information on where the interviewee lives, reported at the NUTS 2 level. Second, data from Eurostat at the NUTS 2 level for the years 2005 - 2014 for several regional characteristics are added.

The master data set consists data on multiple levels, as it has an individual component, information at the regional level (115 regions) and country level (21 European countries). Most of the regional level data is at the NUTS 2 level, however in the Eurobarometer, a few countries are denoted at the NUTS 1 level. These countries are Germany, the United Kingdom and Italy.

The descriptive statistics of the data set can be found in Appendix 8.1. An overview of the variable labels and the correlation matrix can be found there as well.

3.2 Dependent Variable

The dependent variable in the analysis is the attitude of an individual with respect to the European Union, in a certain NUTS 2 region in a specific year. This attitude will be based on a mix of different questions in the Eurobarometer interview data. The questions in Table (1) are used for the construction of this index. These questions were selected from the Eurobarometer interview question set, as they measure in slightly different ways the same concept, namely the attitude of the respondent towards the European Union in terms of trust, attachment and perceived advantages from EU-membership, and whether the membership is believed to be beneficial for the country.

Variables	Question description in Eurobarometer
EU1	EU membership - Good / Bad
EU2	EU membership - Country benefit
EU3	Trust in institutions: EU
EU4	EU image - Positive / Negative

Table 1: Overview of questions for Index-construction

The index (1) is based on a score, averaged by the different answers a respondent gave to each question. The minimum (or “most Eurosceptic” attitude) can theoretically be “-2”, and the maximum (or “most Euro-optimistic”) can theoretically be “+2” in this method.

$$EUindex_{i,r,t} = \frac{EU1_{i,r,t} + EU2_{i,r,t} + EU3_{i,r,t} + EU4_{i,r,t}}{4} \quad (1)$$

Note that the index will have three dimensions, being the respondent i in region r in year t . All observations with a missing component for the EU-index value (or in other

words, no values for any EU1 to EU4) are dropped. This leaves the data set with 147,322 observations.

The EU-index is further classified into a dummy-variable *EU-dummy*. The calculation method is based on the EU-index. However, a more radical approach is taken here, following the methodology of Sola (2018). The EU-index had a range of attitudes from “-2” to “2”, where “-2” represent a very negative attitude or Eurosceptic attitude, and “2” indicates the respondent being positive or Euro-optimistic. The scores of the index are transformed into a binary variable, where the respondent can be assigned a “0” for an on average negative attitude, and “1” for an on average positive attitude. The resulting EU-dummy can be used for robustness tests.

The summary statistics of the four variable components and the eventual index and dummy are presented below in Table (2). Notice that the mean of *EU_index* is positive, which means that on average, people within the sample are positive about the European Union. As the current research is looking for the trend of attitudes, no conclusions can be drawn from these sample means.

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) max
EU_index	147,322	0.317	0.734	-1.250	1.250
EU_dummy	147,322	0.683	0.465	0	1
EU1	147,322	0.324	0.859	-1	1
EU2	147,322	0.352	0.936	-1	1
EU3	147,322	0.211	0.977	-1	1
EU4	147,322	0.380	0.953	-2	2

Table 2: Descriptive statistics of Dependent Variable

3.2.1 Analysis of the Euroscepticism Trend

The trend of Euroscepticism throughout time is investigated with this data set. The literature states that Euroscepticism has grown over time, and therefore it is important to check whether this specific data set shows the same pattern. Then, it is possible to investigate whether the financial crisis has influenced this trend. The two graphs presented below are based on 247,695 observations in the initial data set, before matching.

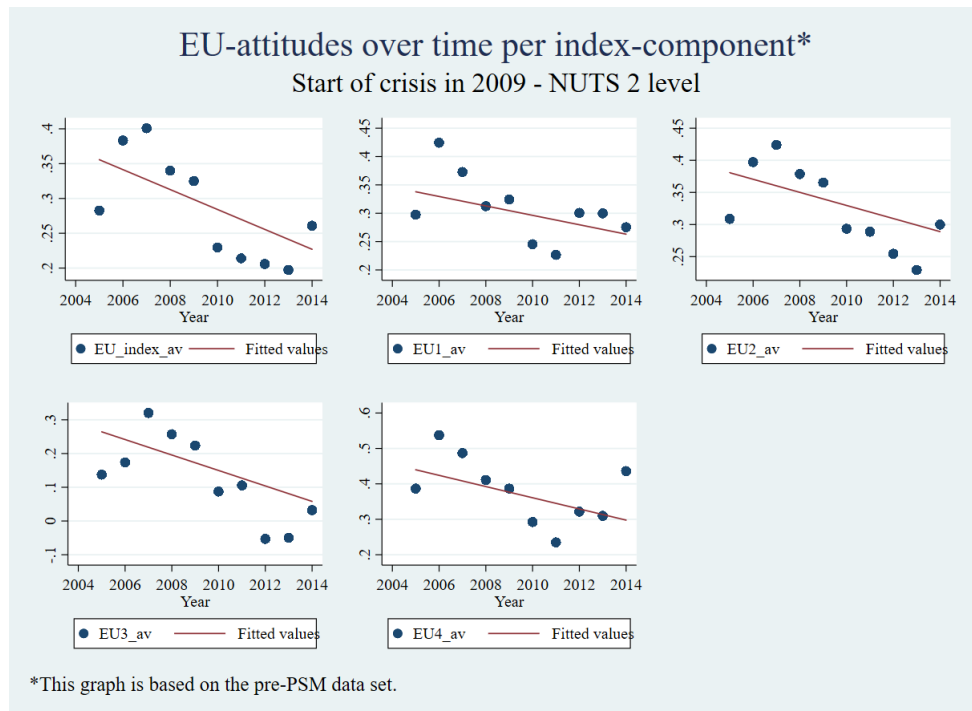


Figure 1: Scatter Plots of all EU-index components

As depicted in Figure (1), it becomes visual that for every component of the construction of EU-index, a negative trend exists. Moreover, the overall EU-index for attitudes towards the EU shows a negative pattern over time. However, these scatter plots are based on the yearly average of each different attitude question, hence it is possible that the trend of Euroscepticism varies across countries.

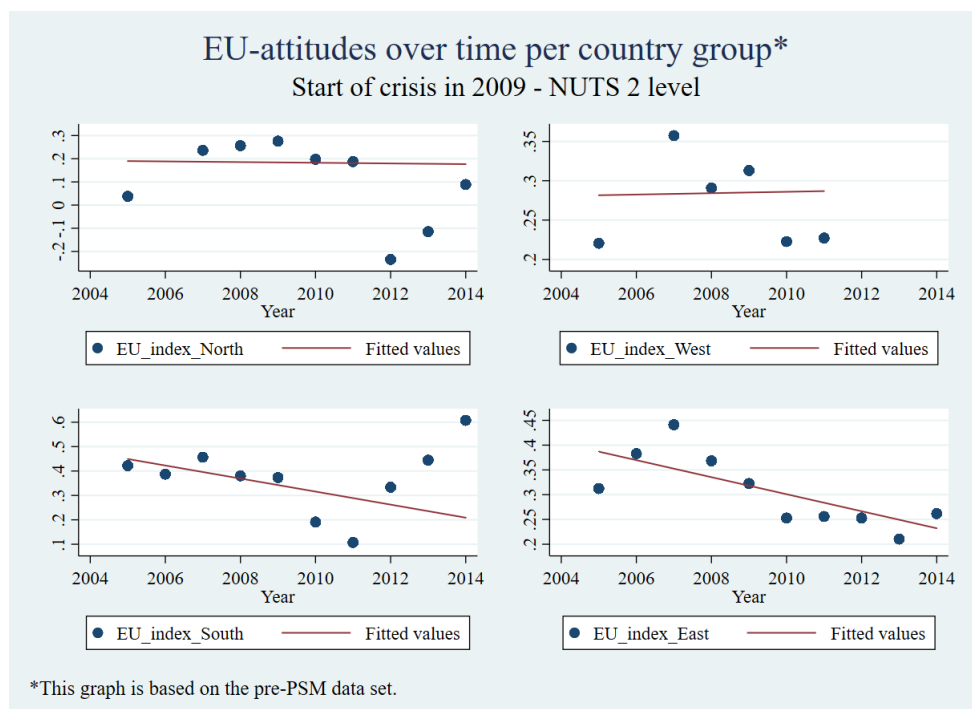


Figure 2: Scatter Plots of EU-attitude over time per country set

This Figure (2) shows that attitudes towards the European Union, and the trend over time, differ per region. All countries in the sample are merged into four different EU-regions: the northern countries, western Europe, southern countries and the eastern countries. It can cautiously be stated that on average, the eastern and southern groups of countries tend to become more Euro-sceptical over time, compared to the northern and western countries. However, it can also be observed from these graphs that the southern countries experience an increase in attitudes towards the European union in the aftermath of the crisis. Therefore, the proposed fitted value trend line should be interpreted with caution.

3.3 Treatment operationalization

In this subsection, the treatment operationalization for the financial crisis will be explained. To estimate whether the event, in this research being the financial crisis, has had a significant effect on the trend in attitudes on the European Union, an event study and difference in difference (diff-in-diff) method are used. To be able to use a diff-in-diff model, three components are important.

First, the start of the crisis and following years should be highlighted in the data. Hence, a variable indicating the timing of the financial crisis is added to the data set. This variable *FC* is valued “1” if the year of observation is 2009 or afterwards, and “0” otherwise.

Second, a group of observations should be labelled as being affected by the financial crisis, opposed to a group that will function as control, or in other words, not influenced by the financial crisis. Therefore, it must be decided which interviewees are affected by the financial crisis. Since all EU-citizens are arguably affected by the financial crisis by at least some extent, it will be determined which respondents were above average affected by the crisis, compared to their fellow EU-citizens.

An appropriate variable for determining above-average crisis-impact for individuals could be the change in unemployment rate of the NUTS 2 region in crisis-times, and check whether this changing rate is above or below the average national change in unemployment rate in the starting year 2009 with respect to the previous year 2008. Hence, a dummy variable *Treated* is created to assign a value of “1” if the region shows an above national average change in the unemployment rate during the start of the crisis. This method generates a set of regions that are on average more affected by the start of the crisis, than all other regions in the sample. These regions are labelled as being “treated” across all years. Within the data, 61 (out of 115) regions are labelled as being “treated” by the financial crisis. The descriptive statistics of *Treated* and *FC* can be found in Table (3) below.

	(1)	(2)	(3)	(4)	(5)
VARIABLES	N	mean	sd	min	max
Treated	147,322	0.465	0.499	0	1
FC	147,322	0.477	0.499	0	1

Table 3: Descriptive statistics of Treatment

Last, an interaction term between the first two components will contain of all individuals being affected by the financial crisis during the time period of the financial crisis. This will be the diff-in-diff estimator. This diff-in-diff estimator is constructed by interacting *FC* and *Treated*, named *int_Treated*. This variable indicates whether respondents are above average affected by the financial crisis, as well as interviewed during the beginning or course of the event, being 2009 onwards. If this is the case, the variable will have the value of “1”, and “0” otherwise. We assume that if an individual is labelled “1” for this variable, this individual is “treated” or in this specific case, overexposed to the financial crisis.

3.4 Moderators of the treatment effect on EU-attitudes

As introduced in section 2.4, three underlying factors are expected to moderate the attitudes towards the European Union. Throughout this section, it is explained how these sources of Euroscepticism are included into the model.

3.4.1 Economic Factor

It is hypothesized that individuals experiencing more economic prosperity, are likely to be more positive towards the European Union, as they for themselves do not necessarily experience disadvantages of their country being a member of the European Union, or perhaps they even benefit from the membership and integration project directly.

To operationalize this idea, a measure for economic prosperity is created. The idea is somewhat similar to the way “overexposure” of the financial crisis is calculated. A dummy variable is created, *RichRegion*, where the value of “1” is assigned to those regions that have a higher Gross Regional Product (GRP) per capita compared to the yearly average within the sample. Thus, those regions that are relatively rich compared to the remaining regions are labelled.

In order to test whether the attitudes towards the European Union is moderated by this variable *RichRegion*, an interaction term between the diff-in-diff estimator *int_Treated* and *RichRegion* is generated. An interaction term allows to check whether the overexposure of the financial crisis is conditional on other variables. In this case, a positive sign is expected, as those individuals that are “treated” by the financial crisis living in relatively rich regions are expected to be more positive towards the European Union, compared to those individuals that do not live in “treated” and relatively prosperous regions.

3.4.2 Cultural Factor

Sometimes, Euroscepticism originates from (the perception of) cultural threats, as explained in Section 2.2. The second sub-hypothesis therefore states that the attitude towards the European Union in the light of the financial crisis is affected culturally. To somewhat objectify this feeling of loss of one's own identity, regional yearly migration rates are used to measure relative "overexposure" to other cultures. It is implicitly assumed that those regions with higher migration rates, will generate more threats towards one's personal or national identity.

The dummy variable *MigrationRegion*, which is constructed in the same manner as *RichRegion*. It will assign a "1" to those regions that have a higher migration rate relative to the yearly average migration rate within the sample, and a "0" otherwise.

Subsequently, an interaction term between *int_Treated* and *MigrationRegion* is generated. The estimated beta-coefficient of this term reveals whether individuals living in regions with higher than average migration rates and simultaneously living in regions that are "overexposed" to the financial crisis indeed are more Eurosceptic, compared to individuals that live in regions that are affected by the crisis, but have lower than average migration rates.

3.4.3 European Support Factor

The last factor that is expected to influence attitudes towards the European Union, involves European support. It is expected that individuals living in countries that have received European funding as a result of the financial crisis and sovereign debt crisis, are more positive about the European Union as institution.

To test for this mechanism, a dummy variable called *EU_support* is created, where all countries that have received from the European Union are valued as "1" and "0" otherwise. Funding and loans from the European Financial Stability Facility (EFSF), European Stability Mechanism (ESM), European Financial Stabilisation Mechanism (EFSM) or European Central Bank (ECB) are taken into account here. As a result, Greece, Portugal, Ireland, Spain and Cyprus are highlighted in the data as support-receivers.

Thereafter, to empirically test whether individuals living in support-receiving countries are more positive towards the EU, an interaction term between *int_Treated* and *EU_support* is constructed. It is expected that individuals being "overexposed" to the financial crisis living in a support-receiving country are more positive, compared to citizens living in "overexposed" regions that did not receive any financial support from the European Union.

The descriptive statistics of these variables and interaction terms with the diff-in-diff estimator are presented below in Table (4).

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) max
RichRegion	147,322	0.347	0.476	0	1
MigrationRegion	147,322	0.393	0.489	0	1
EU_support	147,322	0.132	0.338	0	1

Table 4: Descriptive statistics of Moderator Variables

3.5 Individual control variables

Due to the nature of the model, as will be specified in the next section, control variables that are added to the model are individual characteristics only. In line with Gabel (1998) and de Vreese and Boomgaarden (2005), the following controls are included in the model. The descriptive statistics of all control variables are available in Appendix 8.1.

First, some demographic characteristics are included. *Gender* is added, and it is expected that men are more positive about the European Union than women respectively. *Age* is controlled for, and the expected mechanism to observe is that older people are more Eurosceptic. The variable *Education* consists of four groups, where the higher the group, the higher the level of education of the respondent. It is expected that higher educated individuals are more positive about the European Union. A variable indicating whether the individual occupies a job as a manager or executive is included in the model. It is expected that these individuals have a more positive attitude towards the European Union.

Moreover, two dummy variables, *mig1_dummy* and *mig2_dummy* are added to the model, to control for attitudes towards migration. *mig1_dummy* controls for fear of loss of identity is added, and expected to negatively influence attitudes, if the individual is afraid of identity loss. *mig2_dummy* controls for whether the individual is attached to his or her own country, and it is expected that those individuals that are attached, are less positive about the European Union.

In addition, two control variables, named *pol1_dummy* and *pol2_dummy*, measuring attitudes towards the incumbent government and general political interest will both positively influence attitudes towards the European Union. If the individual is positive about it's own national government and has a high political interest, the individual is expected to be more positive towards the European Union.

Lastly, two dummy variables are added, where respondents that have a right ideology or left ideology are highlighted. These variables are based on the Eurobarometer question related to Left/Right placement, and individuals placed in boxes 1, 2 and 3 are assigned a "1" for the dummy *Left_ideology*, where individuals placed in boxes 8, 9 and 10 are assigned a "1" for the dummy *Right_ideology*. As hypothesized by Gabel (1998), individuals on the left are more Eurosceptic than those on the right, as they perceive European integration as a manifestation of capital forces. Consequently, individuals on the right of the ideological axis are expected to be more positive.

3.6 Model Estimation

This research focuses on investigating a potential significant change in trend of EU attitudes following the financial crisis. Hence two different analyses are executed, being an event study and diff-in-diff model. However, in order to make sure that the regions being "treated" are comparable in regional characteristics to the control regions, first a propensity score matching (PSM) test is performed. Throughout this subsection, each component of the analysis is explained and the estimated models with all their specifications are provided.

3.6.1 Matching

PSM is a statistical tool used in event studies and diff-in-diff modelling. It is used for identifying pre-treatment observable differences between regions that are affected by the financial crisis, compared to those regions that are not affected by the crisis. Through the calculation of propensity scores or "conditional treatment probabilities", by estimating a logit model, it considers covariates that predict or influence being affected by the crisis. Afterwards, based on these scores, it drops control regions that are not comparable to the "treated" regions. The following model (2) is estimated. This is a logit model with *Treated* as dependent binary variable. Wage, population density and tertiary education are expected to affect the likelihood of being affected by the crisis, without being perfectly co-linear to the three moderator-operationalizations.

Moreover, the estimated logit model will have two additional specification. Common support is included, which imposes dropping treatment observations whose pscore is less than the minimum pscore of the controls, or higher than the maximum pscore of the controls. Furthermore, the five nearest neighbors are calculated in the model, instead of just one neighbor. These two settings help in avoiding that too many regions are dropped from the sample.

$$Treated_{r,t} = \beta_0 + \beta_1 average_wage_{r,t} + \beta_2 average_population_density_{r,t} + \beta_3 average_tertiary_education_{r,t} + \epsilon_{r,t} \quad (2)$$

Ideally, other covariates such as crime rates, risk of poverty rates, innovation rates would be included to this model as well, however the data sets from Eurostat were too incomplete to use. Therefore, only wage, population density and tertiary education are considered. The three included independent variables are average values of the years pre-crisis, being 2005 to 2008. Only the years pre-crisis are included, as these covariates have influenced the chance of being affected by the financial crisis in the following year. The PSM-analysis results in a set of regions that are matched and therefore comparable to each other. With this sample, it is possible to perform the event study and diff-in-diff analysis.

3.6.2 Event study

With the matched sample, an event study based on yearly dummy variables interacted with the variable *Treated* provides insights in whether the attitudes towards the EU have significantly changed throughout time. The following model is estimated. This model (3) shows whether the attitudes have changed over time, as a result of the financial crisis. The variable *D_Year* is the yearly dummy variable, interacted with *Treated*.

If the financial crisis has been a significant event in the trend of EU-attitudes, the estimated β_t 's will be significantly different from the baseline, which is the year 2005.

$$EUindex_{i,r,t} = \beta_0 + \beta_1 Treated_{r,t} + \beta_t Treated * D_year_{r,t} + Controls_i + YearFE_t + RegionalFE_r + \epsilon_{i,r,t} \quad (3)$$

As can be seen in equation (3), the individual controls as explained before are included. This accounts for individual characteristics affecting attitudes towards the EU. Furthermore, year fixed effects and regional fixed effects are incorporated. Variation over time as well as regional specific variation that is not picked up by the other independent variables are accounted for in this manner. Lastly, the observations are clustered per NUTS 2 region, to tackle potential heteroskedasticity.

3.6.3 Diff-in-Diff model

Subsequently, a diff-in-diff model is constructed. This method is useful, as it will calculate whether changes over time in EU-attitudes are associated with the financial crisis and the proposed moderators, apart from any structural trends in EU-attitudes. Specifically, it reveals whether a causal link exists between the financial crisis, and a change in attitudes towards the EU from the start of the crisis onwards. Four different models are constructed. The first model only accounts for the effect of the financial crisis itself, where the remaining four models include the three moderators separately and combined, to see whether the effect of the financial crisis is moderated by these three main sources of Euroscepticism. To start, the following model will be estimated.

$$EUindex_{i,r,t} = \beta_0 + \beta_1 FC_t + \beta_2 Treated_{r,t} + \beta_3 int_Treated_{r,t} + Controls_i + YearFE_t + RegionalFE_r + \epsilon_{i,r,t} \quad (4)$$

This model (4) includes all three components as explained in Subsection 3.3. The individual controls are added as explained in Subsection 3.5. Moreover, year fixed effects are included to account for any variation over time not picked up by the other independent variables. Regional fixed effects are included as well, to account for regional-specific variation that does not vary over time or per individual. By including these two fixed effect-specifications, *FC* and *Treated* will be omitted, since these two variables are time-invariant. The estimated β_3 -coefficient reveals whether there is a significant effect of the financial

crisis on EU-attitudes. Lastly, the observations are clustered per NUTS 2 region, to tackle potential heteroskedasticity.

Thereafter, three different models as shown in equation (5), (6) and (7) are estimated for each sub-hypothesis. Lastly, a model involving all three different sources of Euroscepticism will be presented, as modelled in equation (8).

$$EUindex_{i,r,t} = \beta_0 + \beta_1 FC_t + \beta_2 Treated_{r,t} + \beta_3 int_Treated_{r,t} + \beta_4 (int_Treated_{r,t} * Source1) + Controls_i + YearFE_t + RegionalFE_r + \epsilon_{i,r,t} \quad (5)$$

$$EUindex_{i,r,t} = \beta_0 + \beta_1 FC_t + \beta_2 Treated_{r,t} + \beta_3 int_Treated_{r,t} + \beta_5 (int_Treated_{r,t} * Source2) + Controls_i + YearFE_t + RegionalFE_r + \epsilon_{i,r,t} \quad (6)$$

$$EUindex_{i,r,t} = \beta_0 + \beta_1 FC_t + \beta_2 Treated_{r,t} + \beta_3 int_Treated_{r,t} + \beta_6 (int_Treated_{r,t} * Source3) + Controls_i + YearFE_t + RegionalFE_r + \epsilon_{i,r,t} \quad (7)$$

$$EUindex_{i,r,t} = \beta_0 + \beta_1 FC_t + \beta_2 Treated_{r,t} + \beta_3 int_Treated_{r,t} + \beta_4 (int_Treated_{r,t} * Source1) + \beta_5 (int_Treated_{r,t} * Source2) + \beta_6 (int_Treated_{r,t} * Source3) + Controls_i + YearFE_t + RegionalFE_r + \epsilon_{i,r,t} \quad (8)$$

Note that the dependent variable is defined in such a way that higher values represent positive attitudes. Therefore, in equation (5), (6), (7) and (8), for β_3 and β_5 a negative sign is expected, where a positive sign is expected for both β_4 and β_6 . As explained for model (4), FC and $Treated$ are omitted due to the fixed effect-specifications. Moreover, these models are clustered by NUTS 2 region to solve any potential heteroskedasticity.

4 Results

4.1 Matching

Before the event study and diff-in-diff model can be estimated, the PSM analysis is executed in order to match treated regions with comparable control regions. As presented in Table (5), three variables are included, as these three variables are arguably influencing unemployment rates, without being perfectly or highly correlated to the moderator variables. The data set of 904 observations consists of all European NUTS 2 regions in the years pre-crisis (2005-2008).

The initial raw data set consisted of 236 regions in 34 countries. After the matching, 115 regions in 21 countries are left. In this data set after matching, 61 of this matched region sample are treated, the other 54 regions are part of the control group.

VARIABLES	(1) Treated
av_wage_reg	1.95e-05*** (4.19e-06)
av_pop_density_reg	-0.000590*** (0.000143)
av_edu_tertiary_reg	-0.000903 (0.00864)
Constant	-0.253 (0.200)
Observations	904
LR Chi-squared	42.45
Pseudo R-squared	0.0339
Standard errors in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Table 5: Estimated Logit Model for PSM

As the region sample has changed after matching, the set of individuals that are part of the analysis has changed as well. In the initial data set, 247,695 individuals were included. After matching, 147,322 remain. Therefore, the trend of Euroscepticism over time, both in terms of the different components for the index, as well as per block of countries is reconsidered compared to the trend presented in Subsection 3.2. In the two upcoming figures it can be observed that compared to the sample before matching, the EU-index follows a different pattern now.

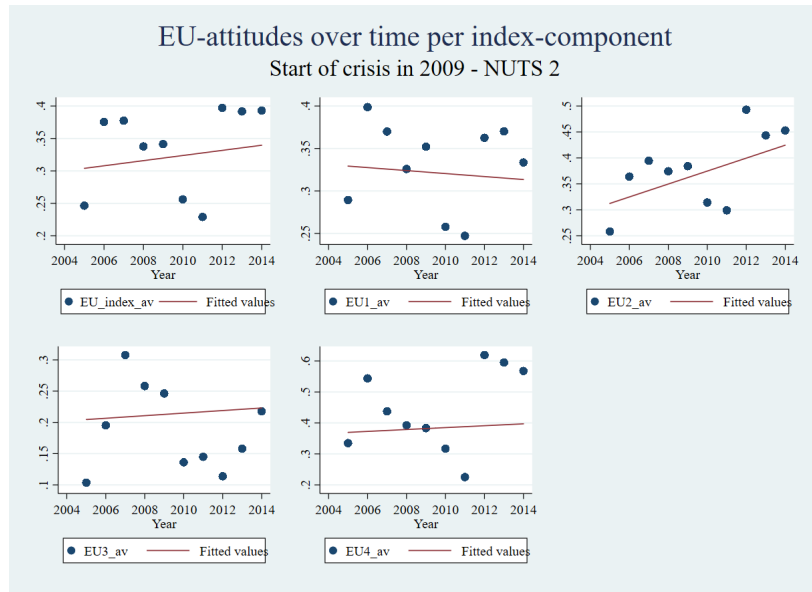


Figure 3: Scatter Plots of all EU-index components with the matched region sample

In Figure (3), the variable *EU.index* follows a positive pattern, suggesting that in the data set after matching, a sample of EU-citizens is present that is relatively positive about the EU, compared to the data set before matching. In Figure (4), only the block of southern countries shows a negative trend in attitudes, while all other three country groups are either growingly positive or stable. Note that for the northern and western countries, the years 2012 to 2014 are missing. The Eurobarometer data sets of these years mainly covered candidate countries, which could slightly bias the results.

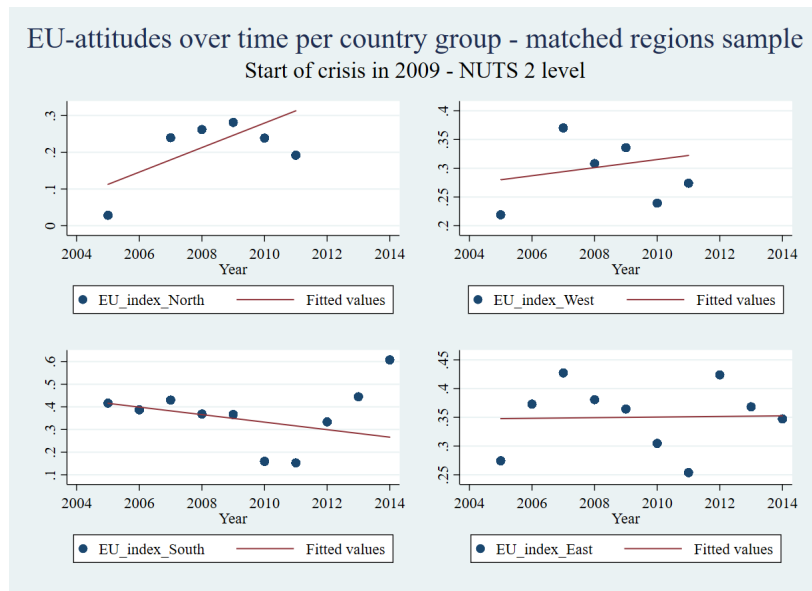


Figure 4: Scatter Plots of EU-attitude over time per country set with the matched region sample

4.2 Event study: analysing the pre-crisis trend

After selecting a matching set of regions, the event study can be performed. If indeed the financial crisis and those individuals who are more than averagely affected by the financial crisis are more negative towards the European Union, then the data must show that before the financial crisis, no difference in attitude towards the European Union exists between "overexposed" and "unexposed" individuals. Please recall that "overexposed" represents those regions within the sample, where the unemployment rates are the above national yearly average.

Following the method often used in event studies, a regression model is estimated with the *EU_index* as dependent variable, and as independent variables, dummy variables highlighting each separate year within the data, interacted with *FC_exposure*. The course of the estimated β 's is depicted in Figure (5). As can be observed in the figure below, in the years before the crisis, almost no difference in attitudes towards the European Union is observed. Hence, during the years of the financial crisis, no significant difference in attitudes towards the EU exist either. Moreover, notice that the graph only covers the years 2005 to 2010. The years thereafter are omitted, as only a relatively small part of the sample is interviewed during the years 2012-2014.

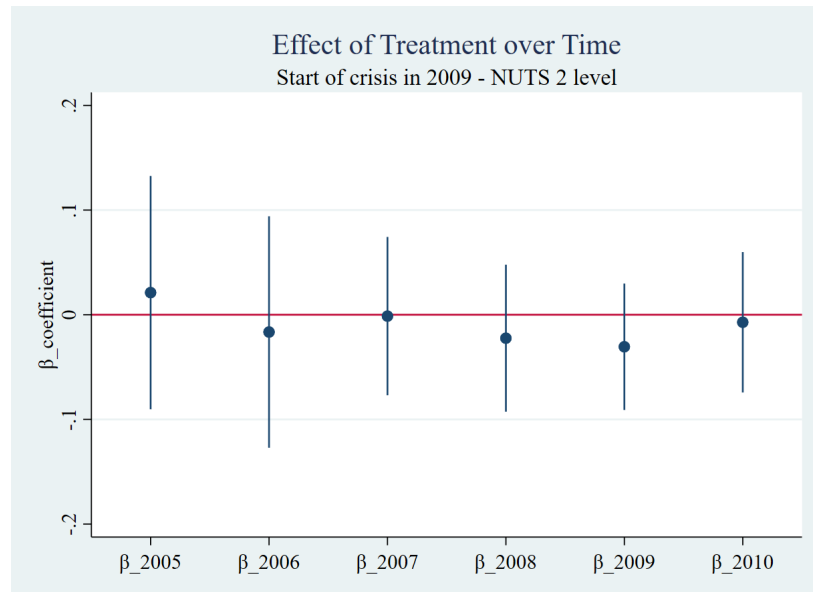


Figure 5: Event Study: Effect of "Treatment" throughout time

The results of this event study suggest no significant difference between the pre-trend of EU-attitudes and the effect of the financial crisis on this attitude trend. To see whether the proposed moderators play a significant role in the effect of the financial crisis on EU-attitudes,

4.3 Difference in difference model

Five different regression models are estimated, as explained in Section 3.6. First, the effect of the financial crisis on attitudes towards the EU is estimated by itself, and the next four regression models are extensions to this base model.

The first regression model can be found in the Table (6). The estimated coefficient for *int_FC* is statistically insignificant, and therefore cannot be interpreted. This suggests, in line with the results from the event study, that the financial crisis has had no significant effect in any change in attitudes towards the European Union. All control variables are statistically significant apart from *pol2_dummy*. All control variables show the expected signs.

Subsequently, four models are estimated, to empirically test the validation of the sub-hypotheses. The results are presented in Table (7). Again, the variable *int_Treated*, the difference in difference estimator, is not statistically significant.

In these additional models, the three moderators for this difference in difference estimator are included separately and all together. The results show no statistical significant results for the first two moderators, *int_FC_RichRegion* and *int_FC_MigrationRegion*. Interestingly, the third moderator that represents whether a country an individual lives in received EU support in the aftermath of the crisis, shows a negative statistically significant coefficient. Individuals living in regions being on average more affected by the crisis that received EU support therefore are associated with higher levels of Euroscepticism, *ceteris paribus*. As this finding is in line with the outcomes of the event study, it provides evidence that the third sub-hypothesis can be accepted.

Moreover, the coefficients for the control variables in table 7 are statistically significant (with the exception of *pol2_dummy*) and have the expected positive or negative signs.

VARIABLES	(1) EU_index
int_Treated	-0.0187 (0.0232)
age	-0.00231*** (0.000557)
gender	-0.0673*** (0.00554)
Education	0.107*** (0.0246)
job_dummy	0.0673*** (0.00914)
mig1_dummy	0.428*** (0.0190)
mig2_dummy	-0.0292** (0.0143)
pol1_dummy	0.246*** (0.0114)
pol2_dummy	0.0302 (0.0189)
Left_ideology	-0.0278* (0.0164)
Right_ideology	0.102*** (0.0198)
Constant	-0.0321 (0.112)
Observations	147,315
R-squared	0.126
Adjusted R-squared	0.125
F-statistic	178.7
Yearly FE	Yes
Regional FE	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6: Regression Model 1

VARIABLES	(2) EU_index	(3) EU_index	(4) EU_index	(5) EU_index
int_Treated	-0.0158 (0.0273)	-0.0254 (0.0238)	-0.00658 (0.0233)	-0.0143 (0.0259)
int_Treated_RichRegion	-0.00654 (0.0290)			0.00973 (0.0283)
age	-0.00231*** (0.000557)	-0.00231*** (0.000557)	-0.00232*** (0.000557)	-0.00232*** (0.000557)
gender	-0.0673*** (0.00552)	-0.0673*** (0.00554)	-0.0675*** (0.00554)	-0.0675*** (0.00552)
Education	0.107*** (0.0246)	0.107*** (0.0246)	0.107*** (0.0246)	0.107*** (0.0246)
job_dummy	0.0673*** (0.00914)	0.0674*** (0.00916)	0.0680*** (0.00914)	0.0681*** (0.00916)
mig1_dummy	0.428*** (0.0189)	0.428*** (0.0190)	0.428*** (0.0189)	0.428*** (0.0190)
mig2_dummy	-0.0292** (0.0143)	-0.0293** (0.0143)	-0.0295** (0.0142)	-0.0296** (0.0142)
pol1_dummy	0.246*** (0.0114)	0.246*** (0.0114)	0.246*** (0.0115)	0.246*** (0.0115)
pol2_dummy	0.0302 (0.0189)	0.0301 (0.0189)	0.0294 (0.0188)	0.0294 (0.0188)
Left_ideology	-0.0278* (0.0164)	-0.0279* (0.0164)	-0.0281* (0.0163)	-0.0282* (0.0164)
Right_ideology	0.102*** (0.0198)	0.102*** (0.0198)	0.102*** (0.0199)	0.102*** (0.0199)
int_Treated_MigrationRegion		0.0196 (0.0266)		0.0107 (0.0274)
int_Treated_EU_support			-0.125*** (0.0310)	-0.127*** (0.0347)
Constant	-0.0321 (0.112)	-0.0319 (0.112)	-0.0301 (0.111)	-0.0300 (0.111)
Observations	147,315	147,315	147,315	147,315
R-squared	0.126	0.126	0.126	0.126
Adjusted R-squared	0.125	0.125	0.126	0.126
F-statistic	163.9	164.3	180.8	154.6
Yearly FE	Yes	Yes	Yes	Yes
Regional FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 7: Regression Models with Moderators

The estimated regression model 5 in Table (7) is presented graphically below in Figure (6). In this figure, only the diff-in-diff estimator and the interaction terms with the three moderators are presented, excluding the constant and all individual control variables. The graph shows that the moderator of EU-support produces a statistically significant estimated coefficient, different from zero. Moreover, as already mentioned, the estimated β -coefficient is negative.

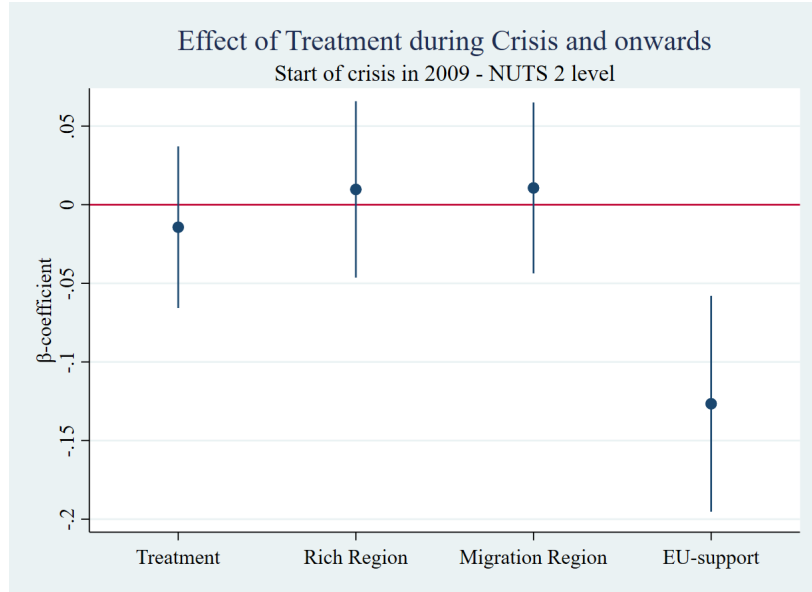


Figure 6: Effect of "Treatment" and Moderators throughout time

4.4 Robustness Checks

To verify the robustness of the results, the data and subsequent analysis are adjusted slightly. The variations to the main data analysis are presented in this subsection.

4.4.1 Robustness check of the dependent variable

Following Sola (2018), the *EU_index* is transformed from a continuous variable to a binary variable. The method on how this is transformed can be found in Subsection 3.2. In order to check the robustness of the results, the event study and diff-in-diff analysis are performed again. The results are given in Appendix 8.2.

When changing the nature of the dependent variable, the results seem to be robust. The outcomes of both the event study and difference in difference model estimation are similar to the results presented in the previous two subsections. Specifically, no significant diff-in-diff estimator is found, opposed to a statistically significant and negative β -coefficient for the interaction term of the diff-in-diff estimator and EU-funding.

4.4.2 Robustness check of the crisis start timing

This subsection, and the following subsections vary in terms of crisis start and NUTS level. The dependent variable is *EU_index* in all cases.

First, the start of the crisis is changed from 2009 to 2010, holding the regional analysis at the NUTS 2 level. The model is estimated with 2010 as start of the financial crisis, as arguably any change in attitude towards the European Union as a result of the crisis is delayed. Moreover, the European Union only started to provide financial support in 2010 onwards, therefore this change in the model could perhaps show different results.

With this redefining of the start of the event, all three components of the analysis are executed. In other words, the propensity score matching is performed again, as well as the event study and difference in difference modelling. The results can be found in the Appendix 8.3.

The data set after matching with 2010 as the start of the crisis consists of 107 regions in 21 countries, with 61 regions being labelled as "treated". The event study results in Figures (9) and (10) and are robust, that is, the results are almost similar if 2009 is labelled as the start of the financial crisis. The results of the diff-in-diff model are to the utmost extent similar as well, aside from the statistically significant estimated β -coefficient for the moderator *MigrationRegion*, which shows a positive sign. This suggests that the cultural aspect in this case is not necessarily a source of Euroscepticism.

4.4.3 Robustness check of the regional dimension

Alternatively, to check the robustness of results, the analysis is aggregated from the NUTS 2 level to NUTS 1. In this way, some countries that are only recorded at the NUTS 1 level in the Eurobarometer data sets are now part of the analysis as well, such as the United Kingdom, Germany and Italy. The results are reported in Appendix 8.4. Note that the start of the crisis is 2009 again in this variation of the analysis.

After matching, 29 NUTS 1 regions in 16 countries remain. 18 out of these 29 NUTS 1 regions are labelled as being "treated" by the financial crisis. The legitimacy of these results can therefore be questioned.

The outcomes of the event study in Figures (11) and (12) suggest somewhat similar conclusions. In the diff-in-diff model however, when including all moderators simultaneously, all three are statistically significant. The estimated coefficient for the moderator regarding the reception of EU support in financial crisis times is negative again, suggesting that individuals living in "treated" regions during the crisis that received EU-support are more sceptical about the European Union, than those individuals not living in "treated" regions not receiving any funding. The estimated β -coefficient for the moderator indicating economic prosperity is positive, in contrast to what was expected based on the literature. The estimated β -coefficient for the moderator with regards to the number of migrants in a region is negative. This is in line with expectations.

4.4.4 Robustness check of the crisis timing and regional dimension combined

Lastly, both two variations to the original analysis are simultaneously applied. This results in an analysis at the NUTS 1 level with 2010 as the start of the financial crisis. The results of the event study and diff-in-diff model can be found in Appendix 8.5. First, the propensity score matching is executed. In this case, 33 NUTS 1 regions from 17 countries are matched, where 20 NUTS 1 regions are "treatment" regions. Then the event study is provided. The results of the event study are similar to the analysis at the NUTS 2 level with 2009 as crisis start.

Lastly, the diff-in-diff model is estimated. In contrast to all other estimations of the base model, a significant diff-in-diff estimator is found. In two out of four cases, the diff-in-diff estimator is positive and statistically significant, suggesting that at the NUTS 1 level, "treated" regions in 2010 and onwards are associated with more positive EU-attitudes. These results are somewhat counterintuitive. Especially since the third moderator, *EU_support* is statistically significant and shows a negative coefficient, suggesting that those individuals living in "treated" regions receiving EU-funds are associated with more negative attitudes towards the EU. Lastly, the second moderator, *Migration_region* is statistically significant as well, estimated with a negative β -coefficient, suggesting that "treated" regions hosting on average more migrants are associated with more negative attitudes towards the EU.

5 Discussion

As mentioned in the conceptual framework, different authors have studied the growing trend of Euroscepticism, with various proposed sources to play a role in this phenomenon. This study set out with the aim of assessing the effect of the financial crisis on the trend of Euroscepticism. It was hypothesized that the crisis influenced EU-attitudes. Moreover, the sub-research questions sought to determine whether three main sources mentioned in literature moderated the effect of the financial crisis on a change in EU-attitudes as a result of the crisis.

The results presented in the previous section provide empirical proof for the acceptance or rejection of the main hypothesis and sub-hypotheses. Contrary to expectations, this study did not find a significant difference between the pre-crisis trend in EU-attitudes and post-crisis developments. Therefore, the main hypothesis is rejected. Furthermore, this study has been unable to demonstrate that relatively rich regions, and regions that host relatively large amounts of migrants moderate the effect of the financial crisis on EU-attitudes. These two sources of Euroscepticism have possibly not amplified the treatment-effect, or at least this is not observed in this analysis.

On the other hand, the third proposed moderator did significantly affect EU-attitudes interacted with the treatment regions during the start and aftermath of the financial crisis. What is surprising here, is the finding that individuals living in "treated" regions receiving EU-support, were associated with more Eurosceptical attitudes post-crisis. This is an important issue for future research, as this result implies the discontentment of citizens living in countries that were funded by several European financial institutions. Where this discontent arises is unclear, however it has already been demonstrated by Serrichio et al. (2013) that countries that have been hardest hit by the crisis, are the ones that have the most significant rise in Euroscepticism as well. Whether a causal connection exists between receiving EU-funds and becoming more sceptical towards the EU should be a main focus for future work. This will especially be of interest for policy makers at the level of the European Union, who are involved in constructing financial support programs.

From the robustness checks presented in Subsection 4.4, it can be concluded that the results are robust in terms of the dependent variable operationalization. However, when changing the timing of the start of the financial crisis and changing the level of analysis at the regional dimension, more significant β -coefficients appear. More research is recommended in order to understand what causes the results to shift from being statistically insignificant to significant.

Overall, several limitations in the data analysis exist, hence the findings must be interpreted with caution. First, the data with regards to the individual attitudes towards the EU can be subject to bias, as not every individual is interviewed multiple times throughout the years, as well as not every region is represented equally in this data set. In this analysis, different individuals are interviewed during each Eurobarometer round, creating a repeated cross-sectional data set. It is important to bear in mind the possible bias in these responses. Specifically, the observed change in attitudes could also stem from the

fact that the interview sample differs each year, instead of an observed change in growing Euroscepticism. If possible, future work should consist of a sample of longitudinal data with the same group of individuals interviewed yearly, where the fixed set of individual is a proper representation of the European Union population. This could simultaneously solve the issue of an over-representation of candidate country states, as the Eurobarometer institute in the years of the aftermath of the financial crisis mainly interviewed citizens from these countries. However, a fixed sample throughout time could cause a respondent bias, so that should be carefully considered when selecting individuals.

Second, the matching procedure drastically decreases the number of observations. Therefore, with a smaller sample size, caution must be applied, as the findings might not be representative for the whole of Europe. The southern and eastern countries are over-represented, compared to the northern and western regions. A potential solution to this problem is a more complete data set of regional characteristics, to make sure that no regions are excluded to the PSM-analysis as a result of missing values. Moreover, the small sample size could arise due to the unavailability of many control regions. The way the "treatment" is operationalized in this research could potentially induce this unavailability, as "treated" regions are comparable in other regional characteristics, and only a small set of control regions are suitable for matching. Future work could try different operationalizations for the "treatment" effect, to test whether this could potentially lead to more matched regions.

6 Conclusion

The present research was designed to determine whether the financial crisis affects the growing trend of Euroscepticism towards the European Union as institution. Furthermore, the purpose of this study was to investigate whether three often mentioned sources of Euroscepticism in literature, moderated the effect of the financial crisis on EU-attitudes. Through an event study and difference in difference model with a data set of interviewed EU-citizens living in different NUTS 2 levels in the time span of 2005 and 2014, these two questions are solved.

This study has shown that there is no significant causal effect of the financial crisis on EU-attitudes, meaning that no statistically significant deviations from the pre-crisis trend in EU-attitudes is observed. From the three proposed sources that could moderate the treatment effect, only a significant difference in EU-attitudes is observed between individuals living in "treated" regions that received EU-support, compared to those individuals that did not receive any funding. Surprisingly, this association is found to be negative, indicating a potential dissatisfaction by individuals living in "treated" regions receiving financial funding. A natural progression of this work is to analyse any potential causal relationship between the attitudes towards the European Union, and individuals receiving EU-funding. This future work will especially be of interest for policy makers at the European level, to increase effectiveness in financial support programs in future crises.

The present study is significant in at least two major respects. First, the results suggest that the financial crisis has had no significant causal effect in attitudes towards the European Union. Moreover, the results show a potential discontentment by citizens living in regions that received financial support in the aftermath of the crisis. Research questions that could be asked now include whether Euroscepticism at the political party-system dimensions did experience an effect from the financial crisis. Additionally, one could wonder whether the performed analysis, with the refugee crisis as event affecting the trend of Euroscepticism, would show different outcomes. This will gain insight in whether another type of crisis has a different effect on Eurosceptic attitudes, and what are driving factors in this change of attitude.

The strand of research investigating the topic of Euroscepticism in times of crisis teaches us about the evolution of Euroscepticism from margins to mainstream, and helps understanding how crises shape and influence this phenomenon. This research contributed to the field by determining whether the financial crisis shaped and affected this trend. While hoping of a world free from any crises, unfortunately the past teaches us otherwise. At the time of writing, the world globally tackles the corona-virus. How and to what extent this corona-crisis, potentially followed up with an economic crisis due to the social distancing and lockdown measures, will affect the way EU-citizens perceive the European Union is research for the future. Nevertheless, gaining deeper understandings in the mechanisms at hand of Euroscepticism, and more importantly, acting upon this trend by hearing out those that feel Eurosceptic about the integration project and European Union as institution, will help overcome these crises all together.

7 Bibliography

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8 Appendices

8.1 Appendix 1: Descriptive Statistics

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) max
year	147,322	2,008	2.085	2,005	2,014
EU_index	147,322	0.317	0.734	-1.250	1.250
EU_dummy	147,322	0.683	0.465	0	1
EU1	147,322	0.324	0.859	-1	1
EU2	147,322	0.352	0.936	-1	1
EU3	147,322	0.211	0.977	-1	1
EU4	147,322	0.380	0.953	-2	2
Treated	147,322	0.465	0.499	0	1
FC	147,322	0.477	0.499	0	1
RichRegion	147,322	0.347	0.476	0	1
MigrationRegion	147,322	0.393	0.489	0	1
EU_support	147,322	0.132	0.338	0	1
age	147,315	47.44	17.63	15	98
gender	147,322	0.521	0.500	0	1
Education	147,322	3.709	0.577	1	4
mig1_dummy	147,322	0.102	0.303	0	1
mig2_dummy	147,322	0.241	0.428	0	1
job_dummy	147,322	0.0723	0.259	0	1
pol1_dummy	147,322	0.192	0.394	0	1
pol2_dummy	147,322	0.0814	0.273	0	1
Left_ideology	147,322	0.227	0.419	0	1
Right_ideology	147,322	0.138	0.345	0	1

Table 8: Descriptive Statistics

Variables	Variable Description
year	Year
EU_index	Indexed attitude towards the EU
EU_dummy	Dummy indicating EU-attitude
EU1	EU membership - Good / Bad
EU2	EU membership - Country benefit
EU3	Trust in institutions: EU
EU4	EU image - Positive / Negative
FC	Financial Crisis year0 2009 and afterwards Dummy
Treated	NUTS 2 Unemployment rate percentage change larger than National Unemployment rate percentage change
RichRegion	Dummy indicating whether regional GRP per capita lies above yearly average GRP per capita
MigrationRegion	Dummy indicating whether regional migration rate lies above yearly average regional migration rate
EU_support	Dummy for whether country received EU-support
age	Age in years
gender	Dummy for gender, where female=1
Education	Categorical variable where a higher category means higher education of respondent
job_dummy	Dummy for whether individual is in an executive / managerial position
mig1_dummy	Dummy for whether individual believes EU means a loss of cultural identity
mig2_dummy	Dummy for whether individual is attached to own country
pol1_dummy	Dummy for whether individual is satisfied about national democracy
pol2_dummy	Dummy for whether individual is interested in politics
Left_ideology	Dummy for whether individual is placed left on ideological axis
Right_ideology	Dummy for whether individual is placed right on ideological axis

Table 9: Variable Label Specification

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Year	1.000																			
EU-index	0.011	1.000																		
EU-dummy	0.015	0.886	1.000																	
EU1	-0.004	0.730	0.649	1.000																
EU2	0.028	0.812	0.775	0.503	1.000															
EU3	0.004	0.788	0.691	0.393	0.502	1.000														
EU4	0.007	0.817	0.674	0.449	0.553	0.556	1.000													
FC	0.792	-0.007	0.001	-0.008	0.011	-0.011	-0.014	1.000												
Treated	-0.125	-0.043	-0.037	-0.029	-0.021	-0.035	-0.051	-0.064	1.000											
RichRegion	0.028	-0.006	0.002	0.055	0.003	-0.033	-0.035	0.025	0.114	1.000										
MigrationRegion	0.046	0.003	0.004	0.037	-0.008	-0.027	0.011	0.014	-0.011	0.141	1.000									
EU-support	0.033	0.041	0.034	0.026	0.018	0.023	0.061	0.018	-0.098	0.179	0.146	1.000								
Age	0.004	-0.098	-0.083	-0.052	-0.089	-0.071	-0.094	0.007	0.017	0.023	0.008	-0.045	1.000							
Gender	-0.013	-0.056	-0.050	-0.068	-0.052	-0.019	-0.040	-0.009	-0.002	-0.021	-0.023	-0.013	-0.006	1.000						
Education	0.005	0.103	0.097	0.074	0.111	0.076	0.066	0.012	0.004	-0.077	-0.016	-0.260	-0.297	-0.032	1.000					
Job-dummy	-0.111	0.042	0.038	0.046	0.039	0.021	0.027	-0.129	-0.020	0.025	-0.005	-0.009	-0.064	-0.049	0.112	1.000				
Mig1-dummy	-0.520	0.057	0.047	0.049	0.038	0.031	0.061	-0.322	0.022	-0.029	0.024	0.001	-0.030	-0.006	0.010	0.140	1.000			
Mig2-dummy	-0.466	0.025	0.018	0.021	0.006	0.026	0.026	-0.514	0.012	-0.033	0.006	-0.012	0.011	0.019	-0.027	0.177	0.180	1.000		
Pol1-dummy	-0.107	0.102	0.097	0.084	0.084	0.070	0.085	0.014	0.022	0.066	0.058	-0.023	-0.005	-0.013	0.026	0.033	0.099	0.273	1.000	
Pol2-dummy	0.339	-0.011	-0.006	-0.022	0.001	-0.012	-0.004	0.312	-0.055	-0.001	0.032	-0.016	-0.014	-0.002	0.007	-0.058	-0.100	-0.140	0.180	1.000
Left-ideology	0.096	-0.038	-0.033	-0.018	-0.027	-0.033	-0.041	0.143	0.012	0.048	0.022	0.006	0.043	-0.016	-0.009	-0.048	-0.042	-0.086	0.136	0.326
1.000																				
Right-ideology	-0.049	0.053	0.041	0.044	0.036	0.044	0.044	-0.050	0.013	-0.043	-0.020	-0.027	0.025	-0.038	0.029	0.034	0.004	0.023	-0.032	-0.095
-0.217	1.000																			

Table 10: Cross-correlation table

8.2 Robustness check of the dependent variable

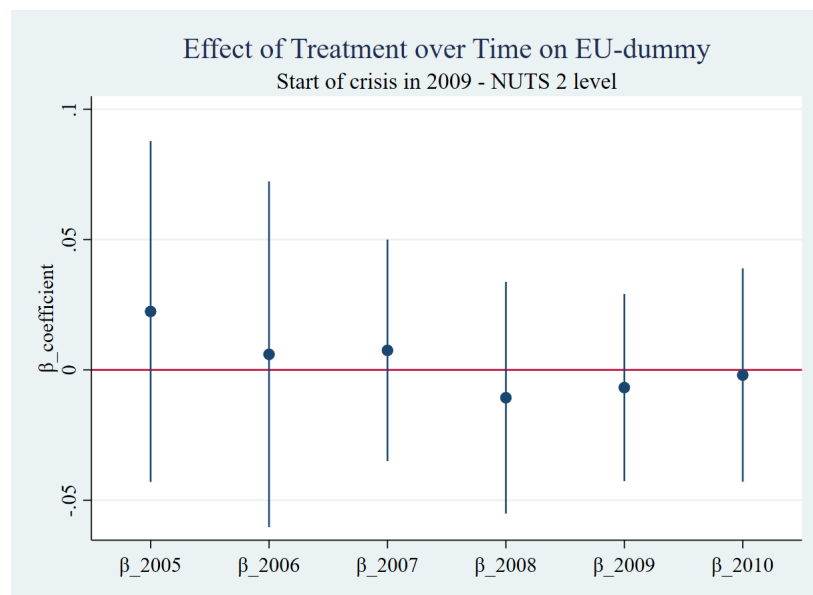


Figure 7: Event Study: Effect of "Treatment" throughout time

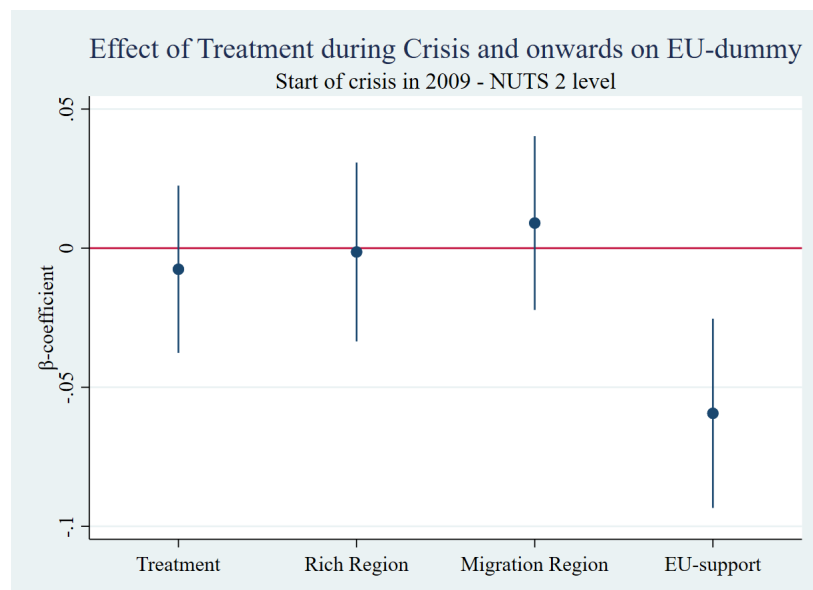


Figure 8: Effect of "Treatment" and Moderators throughout time

VARIABLES	(1) EU_dummy
int_Treated	-0.0108 (0.0138)
age	-0.00123*** (0.000292)
gender	-0.0382*** (0.00368)
Education	0.0628*** (0.0135)
job_dummy	0.0404*** (0.00485)
mig1_dummy	0.238*** (0.0114)
mig2_dummy	-0.0161* (0.00865)
pol1_dummy	0.142*** (0.00646)
pol2_dummy	0.0222** (0.00910)
Left_ideology	-0.0198** (0.00944)
Right_ideology	0.0480*** (0.0104)
Constant	0.476*** (0.0602)
Observations	147,315
R-squared	0.101
Adjusted R-squared	0.101
F-statistic	159.5
Yearly FE	Yes
Regional FE	Yes
Robust standard errors in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Table 11: DID with EU-dummy as dependent variable

VARIABLES	(1) EU_dummy	(2) EU_dummy	(3) EU_dummy	(4) EU_dummy
int_Treated	-0.00699 (0.0160)	-0.0153 (0.0140)	-0.00485 (0.0140)	-0.00759 (0.0152)
int_Treated_RichRegion	-0.00888 (0.0164)			-0.00138 (0.0162)
int_Treated_MigrationRegion		0.0130 (0.0157)		0.00903 (0.0158)
int_Treated_EU_support			-0.0617*** (0.0149)	-0.0594*** (0.0172)
age	-0.00123*** (0.000292)	-0.00123*** (0.000292)	-0.00124*** (0.000292)	-0.00124*** (0.000292)
gender	-0.0382*** (0.00367)	-0.0382*** (0.00368)	-0.0382*** (0.00368)	-0.0382*** (0.00367)
Education	0.0627*** (0.0135)	0.0627*** (0.0135)	0.0626*** (0.0135)	0.0626*** (0.0135)
job_dummy	0.0404*** (0.00485)	0.0405*** (0.00490)	0.0407*** (0.00487)	0.0408*** (0.00491)
mig1_dummy	0.238*** (0.0114)	0.238*** (0.0114)	0.238*** (0.0114)	0.238*** (0.0114)
mig2_dummy	-0.0161* (0.00865)	-0.0161* (0.00865)	-0.0162* (0.00864)	-0.0163* (0.00864)
pol1_dummy	0.142*** (0.00645)	0.142*** (0.00648)	0.142*** (0.00648)	0.142*** (0.00650)
pol2_dummy	0.0221** (0.00907)	0.0221** (0.00909)	0.0217** (0.00903)	0.0217** (0.00901)
Left_ideology	-0.0198** (0.00944)	-0.0199** (0.00944)	-0.0200** (0.00943)	-0.0200** (0.00943)
Right_ideology	0.0480*** (0.0104)	0.0480*** (0.0104)	0.0479*** (0.0104)	0.0479*** (0.0104)
Constant	0.476*** (0.0602)	0.476*** (0.0602)	0.477*** (0.0601)	0.477*** (0.0601)
Observations	147,315	147,315	147,315	147,315
R-squared	0.101	0.101	0.102	0.102
Adjusted R-squared	0.101	0.101	0.101	0.101
F-statistic	147	146.9	152.6	132.9
Yearly FE	Yes	Yes	Yes	Yes
Regional FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 12: DID with moderators and EU_dummy as dependent variable

8.3 Robustness check of the crisis start timing

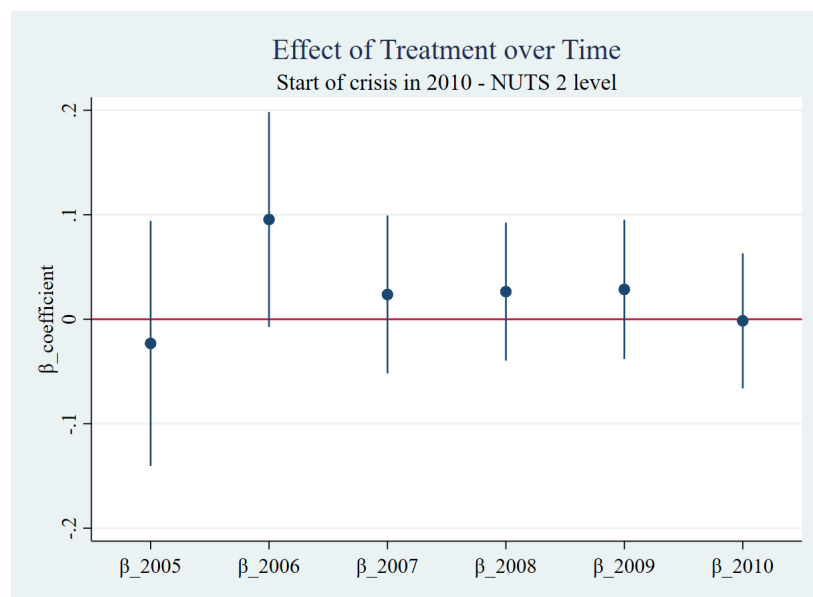


Figure 9: Event Study: Effect of "Treatment" throughout time

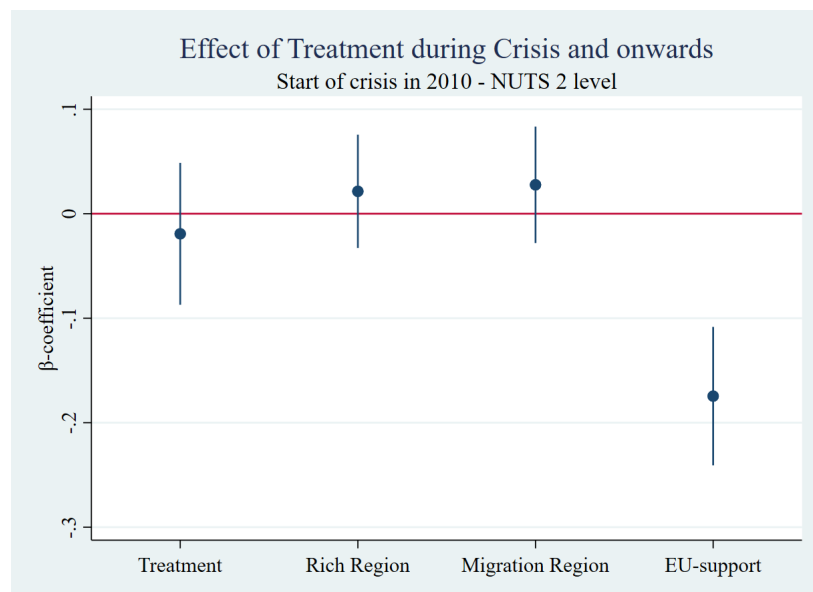


Figure 10: Effect of "Treatment" and Moderators throughout time

VARIABLES	(1) EU_index
int_Treated2010	-0.0177 (0.0288)
age	-0.00170*** (0.000395)
gender	-0.0684*** (0.00611)
Education	0.136*** (0.0106)
job_dummy	0.0655*** (0.00857)
mig1_dummy	0.420*** (0.0235)
mig2_dummy	-0.0248* (0.0149)
pol1_dummy	0.252*** (0.0131)
pol2_dummy	0.0468*** (0.0177)
Left_ideology	-0.0526** (0.0211)
Right_ideology	0.130*** (0.0228)
Constant	-0.179*** (0.0452)
Observations	137,784
R-squared	0.137
Adjusted R-squared	0.136
F-statistic	218.8
Yearly FE	Yes
Regional FE	Yes
Robust standard errors in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Table 13: DID with 2010 as crisis start and NUTS 2 level

VARIABLES	(1) EU_index	(2) EU_index	(3) EU_index	(4) EU_index
int_Treated2010	-0.0198 (0.0328)	-0.0437 (0.0326)	0.00634 (0.0276)	-0.0192 (0.0342)
int_Treated2010_RichRegion	0.00416 (0.0345)			0.0214 (0.0273)
int_Treated2010_MigrationRegion		0.0483* (0.0286)		0.0277 (0.0281)
int_Treated2010_EU_support			-0.174*** (0.0313)	-0.175*** (0.0334)
age	-0.00170*** (0.000395)	-0.00170*** (0.000396)	-0.00170*** (0.000396)	-0.00170*** (0.000396)
gender	-0.0684*** (0.00611)	-0.0685*** (0.00612)	-0.0685*** (0.00613)	-0.0686*** (0.00613)
Education	0.136*** (0.0106)	0.136*** (0.0106)	0.136*** (0.0106)	0.136*** (0.0106)
job_dummy	0.0655*** (0.00859)	0.0654*** (0.00858)	0.0656*** (0.00859)	0.0655*** (0.00860)
mig1_dummy	0.420*** (0.0235)	0.420*** (0.0235)	0.420*** (0.0234)	0.420*** (0.0234)
mig2_dummy	-0.0248* (0.0149)	-0.0248* (0.0149)	-0.0248* (0.0149)	-0.0247* (0.0148)
pol1_dummy	0.252*** (0.0132)	0.252*** (0.0132)	0.251*** (0.0131)	0.251*** (0.0132)
pol2_dummy	0.0468*** (0.0176)	0.0461** (0.0177)	0.0449** (0.0177)	0.0448** (0.0176)
Left_ideology	-0.0526** (0.0211)	-0.0529** (0.0211)	-0.0536** (0.0211)	-0.0539** (0.0211)
Right_ideology	0.129*** (0.0228)	0.130*** (0.0228)	0.130*** (0.0228)	0.130*** (0.0228)
Constant	-0.179*** (0.0451)	-0.179*** (0.0451)	-0.178*** (0.0451)	-0.177*** (0.0451)
Observations	137,784	137,784	137,784	137,784
R-squared	0.137	0.137	0.138	0.138
Adjusted R-squared	0.136	0.136	0.137	0.137
F-statistic	237.6	199.2	196.1	182.9
Yearly FE	Yes	Yes	Yes	Yes
Regional FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 14: DID with moderators and 2010 as crisis start and NUTS 2 level

8.4 Robustness check of the regional dimension

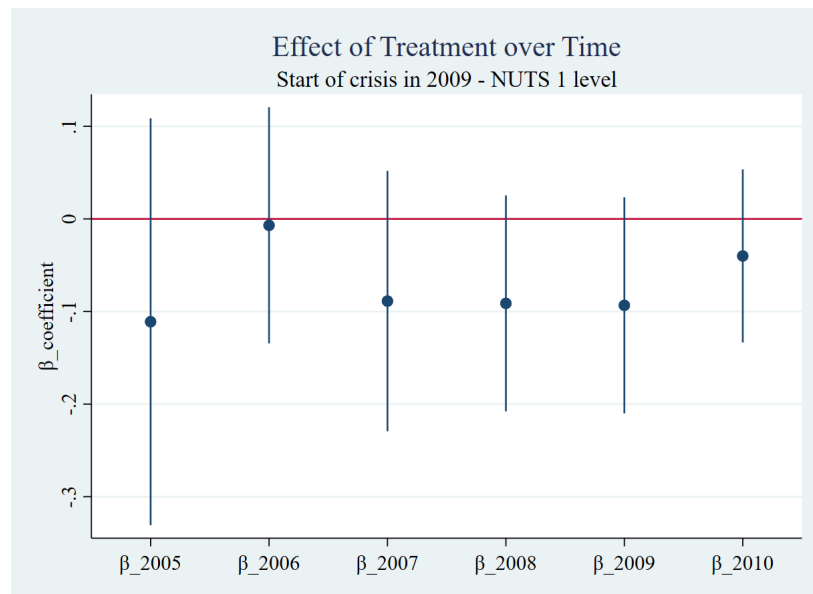


Figure 11: Event Study: Effect of "Treatment" throughout time

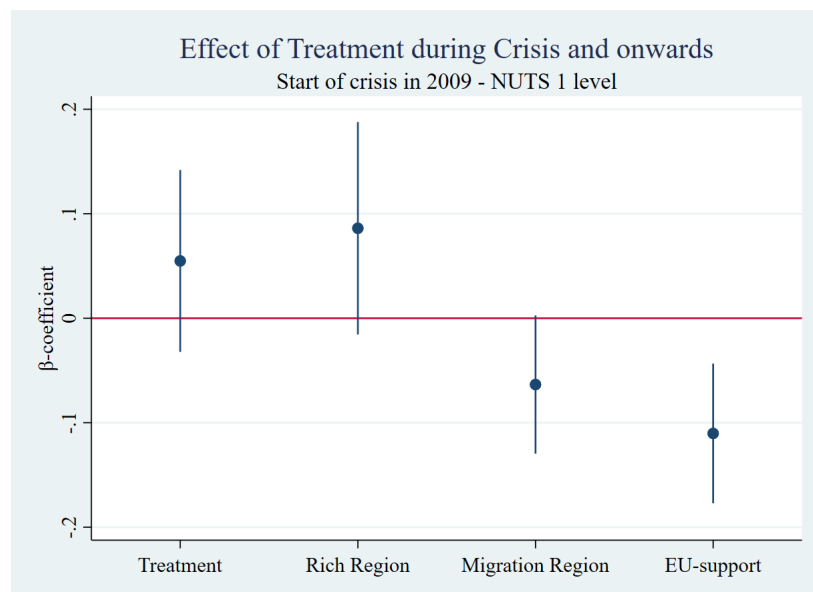


Figure 12: Effect of "Treatment" and Moderators throughout time

VARIABLES	(1) EU_index
int_Treated_Nuts1	0.0305 (0.0405)
age	-0.00301*** (0.000732)
gender	-0.0654*** (0.00892)
Education	0.0970** (0.0359)
job_dummy	0.0628*** (0.0133)
mig1_dummy	0.420*** (0.0271)
mig2_dummy	-0.0406* (0.0220)
pol1_dummy	0.239*** (0.0249)
pol2_dummy	0.0268 (0.0223)
Left_ideology	0.00293 (0.0360)
Right_ideology	0.0393 (0.0363)
Constant	0.0507 (0.157)
Observations	89,937
R-squared	0.113
Adjusted R-squared	0.113
F-statistic	159.6
Yearly FE	Yes
Regional FE	Yes
Robust standard errors in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Table 15: DID with 2009 as crisis start and NUTS 1 level

VARIABLES	(1) EU_index	(2) EU_index	(3) EU_index	(4) EU_index
int_Treated_Nuts1	-0.0111 (0.0373)	0.0690 (0.0428)	0.0349 (0.0412)	0.0548 (0.0425)
int_Treated_RichRegion_Nuts1	0.0820 (0.0504)			0.0861* (0.0496)
int_Treated_MigRegion_Nuts1		-0.0389 (0.0349)		-0.0635* (0.0323)
int_Treated_EU_support_Nuts1			-0.0972** (0.0387)	-0.110*** (0.0326)
age	-0.00301*** (0.000733)	-0.00301*** (0.000732)	-0.00301*** (0.000732)	-0.00302*** (0.000733)
gender	-0.0652*** (0.00889)	-0.0654*** (0.00892)	-0.0654*** (0.00892)	-0.0653*** (0.00888)
Education	0.0970** (0.0359)	0.0970** (0.0359)	0.0971** (0.0359)	0.0972** (0.0359)
job_dummy	0.0636*** (0.0135)	0.0628*** (0.0133)	0.0631*** (0.0134)	0.0640*** (0.0136)
mig1_dummy	0.421*** (0.0269)	0.420*** (0.0271)	0.420*** (0.0271)	0.421*** (0.0269)
mig2_dummy	-0.0412* (0.0217)	-0.0406* (0.0220)	-0.0403* (0.0219)	-0.0407* (0.0216)
pol1_dummy	0.239*** (0.0249)	0.239*** (0.0249)	0.239*** (0.0249)	0.239*** (0.0249)
pol2_dummy	0.0268 (0.0225)	0.0268 (0.0224)	0.0264 (0.0222)	0.0263 (0.0223)
Left_ideology	0.00250 (0.0360)	0.00292 (0.0360)	0.00299 (0.0360)	0.00252 (0.0360)
Right_ideology	0.0388 (0.0362)	0.0393 (0.0363)	0.0394 (0.0363)	0.0389 (0.0362)
Constant	0.0508 (0.156)	0.0507 (0.157)	0.0507 (0.156)	0.0507 (0.156)
Observations	89,937	89,937	89,937	89,937
R-squared	0.114	0.113	0.114	0.114
Adjusted R-squared	0.113	0.113	0.113	0.113
F-statistic	154.7	148.9	145.5	145.6
Yearly FE	Yes	Yes	Yes	Yes
Regional FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 16: DID with moderators and 2009 as crisis start and NUTS 1 level

8.5 Robustness check of the crisis timing and regional dimension combined

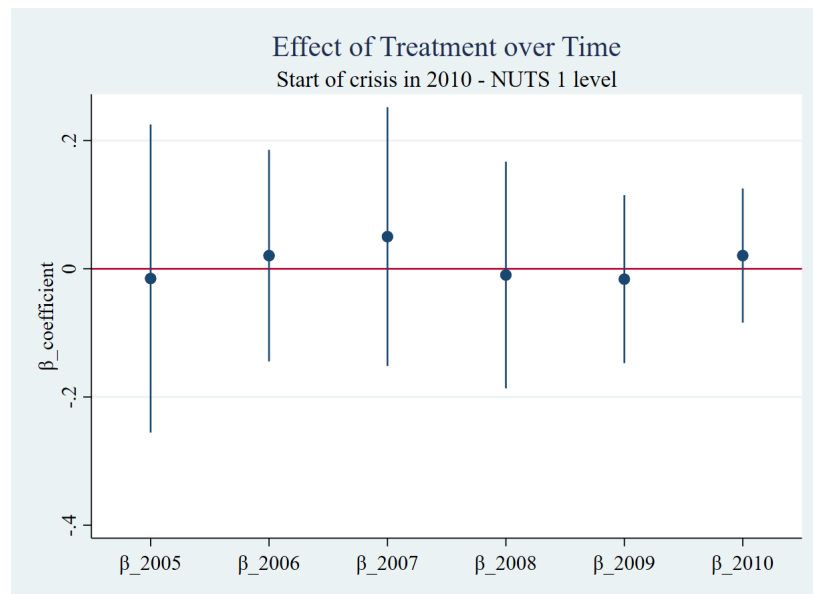


Figure 13: Event Study: Effect of "Treatment" throughout time

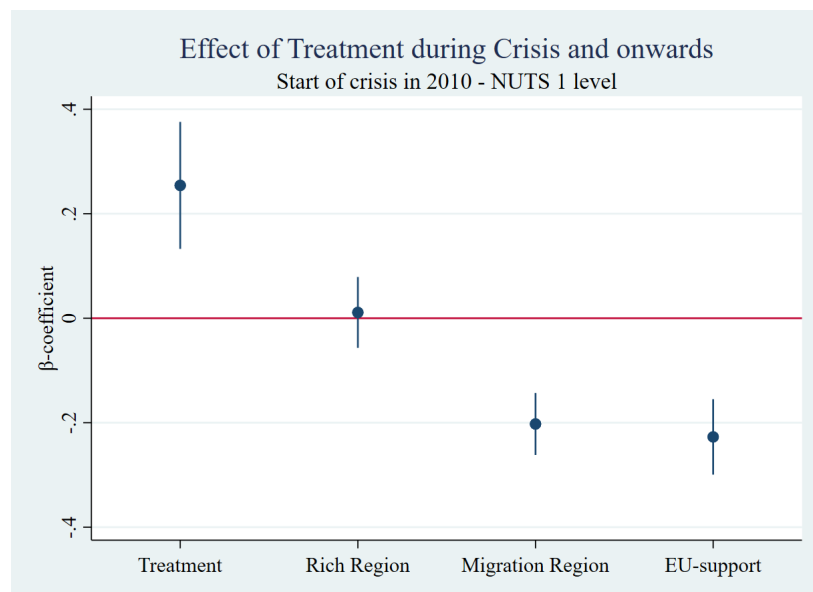


Figure 14: Effect of "Treatment" and Moderators throughout time

VARIABLES	(1) EU_index
int_Treated2010_Nuts1	0.0107 (0.0675)
age	-0.00131* (0.000731)
gender	-0.0744*** (0.00936)
Education	0.148*** (0.0162)
job_dummy	0.0631*** (0.0134)
mig1_dummy	0.386*** (0.0267)
mig2_dummy	-0.0549*** (0.0176)
pol1_dummy	0.265*** (0.0137)
pol2_dummy	0.0201 (0.0229)
Left_ideology	-0.000617 (0.0310)
Right_ideology	0.0571 (0.0363)
Constant	-0.243*** (0.0762)
Observations	94,249
R-squared	0.119
Adjusted R-squared	0.119
F-statistic	144
Yearly FE	Yes
Regional FE	Yes
Robust standard errors in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Table 17: DID with 2010 as crisis start and NUTS 1 level

VARIABLES	(1) EU_index	(2) EU_index	(3) EU_index	(4) EU_index
int.Treated2010_Nuts1	0.0397 (0.0609)	0.253*** (0.0596)	0.0616 (0.0592)	0.254*** (0.0597)
int.Treated2010_RichRegion_Nuts1	-0.0548 (0.0679)			0.0110 (0.0333)
int.Treated2010_MigRegion_Nuts1		-0.247*** (0.0441)		-0.202*** (0.0291)
int.Treated2010_EU_support_Nuts1			-0.228*** (0.0310)	-0.227*** (0.0354)
age	-0.00131* (0.000731)	-0.00131* (0.000731)	-0.00132* (0.000733)	-0.00132* (0.000732)
gender	-0.0744*** (0.00935)	-0.0744*** (0.00935)	-0.0747*** (0.00943)	-0.0747*** (0.00943)
Education	0.148*** (0.0162)	0.148*** (0.0162)	0.147*** (0.0163)	0.147*** (0.0163)
job_dummy	0.0632*** (0.0134)	0.0629*** (0.0133)	0.0635*** (0.0134)	0.0632*** (0.0134)
mig1_dummy	0.386*** (0.0267)	0.386*** (0.0268)	0.387*** (0.0266)	0.387*** (0.0266)
mig2_dummy	-0.0548*** (0.0177)	-0.0548*** (0.0176)	-0.0550*** (0.0175)	-0.0549*** (0.0175)
pol1_dummy	0.265*** (0.0136)	0.266*** (0.0137)	0.264*** (0.0135)	0.264*** (0.0135)
pol2_dummy	0.0197 (0.0231)	0.0202 (0.0229)	0.0164 (0.0228)	0.0166 (0.0227)
Left_ideology	-0.000491 (0.0310)	-0.000449 (0.0310)	-0.00243 (0.0312)	-0.00231 (0.0312)
Right_ideology	0.0573 (0.0362)	0.0571 (0.0363)	0.0574 (0.0364)	0.0574 (0.0364)
Constant	-0.243*** (0.0761)	-0.243*** (0.0762)	-0.239*** (0.0755)	-0.239*** (0.0755)
Observations	94,249	94,249	94,249	94,249
R-squared	0.119	0.119	0.120	0.120
Adjusted R-squared	0.119	0.119	0.120	0.120
F-statistic	149.9	146.7	147.2	126.4
Yearly FE	Yes	Yes	Yes	Yes
Regional FE	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 18: DID with moderators and 2010 as crisis start and NUTS 1 level