# "On the impact of European Union Cohesion Policy on regional support for the European project"

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## Abstract

Cohesion Policy is the main policy tool of the European Union and the backbone of its regional policy. Given its characteristics, it is the EU policy with the greatest impact on the daily life of European citizens and can compensate population groups and places less favoured by the European integration process. As a result, the implementation of Cohesion Policy in a region is expected to shape the degree of regional support for the process of European integration. This study tests this assumption using regional data for the EU28 in a period that includes the recent phases of expansion and recession, in a scenario characterized by growing anti-EU rhetoric. The results suggest that a greater amount of EU funds spent in the region does not stimulate regional support for the Union. However, an appropriate temporal distribution of the resources allocated to the region could have a positive effect on support.

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## Conflict of interest:

**Introduction**

This study assesses the effect of the implementation of the European Union Cohesion Policy (CP) on regional differences in the degree of citizens' support for the European project. CP is the backbone of the EU regional policy and its main investment policy tool. It aims to support jobs, competitiveness, sustainable economic growth and development, and improve citizens' quality of life in all regions of the EU, although most funds are allocated to less developed regions. Interestingly, interventions under the umbrella of CP has two important characteristics. First, given the aims and targets of CP (e.g. improving employability, supporting enterprises, improving the environment, modernizing transport), among all EU policies it has the greatest direct impact on people's daily life. Second, given its redistributive nature, CP can compensate population groups less favoured by the process of European integration. In a way or another, it can therefore help to counteract the increase in Euroscepticism and other current threats to the EU building process (e.g. populism, neo-nationalism).

A rich literature in the last decades has proposed several mechanisms and determinants of the citizens' support for the European integration and identification with Europe (see Bergbauer, 2018 for a recent review). In this regard, it has been claimed that socio-economic conditions could shape the perception that different population groups have of the EU (Brinegar and Jolly, 2005; Braun and Tausendpfund, 2014). In particular, recent studies have emphasized the specific role of CP on support for the EU, although they have not reached a consensus. The effect on the perception of the EU of the amount of structural funds received by a region is positive and significant in some studies (Osterloh, 2011), while it is not significant (Chalmers and Dellmuth, 2015; Perucca, 2019) and even negative in others (Verhaegen et al., 2014).

The major assumption of this study is that at least part of the territorial disparities in the indicators of citizens' support for the EU can be explained by differences among regions in the incidence of CP. This is supported by the argument that transfer payments from the richest to the poorest territories in the EU, particularly by means of regional development funds, have generated political goodwill for the EU (e.g. Duch and Taylor, 1997; Fidrmuc et al., 2016; Dąbrowski et al., 2018). Citizens in the recipient regions are supposed to benefit directly or indirectly as long as EU funds contribute to alleviating deficits in local economies.

This study also considers the effect of other social and economic characteristics of the region, under the assumption that the socio-economic context shapes citizens' attitudes towards the EU. Given that the criteria for allocating CP funds is the economic situation in the region, neglecting the economic context could lead to confounding the true effect of the policy on the degree of regional support. The socio-economic context of the region is expected to affect support for the EU through different channels. If further economic integration benefits certain economic activities but penalizes others, support for the EU will be more abundant in regions specialized in activities benefited from integration (Duch and Taylor, 1997). At the same time, if the economic prospects of European integration are higher for specific groups of individuals, depending for instance on their education and income, those regions with more educated populations and higher income per capita will be more supportive for the EU project (Tucker et al., 2002).

Based on the micro-data of several Eurobarometer surveys, two aggregate indicators of citizens' support for the EU are computed for the regions of the EU28, covering the period from 2000 to 2016. This is an interesting period that includes both the expansion of most European economies until 2008 and the subsequent recession caused by the financial and sovereign debt crises. As a novelty, it also allows to consider the contribution of regions of the new member states of central and eastern Europe, which joined the EU in the first decade of the 21st century. Last but not least, the study provides evidence on the role of CP on regional support for the EU in a context characterised by increasing anti-European rhetoric, populism, and neonationalism.

The regional indicators of support for the EU are merged with data on Structural Fund expenditures per capita in each region, and with that of the regional absorption of Structural Funds. The former is the indicator frequently used to proxy for the intensity of CP in the region, while the latter can be considered as an indicator of the effectiveness with which the projects funded by the policy are implemented in the region. A comprehensive set of factors accounting for the territorial, institutional, and socio-economic situation in each region, such as per capita GDP, educational attainment, quality of local governments, population density, and poverty risk is also included in the analysis. In a first stage, the impact of the intensity of CP, measured by the amount of funds expended in the region, on citizens' support for the EU is explored. The hypothesis to be tested is that, other things equal, higher support will be observed in those regions that benefited more intensively by CP. The study is complemented in a second stage with

the analysis of the influence of the effectiveness in the management and deployment of CP funds in the region. To be clear, I use regional indicators of funds absorption to analyse their correlation with the variables of support. In this way, I aim to provide a more complete picture of the impact of CP on the degree of regional support for the European project.

The results suggest a negligible effect of the intensity of CP on the degree of regional support for the EU once the region's socio-economic context is taken into account. In other words, the evidence from the EU28 regions since the beginning of this century suggests that citizens' perception of the European project is not nurtured by the amount of EU funds spent in the region where they live. Nevertheless, this study reveals that there could be a positive impact of the capacity to absorb CP funds allocated to the region.

The rest of the paper is structured as follows. The following section reviews the extant literature on support for the European integration process, paying special attention to the economic determinants in general, and the role of EU policies in particular. The sources of the data used in the study and the definition of regional indicators of support for the EU, variables related to CP in the region, and factors of the regional context are presented in the third section. Next, the evidence derived from the empirical exercise is summarised. The final section concludes.

**Support for the EU, the region's socio-economic context, and Cohesion Policy**

Recent threats to the European integration process have renewed interest in the determinants of citizens' perception of the EU and their institutions. In this context, scholars and practitioners have been increasingly interested in knowing how the socio-economic framework of countries and regions shapes public attitudes towards the EU and if EU policies in general and CP in particular affect people's attitudes towards the European integration process.

There is abundant evidence on the relationship between macroeconomic fluctuations and electoral outcomes, that has been extensively studied in the political cycle literature (Nordhaus, 1975; Grier and McGarrity, 1998). However, in the case of the EU, Duch and Taylor (1997) argued that imperfect public accountability of EU policies with economic impact prevents citizens from establishing the link between the economic outcomes and the EU. Therefore, macroeconomic fluctuations cannot be expected to have a strong effect

on the perception of citizens about the EU since most of them do not consider the Union as responsible for macroeconomic policies. In other words, it is assumed that variations in aggregate national magnitudes such as growth rates, inflation, and unemployment do not determine support for the EU project. Conversely, economic factors may shape attitudes toward the EU in terms of comparative advantage. Individuals in territories more benefited from integration can be thought to have a better perception of the EU than potential losers. In fact, the concept of winners and losers of EU integration gained momentum from the acceleration of the process of economic and political integration (e.g. Tucker et al., 2002).

The level of income, employment prospects, and educational attainment are natural candidates in the list of regional economic factors that are expected to affect the perception of the EU in a region. But other elements of the regional context could play a role as well. Dąbrowski et al. (2018) has suggested a typology of regional indicators that can potentially shape the attitudes towards the EU. Among the groups they considered, the following three are of particular interest for the empirical analysis carried out in this study:

- Territorial indicators. In the first place, support for European institutions and attitudes towards the EU can vary between urban and rural areas, and even between cities of different size. For example, it is well known that highly skilled and better paid individuals are overrepresented in denser areas (e.g. Glaeser and Maré, 2001). Since there is wide consensus as regards the effect of these personal characteristics on the individuals' degree of identification with Europe (e.g. Verhaegen et al., 2014), it is sensible thinking that attitudes towards the EU will vary between areas of different size.

- Governance indicators. The quality of the institutional framework affects not only the economic performance but also several other dimensions of individuals, such as their social attitudes. In this sense, people in a country or region with low institutional quality can see the EU and its institutions as a protection against the discretion and malfunction of national and/or local authorities. Therefore, under this substitution effect (Bellucci et al., 2012), the image evoked by the EU will be more positive in regions with a poor institutional quality (e.g. widespread corruption). In addition to this mechanism, institutional quality can also affect the perception of the EU if honest

and capable regional governments make more efficient and effective use of EU funds allocated in the region. And also, if they accredit the EU as responsible for the benefits of the policy in the region. Indicators of the quality of the regional government are therefore expected to correlate positively with the variables of support for the EU.

- Socio-economic indicators. The economic utilitarian theory suggests a link between the assessment of the economic costs and benefits of European integration and the extent of support for the EU (Gabel, 1998; Verhaegen et al., 2014). To be clear, under this theory, citizens' support for the EU is positively related to their welfare gains of integration. Therefore, it can be assumed that support will be broader in regions where economic benefits outweigh costs. Gabel and Palmer (1995) postulated that liberalization of capital and labour markets, a common currency, and free trade of goods and services affect citizens differently depending on their level of income. Similarly, the level of education and individual skills are crucial to adapt to the changes in the labour market originated by the above-mentioned processes. Besides, more educated individuals are also more aware of politics and are better able to evaluate messages sent by political elites and the media. Hence, average income and educational attainment in a region are expected to positively correlate with optimistic attitudes toward the EU, since a larger portion of the population will benefit from integration in rich and highly educated territories. Conversely, regions with low employment opportunities will barely benefit from integration, leading to low support for the EU.

The argument that regions with higher levels of socio-economic standings, measured by income level, education, and unemployment, are more prone to greater European integration was corroborates by Duch and Taylor (1997). It is also consistent with the evidence from the study on the regional results in the Brexit referendum by Fidrmuc et al. (2016). They conclude that support for EU membership, i.e. lower share of Brexit votes, was higher in areas that did economically well. In any case, there is an important feature stated by Duch and Taylor (1997) that is worth mentioning: the positive effect of the variables proxying for the socio-economic context of the region is significant but only before the generalized increase in support for the EU at the end of the 80's, that they claimed was driven by the elites. Their results thus suggest that the influence of the regional socio-economic context, and by extension of the territorial and institutional determinants, may vary depending on the overall levels of European support.

An important economic aspect that is expected to shape the citizens' perception of European integration is the amount of EU transfers in the region. Contributions to the political economy literature point to the interaction between the allocation of regional transfers and the incumbent's vote share at the elections ('vote purchasing'). Upper-tier governments can allocate funds in a strategic manner in an attempt to influence the election results (Osterloh, 2011). Based on similar arguments, in the case of the EU it can be argued that citizens from regions where CP is more intense (recipients of more funds) may want to reward EU institutions with a more positive attitude towards European integration. In fact, this could be a side effect (conscious or not) of the policy aimed at helping the less developed territories of the Union to converge with the more advanced ones. If this were the case, we should observe a positive correlation between the intensity of CP in the region and the share of its population that supports the EU project. However, the fact that the amount of CP funds, and eligibility for specific funding objectives, are allocated according to the level of income in the region makes it difficult to establish a univocal relationship between the intensity of the policy and public attitudes towards the EU. This is so because, as mentioned above, lower income levels are usually associated to less support for integration. Therefore, the low portion of wealthy people in regions with large allocations of EU funds may lead to a negative correlation between the intensity of CP and regional support for the EU. In other words, the animosity of people in less developed regions who are subsidized by EU funds could undermine support, counteracting the effect of regional transfers aimed at compensating for territorial disparities in comparative advantages.

The empirical evidence in the extant literature about the net effect of CP in the region on the attitudes of citizens toward the EU is inconclusive. Initial studies using data for the 1980's concluded against a positive effect of the policy. Duch and Taylor (1997) obtained a negative correlation between the amount of regional development funds per capita and support for the EU in the period 1983 to 1989. However, the coefficient of interest is not statistically significant and, above all, the number of regions considered in their analysis is rather limited (40 in basic regressions and 27 when regional controls are included). In any case, they concluded that regional subventions were not effective for building support for the EU.

More recent studies, covering the period since the late 1990s, are more optimistic about the effect of CP in shaping support for the EU.[1] Osterloh (2011) found a positive impact of the Structural Fund payments per capita in the region on support for the EU in the period from 1995 to 1999. This study also points to two interesting pieces of evidence. The first is that there may be spatial spillovers at work, since the positive effect of the policy on EU support seems not to be restricted to the recipient regions, but spills over other regions within the country. The second is that CP funds are far from having homogeneous effects across population groups. In particular, highly educated people are more aware of the policy and react more strongly to the Structural Funds spent in the region than the low educated. This heterogeneous effect of the policy is supported by the results in Chalmers and Dellmuth (2015) using data from the spring Eurobarometer of 2010 merged with the total sum of Structural Fund investments per capita in a region during the period 2007–2013. Their evidence suggests that the effect of regional transfers depends on communal identity (feelings of EU citizenship) and education, which they claimed are not in the hands of European institutions. In a more recent study, Dellmuth and Chalmers (2018) argued that it is important to consider how transfers are spent. In particular, based on results for 127 EU regions in 13 member states during the period 2001 to 2011, they showed that support for the EU increases with the fit between the economic needs in the region and EU spending on human capital, infrastructure and environment.

Other recent studies have exploited data on pro-European versus Eurosceptic or anti-EU voting to conclude on the effect of EU regional policy on public attitudes towards the integration process. Fidrmuc et al. (2016) analyse the relationship between the intensity of CP in the NUTS 2 regions of the UK and the Brexit vote in the 2016 referendum, concluding that European transfers played virtually no role in the results. A similar conclusion has been reached in the study of Crescenzi et al. (2017), using more disaggregated spatial data (electoral wards) and a sophisticated method to identify the causal effect of EU funds on the Brexit vote. Nevertheless, their results suggest that the 'Remain' vote was higher in less developed areas where EU investments had visible effects on the local labour market conditions. The impact of the effectiveness of CP funds spent in the region and the pro-European voting has also been highlighted in the case of

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[1] This is not the case in the study of Verhaegen et al. (2014). However, they consider the effect of the amount of EU funds received in the country rather than in each region.

the French presidential elections of 2017 by Bachtrögler and Oberhofer (2018). They measured effectiveness in terms of employment growth in the set of firms benefited by EU funds in the French NUTS 3 regions, observing that it correlates negatively with the vote shares for the Eurosceptic candidate.

Overall, the extant literature is not conclusive about the effect of CP on citizens' attitudes towards the EU. Only the most recent studies have derived a significant positive effect under certain circumstances and using micro-level data or results in recent elections in specific EU countries. In fact, the evidence on the perception of the EU from aggregate data for a large group of regions of several member states is non-existent. The following sections intend to contribute to filling this gap.

**Dataset and variables**

The microdata files of the Eurobarometer survey for different years of the period under analysis, 2000-2016, were used to calculate the indicators of regional support for the EU.[2] The Eurobarometer is conducted since the mid 70's on behalf of the European Commission to monitor the public opinion in the EU and its member states, particularly with respect to the perception that citizens have about the EU integration process, its institutions and policies. The Eurobarometer includes a series of 'stable' or 'topical' questions that allow tracking the evolution of the public opinion on specific issues. In particular, I focus on the responses to the question:

*"Generally speaking, do you think that (OUR COUNTRY'S) membership of the European Union is …?*

*A good thing / A bad thing / Neither a good thing nor a bad thing / Don't Know"*

The first indicator of the degree of support for the EU is computed as the percentage of people in the region that responded '*A good thing*'. This indicator of support is the one most frequently used in the extant literature (e.g. Duch and Taylor, 1997, Serricchio et al., 2013; Verhaegen et al., 2014). Similarly, following some studies in the literature (e.g. Gabel and Palmer, 1995), a complementary indicator of support is computed as the share of people that responded '*Benefited*' to the question:

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[2] Details on the Eurobarometer surveys used to compute the regional indicators of support for the EU and the procedure used to obtain the indicators are provided in the Online Supplemental Material.

*"Taking everything into account, would you say that (OUR COUNTRY) has on balance benefited or not from being a member of the EU?*

*Benefited / Not benefited / Don't Know"*

The two indicators were calculated for the regions of the EU28 in three subperiods: 2000-2002, 2007-2009, and 2014-2016.[3] In the case of the oldest member states, indicators were calculated for the three subperiods, whereas lack of information in the Eurobarometer surveys for the EU13 countries before they joined the Union prevents including this group of regions in the first subperiod.

Data on regional indicators of citizens' support for the EU were combined with figures on the amount of Structural Funds spent in each region. The specific variable used to account for the intensity of CP in the region is the amount of total Structural Fund expenditures per capita in the year immediately before the period in which the indicators of perception are measured. To be clear, for example, the total amount of Structural Funds spent in the region in 2013 was assigned to the 2014–2016 period. It is worth noting that, due to the stability shown by EU expenditure figures in each region, I obtained similar results when using data of Structural Funds in adjacent years, as well as when computing an average of consecutive years. In addition to the intensity of the policy, the study assesses the influence of the effectiveness in the implementation of CP in the region. In the first place, a traditional indicator is used. This is the so-called absorption rate, defined as the ratio between the amount of funds effectively spent in the region over the lifetime of the programming period 2007-2013 and the amount allocated to the region.[4] Alternatively, I use two measures that could better capture the effective use of the resources allocated in the region. On the one hand, the percentage of expenditures accumulated after five years of implementation of the programme, that is to say, from 2007 to 2011. On the other, the number of years needed to accumulate 50 per cent of the amount allocated to the region.[5]

Regarding the variables of the socio-economic situation of the region, I consider the gross domestic product per inhabitant (GDP per capita), the percentage of the regional

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[3] The list of regions is reported in Table SM1 of the Online Supplemental Material.

[4] Payments made by the European Commission until 2016, as reflected in the figures published in June 2018.

[5] See López-Bazo and Moreno (2019) for details on these alternative indicators.

population between 25 and 64 years old with tertiary education –ISCED levels 5 to 8–, the employment rate, and two indicators measuring the poverty level in the region: the risk-of-poverty rate and the rate of social exclusion. To study the effect of territorial disparities, and more precisely of the agglomeration of population, population density is considered. As to the quality of the institutional framework, it is proxied by the regional European Quality of Government Index (EQI).[6] Higher scores imply higher quality of government and, thus, a better institutional framework in the region. However, since this data is only available for 2010, 2013 and 2017 I could only combine the EQI data with the indicators of support for the EU in the last subperiod.

It should be stressed that data on some of these variables is not available for certain regions for which the indicators of support have been calculated. As a consequence, specifications that include them has been estimated with a lower number of regions. In the worst case (when using the measures of poverty), 120 regions are used to estimate the coefficients of interest. In general, the number of regions used in the analysis (about 175) is far above the one used in previous studies using aggregate data (e.g. Duch and Taylor, 1997). Interestingly, they are from a numerous and heterogeneous group of EU member states, in contrast with studies that only exploit data from a single country (e.g. Fidrmuc et al., 2016).

The descriptive statistics of the indicators of regional support for the EU, Structural Funds per capita in the region and controls of the regional context are reported in the Online Supplemental Material. Inspection of the figures reveals considerable regional heterogeneity in support for the EU. Interestingly, EU regions also varied in the incidence of CP. I take advantage of this variability to estimate the effect of CP on regional support for the EU.

**Results**

The first part of this section analyses the relationship between the intensity of CP and regional support for the EU, together with the association between the latter and the different territorial, institutional and socio-economic variables. In a first step, simple regressions are run to assess the amount of correlation of each individual indicator:

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[6] See Charron et al. (2014 and 2015).

$$Support\_EU_{it} = \alpha + \delta_t + \beta \cdot X_{it} + \varepsilon_{it} \tag{1}$$

where *Support_EU* refers to any of the two regional indicators of citizens' support for the EU, and *X* to a single indicator in the list described in the previous section, including the amount of Structural Fund expenditures per capita. $\delta_t$ denotes period fixed effects. The subscripts *i* and *t* refer to regions and periods, respectively. The coefficient of interest is $\beta$, which captures the effect of the corresponding variable in *X* on the indicator of support. It should be noted that region fixed effects are not considered because the interest at this stage is just the appraisal of the raw correlation between the variables.

In a second stage, the effect of Structural Fund expenditures per capita in the region is estimated in a regression that includes the variables of the regional context as controls. To be sure, the specification to be estimated is as follows:

$$Support\_EU_{it} = \alpha_i + \delta_t + \beta_{CP} \cdot SF\ pc_{it} + Z_{it} \cdot \gamma + \varepsilon_{it} \tag{2}$$

where *Support_EU* is defined as above, *SF pc* refers to the (log of) Structural Fund expenditures per capita, *Z* is a vector of controls, including the (log of) GDP per capita, the share of population with tertiary education, the employment rate, and the (log of) population density.[7] Finally, $\alpha_i$ and $\delta_t$ denote region and period fixed effects, respectively. The coefficient of interest is $\beta_{CP}$, which captures the effect of CP funds in the region on support for the EU net of the effect of the contextual factors. Specifically, when total Structural Fund expenditures per capita in the region increase by 1 per cent, the corresponding indicator of support increases in 100*$\beta_{CP}$ percentage points.[8]

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[7] The other measures of the region's context (quality of government, poverty and social exclusion) were not included at this stage to avoid the reduction in the number of regions used in the analysis, and because they are not available for the three subperiods. As will be discussed later, only the coefficient of the measure of institutional quality is significant in the individual regressions. In any case, the inclusion of these measures for the periods and regions for which they are available does not change the general conclusion on the effect of the CP variable.

[8] Controlling for observable and unobservable (through region fixed effects) heterogeneity works in favour of the identification of the causal effect of the incidence of CP in the region on the degree of support for the EU. Still, it could be argued that the estimation of the parameter of interest could be polluted by reverse causality. That would be the case if the amount of CP funds allocated to a region was decided depending on the degree of support for the EU of its citizens. In this regard, it is important to stress that the distribution of CP funds among the EU regions in each programming period was decided long before the funds were really spent, and the responses of the Eurobarometer surveys used to compute the indicators of support were collected. Even more important, the allocation of CP funds to the regions was decided based on objective economic indicators that in no case included the citizens' perception of the EU and its institutions.

A similar analysis is performed in the second part of the section with respect to the effect of the effectiveness in the management and deployment of CP funds. Therefore, I first estimate the raw effects from single regressions using the variables of absorption of Structural Funds described above. Then, the effects net of the influence of the factors that proxy the regional context are estimated using a multivariate framework, where the corresponding variable of absorption is included as an additional regressor in equation (2).

### *Effect of the intensity of Cohesion Policy*

The estimates of the coefficients associated to the Structural Fund expenditures per capita in the region, and the factors of the regional context, on the two regional indicators of support for the EU are reported in Tables 1 and 2. The ones from the simple regressions – eq. 1 – are shown in a first group of columns (i to viii), whereas those from the multivariate framework – eq. 2 – are in the last two columns (ix and x).

As for the raw effects on the first indicator of support for the EU, column (i) in Table 1 shows that the correlation between the amount of Structural Funds spent in the region and the proportion of its population that believed that the country's membership of the EU is a good thing is negative (and statistically significant at 5 per cent). A 1 per cent increase in the amount of expenditures per capita is associated to a decrease of 1.6 percentage points (p.p) in regional support. In other words, this result suggests that there could have been less support for the EU in regions that benefited most from CP in terms of the amount of funds per capita spent in the region. This is consistent with the fact that the relationship between support for the EU and GDP per capita in the region is positive and highly significant. An increase of 1 per cent in income per capita is linked to a substantial rise in support, of almost 8 p.p. Therefore, the coefficient in the single regression for the intensity of CP may well be capturing the lowest support in the less advanced regions, i.e. those that received the bulk of CP funds. As in the results of previous studies, support also correlates positively with the proportion of highly educated population in the region. The estimated coefficient suggests that increasing the proportion of population with tertiary education by 10 p.p. could have enlarged support by 3.4 p.p.

Overall, the results of the simple regressions confirm that support for the EU was more widespread in the more advanced regions, which led, at least in part, to less support in the regions most benefited by CP. Interestingly, neither the employment rate nor the

proportions of people at risk of poverty and social exclusion correlate with the indicator of support based on the perception of the country's membership to the EU. This is against the hypothesis that the higher the percentage of discontented people in the region the lower the support for the EU integration process. However, it should be kept in mind that data for the two variables of poverty is available for a limited subset of regions and only for the last sub-period analysed. On the other hand, the results in columns (vii) and (viii) confirm positive and significant relationships between support for the EU and the variables of agglomeration of population and institutional quality.

The results of the estimation of the effect of the Structural Fund expenditures per capita controlling for the set of regional characteristics for which data is available in the three sub-periods are reported in columns (ix) and (x) of Table 1. The difference between these two columns is the inclusion in the last one of region fixed effects. They account for unobservable regional characteristics that are expected to affect the degree of support for the EU, and correlate with the amount of Structural Funds in the region and with the other variables of the regional context. Interestingly, they could be accounting for the effect of poverty, social exclusion and institutional quality provided that these variables do not vary much during the period analysed. It can be seen that the coefficient of EU funds turns out to be non-significant in both specifications. This confirms that the significant negative effect derived from the simple regression in column (i) can be attributed to the omission of variables accounting for differences in the socio-economic context, particularly the per capita GDP.

The results obtained in the regressions for the other indicator of support, the percentage of the region's population that believed that membership of the EU is beneficial for the country, are summarized in Table 2. In this case, the simple regression points to a positive correlation with the intensity of CP in the region. A 1 per cent increase in Structural Fund expenditures per capita is associated to a rise of 1.5 p.p. in the indicator of benefits from EU membership. A difference with respect to the previous indicator of support is that none of the socio-economic variables correlates with the one analysed now. Coefficients of GDP per capita, tertiary education, and employment rate are positive but not statistically different from zero. By contrast, the coefficients of the poverty variables are negative, though also non-significant. As for the variables of the territorial and institutional context, there seems to be a positive and significant association between population density and the percentage of the population that believed that the country

benefits from being part of the EU, whereas there seems to be no relationship in this case with the quality of regional institutions.

The estimated effect of the Structural Fund expenditures remains positive after controlling for the observed elements of the regional context (column ix). In fact, it turns out to be more significant and of greater magnitude than when estimated in the simple regression (column i). This estimate suggests that the gap in support between a region that received 10 per cent more EU funds per capita than an otherwise similar region was about 39 p.p. It can also be observed that the coefficients of the level of income per capita and population density are positive, although only marginally significant in the case of the former variable. However, these results can be put into question considering the estimates that control for regional unobservables, i.e. that include region fixed effects. The coefficient for the intensity of the CP in column (x) is similar in magnitude to the one in column (i) but becomes non-significant due to a larger standard error. The essential difference between the specifications that include and do not include the region fixed effects is that the former only exploits the time variation in the data (i.e. disregards variation across regions). This makes an important difference in a variable such as the Structural Fund expenditures that tend to be quite stable over the period analysed, while it varies substantially across regions.

Therefore, being cautious, the only thing that can be concluded from these results is that the variation in the indicator of support not explained by the regional context correlates with the regional variation in the intensity of the CP. But this correlation could be due to other factors in the region (that we do not / cannot observe) that affected the degree of regional support for the EU and correlated with the amount of Structural Funds.

### *Effect of the efficiency in the implementation of Cohesion Policy*

So far, attention has focused on the effect of the intensity of CP, measured by the total amount of Structural Fund expenditures per capita in the region. However, the management and deployment of funds allocated to the region can also be important when it comes to the perception of the impact that CP interventions in the region have on its citizens and, eventually, on the degree of regional support for the EU. As a consequence, in this section I explore the relationship between the so-called rate of absorption of CP funds in the region (Tosun, 2014; Arbolino et al., 2019) and the two regional indicators of support for the EU. Besides, under the assumption that the absorption rate could hide

important aspect of the effectiveness in the management of funds allocated to the region, I extend the analysis to two alternative variables, namely the percentage of funds spent in the first five years of implementation of the programme, and the number of years needed to accumulate 50 per cent of the amount allocated to the region.

The results are summarised in Table 3. As in the previous analysis, this table includes estimates of the effect of each variable of effectiveness in the implementation of CP from the simple regressions as well as those obtained from the specifications that add the amount of Structural Fund expenditures per capita and regional controls.[9] To maximize comparability with results in the previous section, the same set of regional controls have been considered. It is important to stress that since the measures of effectiveness are only available for the programming period 2007–2013, it is not possible to estimate the effects of interest by pooling the data for the three subperiods used in the analysis carried out so far. Therefore, the regressions in this section exploit only the cross section of regions for the last subperiod, 2014–2016, meaning that I cannot control for unobserved region effects that could correlate with both the measures of absorption and the indicators of support. As a consequence, the results in Table 3 should not be read as evidence of a pure causal effect.

Columns (i) and (ii) in Table 3 show the results corresponding to the regional absorption rate of CP funds. It can be observed that there is no significant relationship between the two indicators of support and the ratio between the amounts actually spent and allocated to the region. The only significant coefficient is observed in the simple regression between the absorption rate and the proportion of regional population that believed that the country benefited from EU membership. However, the relationship vanishes when regional controls are included.

A different picture is deduced from the results with the alternative indicators of absorption capacity. Those corresponding to the percentage spent in the first five years are reported in columns (iii) and (iv). In this case, results indicate that the greater the percentage of EU funds spent in the region in the first five years of the programming period, the higher

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[9] It is worth noting that the inclusion of the amount of Structural Funds as a control aims to capture differences in the efforts required to manage the funds allocated to the region. The other regional controls, particularly per capita GDP, are expected to capture the effect of differences in resources available to manage EU funds. The coefficients associated to the amount of Structural Funds and controls of the regional context are not reported for the sake of saving space. They are available upon request.

the regional support for the EU. This positive relationship is statistically significant (at 5 per cent) and, particularly in the case of benefit from EU membership, its magnitude does not seem to be affected by the inclusion of the amount of Structural Funds and controls of the regional context. The evidence obtained when using the variable of speed in the implementation is quite similar to the one for the percentage spent in five years. As reported in the last two columns of Table 3, support for the EU correlates negatively with the number of years needed to accumulate 50 per cent of the funds allocated to the region. Therefore, inefficiency in the management and deployment of EU funds, reflected in an unbalanced pattern in the temporal distribution of the expenditures in the region, could have led to less support for the EU compared to regions in which the management of funds was more effective.

Summing up, whereas the results confirm the lack of relationship between the rate of absorption of CP funds in the region and support for the EU, there could have been a connection with the pace at which the EU funds allocated to the region were spent throughout the programming period. This might be due to a more appropriate allocation of resources to solve the problems of the region, leading to a more positive perception of the policy by the region's population. But it can also capture the effect of the quality of local and national governments, and of the entire socio-economic system in the region. Better institutional and socio-economic frameworks are expected to facilitate the allocation of EU funds to profitable projects in due time, whereas institutional deficiencies can hamper the appropriate management of the allocated resources.

**Conclusions**

The extent to which EU citizens support the European integration project and the reasons that could explain their more or less positive views of the Union and its institutions have been the subject of lively academic and social debates ever since the creation of the European Economic Community in 1957. But, without a doubt, interest on public attitudes towards the EU has been renewed and reinforced in recent years due to the spread of anti-EU arguments, nurtured by neonationalism and populism movements in several member states. Against this framework, this study has taken advantage of regional variability in the degree of support for the EU to assess the effect on support of CP, which is claimed to be the EU policy with a greater impact on people's daily life. Unlike

previous studies, it has done so for a period that includes the most recent episodes of economic expansion and recession of European economies.

The analysis has taken into account that not only the intensity of CP in the region could matter in determining the extent of regional support for the EU, but also the effectiveness in the implementation of the policy in the region. In this regard, in addition to the absorption rate of EU funds in the region at the end of the programming period (as a traditional indicator of absorption of the funds), the study has considered other alternative indicators that aim to capture the region's ability to effectively manage the funds allocated by CP.

The results do not confirm a significant net effect of the intensity of CP in the region on the degree of regional support for the EU. In other words, support would not necessarily be greater in regions that concentrate larger amounts of Structural Funds per capita. Indeed, the significant correlation that is observed between the indicators of support and Structural Fund expenditures per capita in the set of EU28 regions in the period 2000-2016 is likely to be due to the influence exerted by some factors of the regional context. Once their effect is taken into account in the empirical specification, the association between the intensity of CP and regional support vanishes. This raises doubts about the effectiveness of the mechanisms of communicating the benefits of CP. Specifically, it could be failing in connecting the citizens' perception of the policy and their support for the European project (López-Bazo and Royuela, 2019). This is not surprising since so far CP has not included among its objectives the strengthening of the identification of EU citizens with the European integration project.

By contrast, the evidence in this study points to a role of the effectiveness in the management and deployment of CP funds allocated to the region. Support for the EU could be more widespread in those places where there is a reasonable distribution over the programming period of CP funds allocated to the region. On the contrary, the concentration of the bulk of the expenditures at the end of the programming period could be indicating a poor and ineffective use of the available EU funds, which would prevent a positive perception of the policy. Unfortunately, lack of data on the absorption indicators for several periods has prevented me to control for unobserved regional factors that could explain this positive relationship. In particular, an appropriate institutional environment and the proper involvement of social and economic agents in the region could be favouring the effective management and deployment of CP funds and, at the

same time, feeding regional support for the EU (Capello, 2018). This is an interesting aspect that should be addressed in future studies.

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## Table 1: *EU membership as a good thing* and regional factors.

| | (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viii) |
|---|---|---|---|---|---|---|---|---|
| **SF pc (log)** | -0.0159**<br>(0.0070) | | | | | | | |
| **GDP pc (log)** | | 0.0773***<br>(0.0224) | | | | | | |
| **Tertiary educ** | | | 0.0034***<br>(0.0010) | | | | | |
| **Employment rate** | | | | 0.0017<br>(0.0013) | | | | |
| **Poverty risk** | | | | | 0.0003<br>(0.0016) | | | |
| **Poverty – Social excl.** | | | | | | 0.0006<br>(0.0012) | | |
| **Pop. density (log)** | | | | | | | 0.0354***<br>(0.0080) | |
| **EQI** | | | | | | | | 0.0358***<br>(0.0121) |
| | | | | | | | | |
| **Region FE** | NO | NO | NO | NO | NO | NO | NO | NO |
| **Period FE** | YES | YES | YES | YES | YES | YES | YES | YES |
| | | | | | | | | |
| **Observations** | 464 | 460 | 464 | 463 | 450 | 148 | 120 | 120 |
| **R-squared** | 0.0191 | 0.0431 | 0.0407 | 0.0086 | 0.0746 | 0.0556 | 0.0782 | 0.0803 |

**Notes:** Clustered (by region) standard errors in parenthesis. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. The within-R-squared is reported in column (xi).

## Table 2: *Benefit from EU membership* and regional factors.

| | (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viii) |
|---|---|---|---|---|---|---|---|---|
| **SF pc (log)** | 0.0152** | | | | | | | |
| | (0.0069) | | | | | | | |
| **GDP pc (log)** | | 0.0205 | | | | | | |
| | | (0.0224) | | | | | | |
| **Tertiary educ** | | | 0.0015 | | | | | |
| | | | (0.0010) | | | | | |
| **Employment rate** | | | | 0.0002 | | | | |
| | | | | (0.0012) | | | | |
| **Poverty risk** | | | | | -0.0025 | | | |
| | | | | | (0.0016) | | | |
| **Poverty – Social excl.** | | | | | | -0.0016 | | |
| | | | | | | (0.0012) | | |
| **Pop. density (log)** | | | | | | | 0.0205*** | |
| | | | | | | | (0.0075) | |
| **EQI** | | | | | | | | 0.0170 |
| | | | | | | | | (0.0122) |
| | | | | | | | | |
| **Region FE** | NO | NO | NO | NO | NO | NO | NO | NO |
| **Period FE** | YES | YES | YES | YES | YES | YES | YES | YES |
| **Observations** | 464 | 460 | 464 | 463 | 450 | 148 | 120 | 120 |
| **R-squared** | 0.0629 | 0.0536 | 0.0596 | 0.0508 | 0.0950 | 0.0121 | 0.0822 | 0.0750 |

**Notes:** Clustered (by region) standard errors in parenthesis. *** p<0.01, ** p<0.05, * p<0.1. The within-R-squared is reported in column (xi).

**Table 3: Support for the EU and effectiveness in the management of the CP funds.**

| | (i) | (ii) | (iii) | (iv) | (v) | (vi) |
|---|---|---|---|---|---|---|
| **EU membership as a good thing** | | | | | | |
| | | | | | | |
| **Absorption rate** | 0.0230 | -0.0002 | | | | |
| | (0.0185) | (0.0145) | | | | |
| **Percentage in 5 years** | | | 0.4391*** | 0.2854** | | |
| | | | (0.1403) | (0.1369) | | |
| **Years until 50%** | | | | | -0.0739*** | -0.0643*** |
| | | | | | (0.0180) | (0.0157) |
| **Regional Controls** | NO | YES | NO | YES | NO | YES |
| **R-squared** | 0.0058 | 0.2297 | 0.0745 | 0.2542 | 0.1080 | 0.3031 |
| **Benefit from EU membership** | | | | | | |
| | | | | | | |
| **Absorption rate** | 0.0186** | -0.0083 | | | | |
| | (0.0078) | -0.0109 | | | | |
| **Percentage in 5 years** | | | 0.3360** | 0.3039** | | |
| | | | (0.1367) | (0.1525) | | |
| **Years until 50%** | | | | | -0.0596*** | -0.0601*** |
| | | | | | (0.0186) | (0.0172) |
| **Regional Controls** | NO | YES | NO | YES | NO | YES |
| **R-squared** | 0.0032 | 0.2377 | 0.0363 | 0.2603 | 0.0586 | 0.2906 |

**Notes**: Estimates using observations for 143 (140 in columns ii, iv, and vii) regions. Data for the perception of the EU from the period 2014-2016. The indicators of the efficiency in the management of the EU funds are those defined in section 2. Regional controls are the ones used in the multiple regressions in Tables 1 and 2. Robust standard errors in parenthesis. *** p<0.01, ** p<0.05, * p<0.1. The within-R-squared is reported in columns (ii), (iv) and (vi).

# ONLINE SUPPLEMENTAL MATERIAL

## On the impact of European Union Cohesion Policy
## on regional support for the European project

**Details on the data used to calculate the regional indicators of support for the EU**

Data from the Standard Eurobarometer survey is collected twice a year, in spring and autumn, by means of face-to-face interviews to approximately 1,000 individuals, aged 15 years and over, in each country.[10] The samples for the Standard Eurobarometer surveys are new and independently drawn (repeated cross-sections). The sampling procedure takes into account the distribution of the population of each country in terms of metropolitan, urban and rural areas, within the administrative regions (NUTS 2 in almost all countries) of each country.

The statistical margins due to the sampling process are shown to be within acceptable limits for the size of the country samples, i.e. for about 1,000 responses. Therefore, conclusions derived from responses in the Standard Eurobarometer surveys for the EU as a whole and for every member state are expected to be reliable. However, deviations from the real figures in the population increase as the number of observations shrinks. This is important for this study, as I intend to compute indicators of support for the set of EU regions, while the number of sample observations for each one is rather limited. As in Dąbrowski et al. (2018) and Capello and Perucca (2018), I try to overcome this drawback by combining the samples of the Eurobarometer surveys of three consecutive years. In this way, the number of responses by region is expected to be large enough to keep the statistical margins within reasonable limits.[11] In any case, it should be mentioned that some robustness checks were performed to assess the influence of the inclusion of regions with the least number of responses. In general, the main conclusions derived from the

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[10] About 500 interviews in small countries.
[11] The average number of observations used to compute the indicators in the set of regions used for the analysis is 442.7, whereas in the median region there are 297 observations. In less than 10% of the regions, the number of responses is lower than 100, whereas in the top 25% there are more than 500 responses.

results reported using the entire set of regions are not affected by the exclusion of those with fewer responses.

The period under analysis ranges from 2000 to 2016. Although it is possible to compute indicators of support and attitudes using the Eurobarometer surveys prior to 2000, I have not made use of this earlier information for several reasons. First, because homogeneous 'official' regional data for some of the socio-economic variables of interest in the study is only available since 2000. Second, because the information for the questions of interest in the Eurobarometer surveys is available only for the EU member states in the year in which the survey was carried out. To be clear, information for the EU13 countries was only included starting from the year in which they joined the EU.[12] Finally, because changes over time in the definition of the territorial breakdown (NUTS system) makes comparing the regional aggregate figures of the Eurobarometer survey over longer periods quite difficult. It should also be noted that the analysed period ends in 2016 because this was the last year for which the Eurobarometer survey microdata files were available when the study was designed.

Considering these circumstances, I define three subperiods, including three years each: 2000–2002, 2007–2009, and 2014–2016. The first is a period of growth of the European economy, while the second includes the downturn caused by the financial and economic crises. The last subperiod corresponds to the phase of the recovery, characterized by moderate growth. It is assumed that the degree of support for the EU in a region does not change dramatically from one year to the next. For that reason, the analysis allows for a window of five years between subperiods, in order to maximize the possibility of differences in citizens' perceptions in the territories under analysis.

The Eurobarometer surveys used to calculate the indicators of interest for the set of EU regions in the three subperiods were selected based on the inclusion of the questions proxying for support (since the two questions are all not always included in both the spring and autumn editions). They are the following ones:

- Period 2000–2002: ZA3296–Eurobarometer 53 (spring 2000), ZA3627–Eurobarometer 56.2 (autumn 2001), ZA3693–Eurobarometer 58.1 (autumn 2002)

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[12] The consideration of information from the CEE Eurobarometer (1990-1997) and the Candidate Countries Eurobarometer (2000-2004) could be an interesting exercise but is beyond the scope of the current study.

- Period 2007–2009: ZA4530–Eurobarometer 67.2 (spring 2007), ZA4819–Eurobarometer 70.1 (autumn 2008), ZA4994–Eurobarometer 72.4 (autumn 2009)

- Period 2014–2016: ZA5932–Eurobarometer 82.3 (autumn 2014), ZA5998–Eurobarometer 83.3 (spring 2015), ZA6788–Eurobarometer 86.2 (autumn 2016)

It should be mentioned that this study uses the regional codes made available in the PERCEIVE regional dataset and in the micro-data files of the Standard Eurobarometers from 2000 to 2016.[13] This facilitates the construction of the indicators of support from the Eurobarometer micro-data files for a set of EU regions in different years, and the combination of the resulting indicators with the other regional magnitudes used in the study. In any case, it should be mentioned that I had to deal with changes in the definition of the NUTS system introduced over the analysed period, which in some cases resulted in a decrease in the territorial detail used for some countries (e.g. by grouping some regions). In addition, I gathered responses in regions with a low number of individuals in the sample even after adding the responses in the Eurobarometer surveys of three consecutive years. The criteria for grouping regions in this case was geographical proximity. As a result, the final set of territorial units is composed by 180 regions, 124 from the EU15 and 56 from the EU13, as reported in Table SM1.

**Details on the socio-economic variables used in the study**

GDP per capita is measured in purchasing power standards to account for differences across countries in the cost of living. However, it does not discount price differences within countries.

I preferred to use the employment rate instead of the unemployment rate because regions in the sample differ greatly in participation rates. The employment rate is defined as the ratio between the employed and the working age population (15 to 64 years old) in the region.

The risk-of-poverty rate is the percentage of the region's population with an equivalized disposable income below the risk-of-poverty threshold.[14] The rate of social exclusion adds to the persons in risk of poverty those being above the risk-of-poverty threshold but

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[13] Charron (2017). Available at https://zenodo.org/record/845349#.XAViPC2ZPUI
[14] It is set at 60% of the national median equivalized disposable income.

severely materially deprived or living in households with very low work intensity. The primary source of information for the construction of the poverty indicators is the EU statistics on income and living conditions (EU-SILC). Since it is available from 2003 onwards, I cannot include the first subperiod (2000–2002) when analysing the relationship between poverty and citizens' attitudes towards the EU. In addition, the poverty indicators are only available for a limited number of NUTS 1 and NUTS 2 regions. In particular, after merging them with the perception indicators, information is only available for 55 regions in the second subperiod and 65 in the third subperiod.

Population density is used to proxy for the effect of the agglomeration of population. It is defined as the annual average population per square kilometre in the region.

The European Quality of Government Index (EQI) is an index computed based on survey data on regional level governance in the EU by The Quality of Government Institute (Charron et al., 2014 and 2015). Data is available for 2010, 2013 and 2017. Therefore, it is only possible to combine data on the EQI with the indicators of the perception of the EU for the last subperiod. In particular, the results in in the study are obtained using the EQI for 2013, as it includes more regions than the 2010 edition (206 in 2013 versus 172 in 2010). After combining these data with those of the EU perceptions, the sample was reduced to 148 regions.

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Dąbrowski, B. M., Stead, D. and Mashhoodi, B. (2018) 'Towards a regional typology of EU identification'. COHESIFY Research Paper No. 6.

# Table SM1: List of regions used in the analysis.

| Country | Regions |
|---|---|
| **AT** | Burgenland, Niederösterreich, Wien, Kärnten, Steiermark, Oberösterreich, Salzburg, Tirol, Vorarlberg |
| **BE** | Bruxelles-Capitale / Brussels, Hoofdstedelijk Gewest, Prov. Antwerpen, Prov. Limburg (BE), Prov. Oost-Vlaanderen, Prov. Vlaams-Brabant, Prov. West-Vlaanderen, Prov. Brabant Wallon, Prov. Hainaut, Prov. Liège, Prov. Luxembourg (BE), Prov. Namur |
| **BG** | Северозападен (Severozapaden), Северен централен (Severen tsentralen), Североизточен (Severoiztochen), Югоизточен (Yugoiztochen), Югозападен (Yugozapaden), Южен централен (Yuzhen tsentralen) |
| **CY** | Κύπρος (Kypros) |
| **CZ** | Praha, Střední Čechy, Jihozápad, Severozápad, Severovýchod, Jihovýchod, Střední Morava, Moravskoslezsko |
| **DE** | Baden-Württemberg, Bayern, Berlin, Brandenburg, Bremen, Hamburg, Hessen, Mecklenburg-Vorpommern, Niedersachsen, Nordrhein-Westfalen, Rheinland-Pfalz, Saarland, Sachsen, Sachsen-Anhalt, Schleswig-Holstein, Thüringen |
| **DK** | Hovedstaden, Sjælland, Syddanmark, Midtjylland & Nordjylland |
| **EE** | Eesti |
| **ES** | Galicia, Principado de Asturias & Cantabria, País Vasco, Comunidad Foral de Navarra & La Rioja, Aragón, Comunidad de Madrid, Castilla y León, Castilla-La Mancha, Extremadura, Catalunya, Comunidad Valenciana, Illes Balears, Andalucía, Región de Murcia, Canarias |
| **FI** | Etelä-Suomi, Länsi-Suomi, Helsinki-Uusimaa, Pohjois- ja Itä-Suomi |
| **FR** | Île de France, Champagne-Ardenne & Alsace, Picardie, Haute-Normandie, Centre, Basse-Normandie, Nord - Pas-de-Calais, Lorraine, Franche-Comté & Bourgogne, Pays de la Loire, Bretagne, Poitou-Charentes & Limousin, Aquitaine, Midi-Pyrénées, Rhône-Alpes & Auvergne, Languedoc-Roussillon, Provence-Alpes-Côte d'Azur |
| **GB** | North East (England), North West (England), Yorkshire and the Humber, East Midlands (England), West Midlands (England), East of England, London, South East (England), South West (England), Wales, Scotland, Northern Ireland |
| **GR** | Βορεια Ελλαδα (Voreia Ellada), Κεντρικη Ελλαδα (Kentriki Ellada) & Αττικη (Attiki), Νησια Αιγαιου, Κρητη (Nisia Aigaiou, Kriti) |
| **HR** | Jadranska Hrvatska, Kontinentalna Hrvatska |
| **HU** | Közép-Magyarország, Közép-Dunántúl, Nyugat-Dunántúl, Dél-Dunántúl, Észak-Magyarország, Észak-Alföld, Dél-Alföld |
| **IE** | Border and Midland and Western, Southern and Eastern |
| **IT** | Piemonte & Liguria, Lombardia, Abruzzo, Campania, Puglia & Basilicata, Sicilia & Calabria, Sardegna, Veneto & Provincia Autonoma di Bolzano/Bozen, Emilia-Romagna, Toscana, Marche & Umbria, Lazio |
| **LT** | Lietuva |
| **LU** | Luxembourg |
| **LV** | Latvija |
| **MT** | Malta |
| **NL** | Groningen, Friesland (NL), Drenthe, Overijssel & Flevoland, Gelderland, Utrecht, Noord-Holland, Zuid-Holland, Noord-Brabant & Zeeland, Limburg (NL) |
| **PL** | Łódzkie, Mazowieckie, Małopolskie, Śląskie, Lubelskie, Podkarpackie, Świętokrzyskie & Opolskie, Podlaskie, Wielkopolskie, Zachodniopomorskie<br>Dolnośląskie & Lubuskie, Kujawsko-pomorskie, Warmińsko-mazurskie, Pomorskie |
| **PT** | Norte, Algarve, Centro (PT), Área Metropolitana de Lisboa, Alentejo |
| **RO** | Nord-Vest, Centru, Nord-Est, Sud-Est, Sud – Muntenia, Bucureşti – Ilfov, Sud-Vest Oltenia, Vest |
| **SE** | Östra Sverige, Södra Sverige, Norra Sverige |
| **SI** | Vzhodna Slovenija, Zahodna Slovenija |
| **SK** | Bratislavský kraj, Západné Slovensko, Stredné Slovensko, Východné, Slovensko |

**Table SM2: Descriptive statistics of the indicators of support for the EU.**

| Indicator | Sample | Period | Mean | Std. Dev | 10% | 25% | 50% | 75% | 90% |
|---|---|---|---|---|---|---|---|---|---|
| | EU 28 | 2007-09 | 54.4 | 14.8 | 34.4 | 43.4 | 55.8 | 66.5 | 73.5 |
| | | 2014-16 | 53.1 | 14.6 | 35.1 | 42.8 | 52.6 | 64.5 | 72.2 |
| **EU membership as good thing** | EU 15 | 2000-02 | 54.7 | 14.1 | 34.6 | 44.2 | 56.3 | 64.5 | 72.2 |
| | | 2007-09 | 55.2 | 15.1 | 35.0 | 43.4 | 55.9 | 68.1 | 74.7 |
| | | 2014-16 | 53.8 | 15.8 | 34.0 | 42.1 | 54.0 | 66.7 | 73.1 |
| | EU 13 | 2007-09 | 52.8 | 14.0 | 29.0 | 44.0 | 55.6 | 64.6 | 68.7 |
| | | 2014-16 | 51.7 | 11.4 | 35.4 | 43.2 | 50.8 | 62.3 | 66.5 |
| | EU 28 | 2007-09 | 59.4 | 14.4 | 40.4 | 46.2 | 61.2 | 72.3 | 77.5 |
| | | 2014-16 | 60.9 | 14.6 | 42.3 | 51.3 | 61.9 | 71.6 | 79.3 |
| **Benefit from EU membership** | EU 15 | 2000-02 | 53.0 | 14.7 | 32.1 | 40.7 | 54.5 | 64.7 | 70.9 |
| | | 2007-09 | 58.3 | 14.2 | 41.1 | 45.7 | 58.8 | 70.1 | 77.0 |
| | | 2014-16 | 58.0 | 14.4 | 37.3 | 48.6 | 59.5 | 69.3 | 76.0 |
| | EU 13 | 2007-09 | 61.8 | 14.7 | 39.9 | 47.3 | 65.4 | 74.7 | 78.4 |
| | | 2014-16 | 67.4 | 13.1 | 47.3 | 60.5 | 65.8 | 77.9 | 84.6 |

**Notes**: Figures are percentages of the population that responded the option represented by the indicator. The number of regions is as follows: 180 for the EU 28; 124 for the EU 15; 56 for the EU 13. The last set of columns refer to the values in the corresponding percentiles of the regional distribution of the variable.

**Table SM3: Descriptive of the Structural Funds per capita and variables of the regional context.**

|  | SF pc (log) | GDP pc (log) | Tertiary education | Employment Rate | Pop. Dens. (log) | Poverty risk | Social exclusion |
|---|---|---|---|---|---|---|---|
| **Pool** | | | | | | | |
| Mean | 3.951 | 10.026 | 24.591 | 64.43 | 5.086 | 17.975 | 26.463 |
| Std. Dev. | 1.228 | 0.393 | 9.242 | 7.346 | 1.129 | 9.210 | 12.246 |
| Obs. | 464 | 460 | 464 | 463 | 450 | 120 | 120 |
| | | | | | | | |
| **2000-2002** | | | | | | | |
| Mean | 3.651 | 9.969 | 21.046 | 63.265 | 5.233 | | |
| Std. Dev. | 1.093 | 0.266 | 7.746 | 7.469 | 1.201 | | |
| Obs. | 117 | 110 | 114 | 113 | 100 | | |
| | | | | | | | |
| **2007-2009** | | | | | | | |
| Mean | 4.000 | 10.003 | 22.852 | 64.998 | 5.037 | 17.227 | 25.22 |
| Std. Dev. | 1.196 | 0.449 | 8.638 | 7.028 | 1.099 | 9.566 | 12.294 |
| Obs. | 174 | 175 | 175 | 175 | 175 | 55 | 55 |
| | | | | | | | |
| **2014-2016** | | | | | | | |
| Mean | 4.105 | 10.085 | 28.639 | 64.613 | 5.05 | 18.608 | 27.515 |
| Std. Dev. | 1.316 | 0.394 | 9.272 | 7.533 | 1.114 | 8.922 | 12.200 |
| Obs. | 173 | 175 | 175 | 175 | 175 | 65 | 65 |

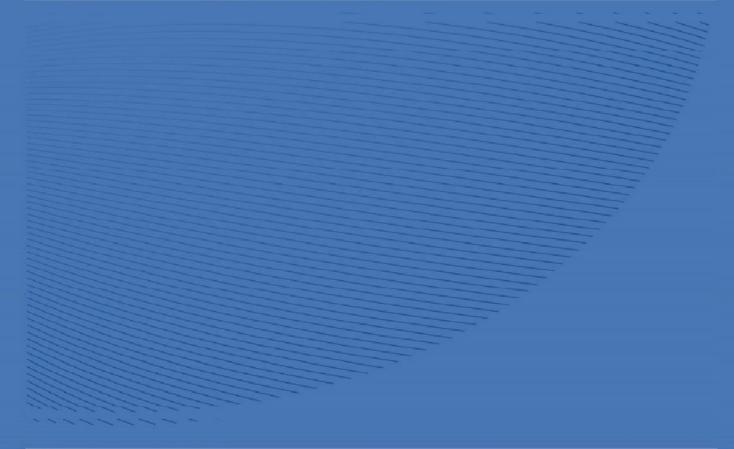**Note**: The descriptive statistics for each variable corresponds to the sample of regions used to estimate the coefficients reported in the tables of the main text.