

# **Citizens' perception of the Cohesion Policy and support for the European Union**

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**Abstract:**

Using a novel database, this study assesses the impact of the perception of the personal benefits of the EU Cohesion Policy on support for the European project. The results show that the gap in support between people who claim to have benefited from the Cohesion Policy and those who feel they have not vanished once differences in individual traits and reverse causality are taken into account. This means that, despite the significant positive effect that the intensity of the Cohesion Policy in the region exerts on the perception of the policy, it does not stimulate support for the EU.

**Keywords:** cohesion policy; attitudes toward the EU; perceived benefits; structural funds; European Union

**JEL codes:** C35, R10, H23, N44

## 1. Introduction

Does the EU Cohesion Policy (CP) shape the mass attitudes towards the European integration process? More specifically, is support for the EU more frequent among citizens who benefit personally from the policy? This is an important question at least for two reasons. First, because the CP is the main policy tool of the EU, with most of its funds allocated to less developed regions and its interventions having the greatest expected impact on people's everyday lives. Second, given its redistributive nature, the CP can compensate the population groups less favoured by the process of European integration, and in this way it could help counteract the current threats to the EU building process (e.g. the rise of Euroscepticism, populism, and neo-nationalism). Despite such implications, so far there is no direct empirical evidence on the relationship between the citizens' perception of the personal benefits of the CP and their support for the European integration process. The main aim of this study is to contribute to filling this gap.

To do so, the study benefits from a unique source of information, namely, the survey carried out under the umbrella of the H2020 PERCEIVE project.<sup>1</sup> The corresponding database includes individuals' responses to questions that capture the two phenomena of interest to this study, allowing us to assess the impact of the perception of having personally benefited from the CP on support for the EU. Additionally, it is possible to assign each respondent in the survey to the region where they lived and, therefore, to merge the individual-level data with the aggregated regional and country indicators, such as the intensity of the CP in the region.

The mechanisms and determinants of the citizens' opinion of the process of European integration and their degree of identification with Europe have been widely studied in the last decades, both from theoretical and empirical perspectives (for recent reviews see e.g. Barberio et al., 2017; Royuela and López-Bazo, 2019; and in particular Bergbauer, 2018). The extant literature suggests that the mass attitude toward the European project is affected by the degree of cognitive mobilization and political awareness of individuals. Specifically, it is argued that support for the EU and/or identification with the European project is greater among people who are more conscious of European issues and who are more interested in politics at the European level (Gabel, 1988; Clements, 2011; Chalmers

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<sup>1</sup> PERCEIVE is an acronym that stands for 'Perception and evaluation of Regional and Cohesion Policies by Europeans and Identification with the values of Europe'. <https://www.perceiveproject.eu>

and Dellmuth, 2015; Luhman, 2017). It has been shown that the perception of the EU also varies between individuals with different political values while, at the same time, it can be influenced by the opinion of leaders and parties' political 'cues' (Gabel, 1988; Marks and Hooghe, 2003; Clements, 2011). Likewise, the evidence indicates that the identification with the process of European integration is not independent of the degree of attachment to national and even subnational identities (Hooghe and Marks, 2004 and 2005; Serricchio et al., 2013, Risse, 2014; Capello, 2018; Capello, 2019), and that it is affected by citizens' trust in European and national institutions, and by their effectiveness during the great recession (Armingeon and Ceka, 2014; Hooghe and Verhaegen, 2017).

From a complementary perspective, the significant impact of the self-perception of the socio-economic situation of the individual agrees with the economic utilitarian theory that states that individuals tend to have a positive view of the EU if they benefit from the integration process (Verhaegen et al., 2014), and with the political economy and the winners/losers explanations of public opinion of European integration (Tucker et al., 2002; Hooghe and Marks, 2004 and 2005; Capello and Perucca, 2019). In parallel, objective socio-economic conditions could shape the perception that different population groups have of the EU (Brinegar and Jolly, 2005; Braun and Tausendpfund, 2014; Borz et al., 2018). In this context, some studies focused on the specific role of the EU CP, coming to different conclusions. While the estimated effect of the amount of structural funds received by the region on support for European integration is positive and significant in some studies (Osterloh, 2011; Brasili et al., 2019), it is not significant (Chalmers and Dellmuth, 2015; Dellmuth and Chalmers, 2018) and even negative in others (Verhaegen et al., 2014).

Borz et al. (2018) also consider the amount of structural funds per capita in the region, although their interest is in the effects on the formation of a European identity rather than in support for the EU.<sup>2</sup> In addition, they focus on the interaction between perceived and real benefits, which means that they do not pay specific attention to the particular effect of the indicator of the CP intensity. Their estimated effects are statistically significant and positive, although of a moderate size. However, for us what is of greater importance is the fact that they link identification with Europe to the subjective perception of the

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<sup>2</sup> In a similar study, Perucca (2019) analyses the influence of CP on the imbalance between country and European identity, concluding that the intensity of funding is not among the most important determinants of the preference for the country over Europe.

benefits of EU funding, concluding that the higher the perceived benefits, the stronger the European identity.

Like Borz et al. (2018), we agree that support for the EU is greater from people who perceive the personal benefits of the CP. Therefore, we expect to see a gap in support in the raw data. However, our hypothesis is that much of the effect of the perception of the benefit on support corresponds to the effect of individual characteristics that vary between those people who perceive and do not perceive the benefits of the CP. In addition, we consider the possibility that the association between both variables is due to the fact that the people who most support the EU tend to perceive its policies more positively. In order to disentangle this reverse causality, we exploit the assumption that the intensity of the CP in the region has no direct effect on support. In this case, its only effect would be indirect; that is, EU funds in the region would have an impact on the perception of the benefits of the policy, which, in turn, could stimulate support for the EU. Accordingly, once accounting for individual characteristics and reverse causality, we expect a moderate gap, if any, in support.

Our study differs from Borz et al. (2018) in some important respects. Firstly, their study uses data from a survey carried out in 17 regions of 12 EU member states, whereas the data used in our study covers all regions of 15 member states. Secondly, our interest is in the impact on support for the EU, not in European identity. Finally, we address the reverse causality by instrumenting the subjective perception of the CP with the intensity of the policy in the region. Therefore, our work complements rather than overlaps preceding evidence.

To test our hypothesis, we specify a recursive bivariate probit that accounts for the endogeneity of the perception of the personal benefit of the policy. Our results show a high and significant raw association between the personal benefit of the CP and the support for the EU. However, this relationship decreases considerably once the confounding factors are taken into account, and in the end, once we control the reverse causality, we do not find any causal effect at all. On the other hand, the evidence confirms that, as expected, the subjective perception of the CP increases with the intensity of the policy in the region.

The rest of the paper is organized as follows. The next section presents the individual and aggregate data used in the study and provides initial descriptive evidence. The empirical strategy to test the hypothesis of interest is discussed in section 3, while the results are

discussed in section 4. Finally, section 5 concludes. Complementary results are reported in the Online Supplemental Material.

## **2. Data set and descriptive analysis**

The empirical exercise in this paper assesses the impact of the citizens' perception of the EU CP on their support for the European project. For this purpose, information for both aspects is required from a representative sample of individuals. Unfortunately, this information is not available in the Eurobarometer surveys since the standard ones that include the questions that enable the computation of indicators of the citizens' support for the EU do not ask about the perception of the CP. In turn, the Flash Eurobarometer surveys that compile information about the latter aspect (awareness of regional policy in the EU) do not include questions about the degree of support for the European project. To fill this gap, the PERCEIVE project carried out a unique survey that provided information about both citizens' support for the EU and their perception of the CP (see Charron and Bauhr, 2019; Bauhr and Charron, 2019). In all, 17,147 interviews were carried out during the summer of 2017 in 15 EU member states.<sup>3</sup> The surveyed countries were selected on the basis of variation in terms of geography, size and institutional quality. Their population represents over 85% of the EU population.

In addition to the responses about the perception of the CP and support for the EU, the PERCEIVE survey includes information on the different dimensions and mechanisms suggested in the literature about the formation of a European identity and the citizens' support for the European integration process, as well as detailed information about the individuals' personal and socio-economic characteristics. Interestingly, the database adds an identifier of the NUTS region (up to the third level) in which the respondents lived<sup>4</sup>, which allows the individual responses from the PERCEIVE survey to be merged with the

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<sup>3</sup> The countries and number of respondents, in parenthesis, are Austria (1000), Bulgaria (503), Estonia (500), France (1500), Germany (1500), Hungary (1000), Italy (2000), Latvia (500), the Netherlands (500), Poland (2000), Romania (1015), Slovakia (1014), Spain (2014), Sweden (580), and UK (1500). One region in Austria, Romania, Spain, Sweden and the UK and two regions in Italy and Poland were oversampled due to specific analyses carried out by the PERCEIVE project. See Charron and Bauhr (2019) for details.

<sup>4</sup> NUTS, the acronym (in French) of nomenclature of territorial units for statistics, is a geographical nomenclature subdividing the economic territory of the EU into regions at three levels, NUTS 1 to 3 from larger to smaller territorial units.

data about an indicator of the intensity of the CP in the region, and with other region's and country's controls.

The final sample used in this study excluded observations with missing values in any of the variables included in the empirical specifications used to estimate the impact of the perception of the benefits of the CP on support for the EU. This was the case for 2,314 respondents (13.5% of the total sample). In other words, the sample used in the empirical analysis included 14,833 respondents.

The PERCEIVE survey asked the citizens about their perception of the EU CP through different questions. As pointed out by Bauhr and Charron (2019), measuring awareness and public support for this policy is far more difficult than in the case of other policy areas. The survey included a first set of questions about knowledge of the CP. Interviewees were asked whether they *have ever heard about* the policy, using its alternative labels (Cohesion Policy / Regional Policy / Structural Funds). This information was complemented with that of the responses to a more general question related to their *having ever heard about any EU-funded project in the region or area* in which the individual lived. Although the responses to these questions allow a picture of the citizens' awareness of the CP to be obtained, they do not necessarily contain information about the direct impact of the policy on individuals. In other words, a citizen of the EU can be aware of the existence of the CP without having benefited from it. Since in this study we are interested in testing whether individuals who obtain a personal benefit from the policy are more prone to support the EU, indicators based on awareness can produce flawed results. The questionnaire also included a question about the perception of the personal impact of the policy:

*To your knowledge, have you ever benefited in your daily life from any project funded by the EU?*

Respondents had to choose one among three options: *Yes*, *No*, or *Don't know*, where the last one also included those who refused to answer the question. We assume that the individuals who responded positively were not only aware of the policy but also realized that it had a positive effect on their everyday lives. It might be the case that some individuals had benefited in their daily life from projects funded by the EU through policy interventions other than the ones included under the umbrella of the CP. However, due to the type of projects funded by the CP and the other EU programmes, we believe that the real influence of the latter in the responses to this question can be considered as marginal.

Besides, it should be kept in mind that before responding to this question, interviewees answered the questions related to their knowledge and awareness of the EU CP.

The answers to the question were recoded as a dichotomous variable, *BenefitCP*, which distinguishes between respondents who claimed to have benefited from any project funded by the EU (i.e. answered *Yes*) and those who did not, or did not know.<sup>5</sup> Based on the figures from the sample, it can be said that about one-third of the population in the 15 EU member states considered in the survey declared they had benefited in a direct way from the CP (first column of results in Table 1).

As in previous studies (e.g. Verhaegen et al., 2014; Dellmuth and Chalmers, 2018), we use the responses to the following question included in the PERCEIVE survey questionnaire as the indicator of citizens' support for the EU:<sup>6</sup>

*In general, do you think that (YOUR COUNTRY'S) EU membership is: a good thing; a bad thing; neither good nor bad; not sure*

In line with previous studies (e.g. Clements, 2011; Serricchio et al., 2013), the answers were recoded in a dichotomous variable, *SupportEU*: individuals were assumed to support the EU if they responded that their country's membership of the EU was a good thing; otherwise it was assumed that they did not support the EU. It should be noted that this question was not asked to UK respondents because of the situation after the outcome of the Brexit referendum. To avoid losing information from the UK citizens, we appended the answers to a question only included in the UK questionnaire:

*If the BREXIT referendum were held today, how would you vote?*

The respondents selected from among the following options: *Remain / Leave / Didn't vote / Refused*. We assumed that those who responded *Remain* think that the UK's membership of the EU was a good thing and, therefore, that they supported the EU.

Overall, as can be observed in Table 1, about 60% of the respondents supported the EU. This is consistent with the figures about support for the EU in the Eurobarometer surveys of 2017 and 2018. The percentage of supporters of the EU project in the sample as a whole obscures significant differences between the people who benefited and did not

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<sup>5</sup> The main results are robust to the exclusion from the sample of the *Don't know / Refused* responses. They are 2.3% of the total sample and 1.8% of the considered sample.

<sup>6</sup> A similar question is included in the Eurobarometer survey to proxy for the citizens' support for the EU.



benefit from the policy. Three out of four EU citizens who claimed to have benefited directly from the CP supported the EU project, whereas the percentage is slightly above 50% for those who did not benefit personally. This evidence would confirm that individuals who benefited from the CP in their daily lives are more prone to support the EU.

However, the positive association between benefiting from the policy and the citizens' support for the EU could be due (at least in part) to characteristics of the individuals that affect both the perception of the policy and the attachment to the European project. As mentioned above, the database used in this paper includes detailed information about the demographic and socio-economic characteristics that can be used to control for these factors. Considering the arguments in the extant literature outlined in the previous section, they are grouped in the following categories: Utilitarian/economic egocentric mechanisms (Occupation, Income level, Perception of the economic situation in the region – current and future); Political ideology (More restriction on immigration, Support to redistribution, Preference for a strong leader); Political awareness/Cognitive mobilization (Education, Vote in European elections); Communal identity (Christian religion, Share common European history and culture, Identification with country and with region); Political-institutional factors (EU effectiveness, Corruption in the EU), and Demographic characteristics (Gender, Age, City size). As an additional control, we computed an indicator of the match between the needs in the region and the CP thematic objectives. This is based on the respondents' perception of the most important problem in the region and the list of thematic objectives of the CP in the 2007–2013 period.<sup>7</sup> Table 2 lists the variables with their corresponding categories and descriptive statistics. The last two columns include the figures corresponding to the subsamples of individuals that benefited and did not benefit from the CP. The two groups of respondents differ in several respects, including income level, education, perception of immigrants, preference for a strong leader, participation in European elections, and the perception of the economic situation in the region. As mentioned in the previous section, there is wide evidence on the influence of these individual characteristics on support for the European integration project.

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<sup>7</sup> Details on these variables, including the questions of the PERCEIVE survey and the categories and range of values, are provided in Table A.1 of the Appendix.

Besides individual-level characteristics, the study also considers several indicators at the regional and country levels. On the one hand, the intensity of the CP in the region is considered as a factor that determines the propensity to personally benefit from the policy but does not have a further direct effect on the support for the EU. It is proxied by the yearly average of the 2007–2013 programming period of the total annual structural fund expenditures in the region over the region’s total population of the corresponding year.<sup>8</sup> Table 1 shows the average of the structural fund expenditures per capita in the quartiles of its distribution in the set of European regions in the sample. It can clearly be observed how the intensity of the policy varies markedly between regions. The average in the regions with the lowest intensity is just €13.5 per capita, in sharp contrast with the €331.5 that, on average, the less developed regions received. As expected, the percentage of citizens that benefited personally from the policy increases with the amount of structural funds expended in the region. The descriptive figures suggest a strong association between the intensity of the policy and the perception of personally benefiting from it: the percentage of people who benefited from the CP in regions that received the highest amount of structural funds per capita is three times the figure of those regions with the lowest intensity of the policy. Interestingly, the difference in the percentage of support for the EU between regions that received different amounts of structural funds is less obvious. This would support our assumption that the intensity of the policy would not have a direct effect on citizens’ support for the EU. This is confirmed by the information reported in Panel B of Table 1, where the percentage of the population that supports the EU is computed separately for the quartiles of the structural funds per capita and the groups of individuals who benefited and did not benefit from the policy. In neither of the two groups does support increase with the amount of EU funds in the region.

Several region- and country-level controls are considered in the analysis. The first group includes the region’s employment rate, the level of GDP per inhabitant (in purchasing power standard as percentage of the EU average) and the percentage of the region’s population aged 25–64 years old whose highest level of education successfully completed is ‘Tertiary education’ (highly skilled individuals). The country-level controls are the net contribution of the country to the EU budget (as percentage of its GDP), the ratio of intra-EU to the extra-EU exports, the inflation rate, membership of the Eurozone, the spread

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<sup>8</sup> This data is made available by the European Commission DG Regional Policy in the webpage “Data for Research” ([https://ec.europa.eu/regional\\_policy/en/policy/evaluations/data-for-research/](https://ec.europa.eu/regional_policy/en/policy/evaluations/data-for-research/)).

of government bonds, and the number of years since accession to the EU. All these variables are measured in 2016 and come from Eurostat and other official European sources.

### 3. Empirical model

To estimate the effect of having benefited personally from the CP on the propensity to support the EU we specify the following empirical model:

$$P(\text{SupportEU})_{r(i)}^* = \beta_1 \cdot \text{BenefitCP}_{r(i)} + \mathbf{Ind1}'_{r(i)} \cdot \mathbf{\Gamma}_1 + \mathbf{Reg\_Cou}'_r \cdot \mathbf{\Psi}_1 + \varepsilon_{1r(i)} \quad (1)$$

where  $P(\text{SupportEU})_{r(i)}^*$  denotes the probability that an individual  $i$  in region  $r$  supports the EU, and  $\text{BenefitCP}_{r(i)}$  is a dichotomous variable that equals 1 when this individual declared that they had benefited from the CP, and 0 otherwise. The parameter of interest for the study,  $\beta_1$ , captures the difference in the probability of supporting the EU between individuals that benefited and did not benefit from the policy. If individuals that benefit personally from the CP are more prone to support the EU,  $\beta_1$  will be positive and statistically significant.<sup>9</sup> The set of individual controls for respondent  $i$  in region  $r$  is included in the row vector  $\mathbf{Ind1}'_{r(i)}$ , whereas  $\mathbf{Reg\_Cou}'_r$  includes the controls for the region-country where the respondent  $i$  lived,  $\mathbf{\Gamma}_1$  and  $\mathbf{\Psi}_1$  being the corresponding vectors of parameters. The inclusion of these controls is crucial for the identification of the net effect of having benefited personally from the CP in the support for the EU, since it can be argued that the mechanisms that determine the awareness of the CP, and the benefits it provokes in the region in general, and in each individual in particular, are not independent of those that affect the support for the EU.

Nevertheless, unless the individual and region-country covariates completely control the influence of these mechanisms, the estimate of  $\beta_1$  from (1) could be biased, since it would include the effect of unobservable characteristics that influence both support for the EU and the perception of the personal benefit of the CP. In addition, the estimate of  $\beta_1$  might capture not only the impact of the benefit on the support, but also the opposite effect. This

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<sup>9</sup> In this study, it is assumed that the effect of benefiting from CP on support for the EU is uniform across all individuals and regions. However, as stressed by Mols et al. (2009), European identification is context- and inter-group-dependent. Although we acknowledge that the effect of interest in this study can vary between population groups (e.g. winners and losers of the integration process) and across places (e.g. the link could be weaker in Eurosceptic countries and regions), the analysis of these types of heterogeneities is beyond the scope of this paper. We thank an anonymous reviewer for pointing out this issue.

is likely to be the case if the citizens who are most likely to support the European project are also more prone to have a positive perception of the CP, both in terms of awareness and in the perception of the personal benefits of the projects in the region financed by the policy. In either case, it could not be claimed that the estimate of  $\beta_1$  from (1) corresponds to the causal impact of the personal benefit of the CP on the citizens' support for the EU. To take into account the pernicious effect of unobservables that can affect the two variables of interest and to mitigate the problem of reverse causality, a probabilistic model for the benefit variable is also specified as follows:

$$P(\textit{BenefitCP})_{r(i)}^* = \beta_2 \cdot \log(\textit{SFpc})_r + \mathbf{Ind2}'_{r(i)} \cdot \Gamma_2 + \mathbf{Reg\_Cou}'_r \cdot \Psi_2 + \varepsilon_{2r(i)} \quad (2)$$

where  $P(\textit{BenefitCP})_{r(i)}^*$  denotes the probability that an individual  $i$  in region  $r$  had benefited personally from the policy,  $\log(\textit{SFpc})_r$  is the indicator of the intensity of the CP in the region, and  $\mathbf{Ind2}'_{r(i)}$  is a vector of individual controls. In this specification, it is expected that  $\beta_2 > 0$ , indicating that the stronger the intensity of the policy in the region, the higher the chance that individuals in the region benefited personally by a CP-funded project.

Although  $P(\textit{SupportEU})_{r(i)}^*$  and  $P(\textit{BenefitCP})_{r(i)}^*$  are not observed, under the assumption of normality of  $\varepsilon_{1r(i)}$  and  $\varepsilon_{2r(i)}$  the coefficients of interest can be estimated from the corresponding univariate probit models when  $\text{Cov}(\varepsilon_{1r(i)}, \varepsilon_{2r(i)}) = \rho = 0$ . It is worth noting that if there were no correlation between the error terms of the two equations, the *BenefitCP* variable would be exogenous in the empirical model and its effect on support for the EU could be estimated consistently from the univariate probit model. Conversely, if  $\text{Cov}(\varepsilon_{1r(i)}, \varepsilon_{2r(i)}) = \rho \neq 0$ , the estimate of  $\beta_1$  from the univariate probit model would not provide a consistent estimate of the effect of the benefit on support. As mentioned above, the errors of the two equations will correlate if they absorb the effect of unobservables affecting the two variables under analysis. Therefore, we will estimate the recursive bivariate probit model, accounting for the correlation between the errors of equation (1) and (2). In this way it is possible to identify consistently the causal effect of the perception of the personal benefit of the policy on the support for the EU. In addition, the estimate of  $\beta_2$  will allow us to assess how the probability of personally benefiting from the CP evolves with its intensity in the region, net of the effect of the other covariates.

The exclusion of  $\log(SFpc)_r$  in the specification of the support for the EU (equation 1) is motivated by the assumption that, once conditioned on the individual characteristics, the only channel through which the policy affects the individual's support for the EU is through its impact on the perception of personal benefit. To be clear, it is assumed that the information that people have about the intensity of the CP in the region is (at best) rather vague. As a result, when they decide on the degree of support for the EU, they do not make a conscious connection with the amount of EU funds allocated in the region. However, it is sensible to think that people living in regions where large amounts of CP funds are allocated are more aware of EU-funded projects in the region than similar people in places that receive less investment. Similarly, we can expect more people to benefit in their daily lives from CP-funded projects in highly recipient regions. It is the greater perception of benefiting from EU interventions in these regions that can encourage support for the EU among their citizens. In other words, our hypothesis is that the impact of the CP on the citizens' support for the EU is channelled through this indirect mechanism.

The fact that the distribution of the CP funds among the EU regions for the period 2007–2013 was decided several years before the PERCEIVE survey was carried out and, therefore, well before the perception of the policy and support for the EU were measured, works in favour of the exogeneity of  $\log(SFpc)_r$ . For this assumption to hold, it is also crucial that the criteria used to allocate the funds in the different countries and regions were based on objective rules (the relative level of per capita GDP in the region) that did not include the degree of support for the EU of their citizens and/or their perception of the CP (see Osterloh, 2011 and Dellmuth and Chalmers, 2018 for similar arguments). Likewise, the evidence in Bouvet and Dall'erba (2010) confirms that Euroscepticism and the citizens' attitudes towards the EU do not exert a significant effect on the distribution of structural funds across countries and regions.

It should also be noted that the match between the perceived needs in the region and the CP thematic objectives is assumed to affect the propensity to perceive a personal benefit of the CP but not the support for the EU. Accordingly, this variable is not included in  $Ind1$  of equation (1). Conversely, the perception of the economic situation of the region and the communal identity and political–institutional indicators are not included in  $Ind2$  because they are assumed to impact only support for the EU.

Finally, it is worth mentioning that the errors of the individuals living in the same region are expected to correlate with each other. A mixed-effect model that accounts for this type of correlation in the errors has been considered in previous studies (e.g. Verhaegen et al., 2014). Alternatively, the robust region-clustered standard errors of the estimated coefficients can be computed to account for this correlation, in the context of the bivariate probit model (e.g. Osterloh, 2011; Serricchio et al., 2013). In this study we have opted for the latter option.

#### 4. Results

This section discusses the results of the estimation of the impact of the perception of the personal benefit of the CP on the citizens' support for the EU from the empirical model discussed in the previous section. To facilitate the interpretation of the size of the effects of interest, the figures in all the tables of this section are the average marginal effects (AMEs) associated with the estimate of the corresponding coefficients.<sup>10</sup>

In the first place, the univariate probit model for the support for the EU in equation (1) is estimated as a sort of baseline specification. The results are reported in Table 3.<sup>11</sup> The first column corresponds to the simplest specification that only includes the *BenefitCP* variable. Columns (ii) and (iii) subsequently add the individual and region-country controls. It is clearly observed that the omission of the control variables biases upward the estimated impact of *BenefitCP*. The estimated effect in the simplest specification in column (i) indicates that, on average, the propensity to support the EU of people who declared that they personally benefited from the policy is 20.4 percentage points (p.p.) higher than that of the people who did not. This raw difference, which was already reported in Table 1, is one-third of the overall percentage of citizens who declared that they supported the EU.

Interestingly, the estimates in columns (ii) and (iii) confirm that a great deal of this gap in support between respondents who benefited and did not benefit from the CP is attributable to differences among them in individual and region-country characteristics. To be clear, not controlling for the mechanisms and determinants that affect the propensity of individuals to support the EU leads to confounding the estimate of the effect

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<sup>10</sup> The sample weights available in the PERCEIVE survey have been used to obtain all the results in this section.

<sup>11</sup> The detailed results of the regressions in this section are available in the Online Supplementary Material (Tables SM1 to SM3).

of having benefited from the policy. The difference net of the influence of the observed individual controls shrinks to 6.9 p.p. (column ii), whereas the inclusion of the aggregate determinants decreases the gap slightly to 6.4 p.p. (column iii). In any case, the impact of the personal benefit remains significant from a statistical point of view in the two extended specifications. Taking into account that 61% of individuals supported the European project, the size of the impact of the benefit of the CP can be considered as moderate (it represents around 10% of the support for the EU).

The last column of Table 3 includes the indicator of the intensity of the CP as an additional direct determinant of the probability of support for the EU. This can be considered as a sort of test of the assumption that the amount of Structural Fund expenditures per capita in the region does not exert an effect on support beyond that channelled through its impact on the perception of personal benefit. As can be seen in column (iv), the estimated impact of the *BenefitCP* variable remains unchanged and, what is more important, there is no significant direct effect of the intensity of the policy on support. In other words, this result supports the validity of our exclusion restriction, i.e. the lack of a direct effect of the intensity of the CP on support for the EU.

To tackle the endogeneity of the *BenefitCP* variable we estimated the effects of interest from the recursive bivariate probit model introduced in the previous section. The estimated AMEs are summarized in Table 4. The first column of results corresponds to the effect of the indicator of the intensity of the CP on the perception of the benefit of the policy, while the estimated AME of this variable on the support for the EU is reported in the second column.<sup>12</sup> In the first place, it is observed that the indicator of the intensity of the CP in the region exerts a significant sizeable effect on the probability of having benefited personally from the policy. An increase of 10% in the amount of Structural Fund expenditures per capita in the region increases the probability of reporting a personal benefit by around 0.7 p.p. This is an important effect if one considers the large regional variation in the CP expenditures per capita (see the figures reported in Table 1) and that only a third of the population in the surveyed countries declared they had benefited from the CP.<sup>13</sup>

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<sup>12</sup> The results of the bivariate probit model that does not include the control variables are not reported to save space. They are available upon request.

<sup>13</sup> The univariate probit model for the benefit from the Cohesion Policy reports similar results on the effect of the amount of Structural Funds per capita in the region. The results for this model are summarized in Table A2 in the Appendix.

Interestingly, the results in the second column of Table 4 point to a non-significant effect of benefiting from the policy on the propensity to support the European project. This is in sharp contrast with the positive and significant effect obtained from the univariate probit specification. In fact, the positive estimate of the effect in the univariate probit discussed above may be due to the fact that citizens who are more prone to support the EU have a more positive perception of the effect of the CP and, as a result, tend to declare that the projects financed by the EU have benefited them in their daily lives. When this source of reverse causality is controlled in the recursive bivariate probit model,<sup>14</sup> the evidence no longer supports the existence of a causal effect of benefiting from the CP in supporting the EU. As a consequence, the significant and sizeable effect of the intensity of the policy on the perception of its benefits does not translate into greater support for the EU.

Nevertheless, our conclusions can be questioned based on the result of the Wald test of the hypothesis that  $\text{Cov}(\varepsilon_{1r(t)}, \varepsilon_{2r(t)}) = \rho = 0$ , reported at the bottom of Table 4. The result of this test leads to the exogeneity of *BenefitCP* not being rejected and, therefore, suggests that the univariate probit model for support for the EU (equation 3) provides a consistent estimate of the effect of interest. However, this result should be read with caution for two reasons. Firstly, Monfardini and Radice (2008) showed that in the context of the recursive bivariate probit model, a likelihood ratio test (LR) is preferred over a Wald test to check for endogeneity, due to the poor performance of the latter test. Secondly, the LR test should not be used when, as in our empirical exercise, sample weights and/or robust-clustered errors are considered.<sup>15</sup> For this reason, we re-estimated the bivariate probit model without weighting and without using the robust-cluster option. In this case, the LR test equals 6.3 with a p-value of 0.01, which leads to doubt about the exogeneity of *BenefitCP* (results are reported in Table SM4 of the Online Supplemental Material). This is confirmed by an alternative test of the exogeneity of *BenefitCP*, based on Rivers and Young (1988), whose result clearly points to the endogeneity of this variable.<sup>16</sup>

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<sup>14</sup> The identification in the recursive bivariate probit also relies on the exclusion of some of the individual determinants in the *BenefitCP* equation. In any case, the main conclusion of our study is robust to the inclusion of these variables in both equations.

<sup>15</sup> The ‘likelihood’ is not a true likelihood in this case.

<sup>16</sup> To implement this test, in a first stage we computed the generalized residuals from the probit model of the benefit variable on the Structural Funds per capita and the control variables. In a second stage, the univariate probit model for the support variable was extended with the first-



Finally, the estimated effects of the individual and region-country controls are reported in Table SM2 of the Online Supplemental Material. It is observed that the probability of perceiving personal benefits from the CP increases with the income and education levels, and it is higher for those interested in European politics (as proxied by voting in the European elections) and for individuals who reported one of the thematic objectives of the CP as the biggest problem that their regions faced in the recent years (*Match needs region – CP thematic obj.*). By contrast, this probability is lower among those who believed that their countries should have more restrictions on immigration, and among individuals who think that their countries would benefit from having a strong leader who can solve problems quickly, without having to worry about elections and parliamentary rules. The probability is also a bit lower among females and those living in small towns. Regarding the effect of the aggregate controls, the only regional determinant with a significant effect is the endowment of skills. The results suggest that similar individuals living in regions with a higher percentage of highly educated population tend to have a greater probability of perceiving the personal benefits of the CP. More country controls seem to have a significant effect on this probability. This is smaller for people in countries that are net donors to the EU budget, members of the Eurozone, and older members of the EU. Conversely, it is greater in countries for which the EU market is an important destination of their exports.

As regards the impact of the control variables on the propensity to support the EU, it is observed that there are no significant differences among individuals of different ages and gender. However, support varies across occupations and income levels. For example, with respect to employees in the public sector, those in the private sector seem to be more supportive of the European project. Support is also higher among students and trainees. By contrast, there are no differences between public sector employees and, for example, the unemployed and pensioners. Similarly, support increases with the level of income declared by the individual. Interestingly, other things being equal, individuals who have a more positive perception of the current and future economic situation in the region are more prone to support the EU. This is consistent with the utilitarian economic arguments and the differences in support between winners and losers of the European integration process. The results are also consistent with the hypotheses of political awareness,

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stage generalized residuals. The Wald test of the significance of these residuals is a test of the exogeneity of *BenefitCP*. The test statistic reported a value of 6.75 with an associated p-value of 0.01.

cognitive mobilization, and communal identity. On the one hand, the propensity to support the EU is significantly higher among the highly educated individuals and those who participated consistently in the European elections. On the other, support is lower among citizens who considered that the Christian religion is an important element of the identification with Europe and among those who do not feel that having a common history and culture is important in that respect. It is also observed that a higher identification with the country is associated with a higher probability of support for the EU.

The political ideology of the respondents also exerted a significant effect. Specifically, the probability of support is higher for those who agreed with the principle of redistribution, whereas it is lower among individuals who thought that their countries should put more restrictions on immigration and wanted a strong leader who can solve problems quickly, without worrying about the democratic mechanism. On the other hand, support for the EU is significantly higher among individuals who perceived that the EU is effective in dealing with the biggest problem in their regions, whereas it decreases with the perception that corruption is widespread in the EU.

With regard to the aggregate controls, it is observed that the effect of the regional ones is negligible in all cases. This means that after controlling for the influence of the individual characteristics, there are no regional differences in support that can be explained by differences in the employment rates, income per capita, and the endowment of skills in the region. On the contrary, some country-level determinants seem to have a significant effect. To be clear, the probability of support for the EU decreases with the net contribution to the EU budget, the inflation rate, and the years since the accession to the EU. Overall, this could be capturing the higher support for the EU in the poorest member states that joined the EU in the recent enlargements and, to some extent, differences across countries in the degree of Euroscepticism among their populations.

## **5. Conclusions**

This study provides, for the first time, evidence on the impact of the perception of the subjective benefits of the CP on mass support for the EU, using information from a novel survey that combines questions regarding these two aspects. The results suggest that the positive gap in support between individuals who declared and did not declare that they personally benefited from the policy should not be attributed to a causal effect of the perception of the subjective benefit on support. This is so since most of the correlation

between the two variables is explained by the individual characteristics that affect both the perception of the benefits and the support. In addition, the evidence obtained in this study suggests that the raw association between the two variables is probably explained by the fact that the people who most support the EU tend to have a greater perception of the subjective benefits of the CP.

On the other hand, the results indicate that the intensity of the Cohesion Policy in the region does not stimulate support for the EU, either in a direct or in an indirect way. Although the perception of the subjective benefit increases with the amount of EU funds received in the region, the lack of impact of the perception of the benefit on support prevents a transmission of the effect of the intensity of the policy to this latter variable. Among other implications, this raises doubts about the effectiveness of the mechanisms of the communication of the Cohesion Policy. On the one hand, awareness and particularly perception of the personal benefit of the policy is not especially high, even in the regions that receive the largest amounts of EU funds. On the other, and most importantly, it could be failing in building the bridge between the citizens' perception of the policy and their support for the European project. As stated by (Molica and Salvai, 2019) when discussing the CP, 'public communication is currently confronted by enormous challenges' (p. 10). In any case, it must be stressed that, up to now, the CP has not had among its declared objectives the strengthening of the identification of citizens with the European integration project.

Finally, it should be acknowledged that this study has not considered differences in the effects of interest between population groups (e.g. winners and losers of the EU integration) and types of regions. For example, it could be argued that the causal effect of policy benefits on support exists only for individuals with a given degree of education and political awareness. Similarly, it can be argued that this effect varies between Eurosceptic and non-Eurosceptic regions. A significant positive effect of benefiting from the Cohesion Policy on support for the EU may be more likely to exist in the pro-EU regions. Although the exploration of these sources of heterogeneity is beyond the scope of this paper, they are at the core of our future research agenda.

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**Table 1. Benefit from the Cohesion Policy and Support to the EU.**

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<b>PANEL A</b>		
	<b>Benefit CP</b>	<b>Support EU</b>
<b>Full sample</b>	32.61	61.04
<b>Benefit CP</b>		
<b>NO</b>		54.49
<b>YES</b>		74.57
<b>Structural Fund exp. pc</b>		
<b>Q1</b> (13.48)	18.30	56.17
<b>Q2</b> (42.28)	22.91	62.98
<b>Q3</b> (163.13)	32.81	61.64
<b>Q4</b> (331.50)	54.76	64.52

  

<b>PANEL B Support to the EU (%) by perception and intensity of the CP</b>		
	<b>Benefit CP</b>	
	<b>NO</b>	<b>YES</b>
<b>Structural Fund exp. pc</b>		
<b>Q1</b> (13.48)	51.52	76.95
<b>Q2</b> (42.28)	59.30	75.37
<b>Q3</b> (163.13)	55.02	75.21
<b>Q4</b> (331.50)	52.51	74.44

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Notes: Computed from the sample used in the estimations (14,833 observations). Figures are weighted proportions in the sample (in %) using the sample weights in the PERCEIVE survey. CP refers to Cohesion Policy. Q1 to Q4 denote the quartiles of the distribution of Structural Fund expenditures per capita in the region. The average amount in each quartile (in €) is reported in parenthesis.

**Table 2. Description of individual characteristics.**

	Full Sample	Benefit CP: NO	Benefit CP: YES
<b>UTILITARIAN / ECONOMIC MECHANISMS</b>			
<b>Occupation</b> (Employed public sector)			
Employed private sector	0.26	0.25	0.28
Self employed	0.11	0.10	0.13
Unemployed	0.06	0.07	0.05
Housewife / Houseman	0.04	0.05	0.03
Pensioner, retired	0.26	0.29	0.21
Student / Trainee	0.04	0.04	0.04
Other	0.02	0.02	0.02
<b>Income level</b> (Low)			
Medium	0.31	0.31	0.30
High	0.39	0.34	0.49
<b>Perception economic situation in region</b> (Very unsatisfied)			
Somewhat unsatisfied	0.30	0.30	0.28
Somewhat satisfied	0.47	0.45	0.52
Very satisfied	0.08	0.08	0.08
<b>Perception evolution economic situation in region</b> (Worse)			
About the same	0.43	0.46	0.38
Better	0.31	0.26	0.43
<b>POLITICAL IDEOLOGY</b>			
<b>More restrictions immigration</b>	5.9	6.3	5.2
<b>Support redistribution</b>	7.7	7.7	7.9
<b>Strong leader</b>	6.2	6.4	5.8
<b>POLITICAL AWARENESS / COGNITIVE MOBILIZATION</b>			
<b>Education</b> (Less than secondary)			
Secondary	0.36	0.39	0.32
University	0.30	0.28	0.34
Post graduate	0.14	0.10	0.21
<b>Vote 2009 and 2014 EU elections</b> (Neither)			
Once	0.17	0.16	0.17
Both times	0.51	0.49	0.57
<b>COMMUNAL IDENTITY</b>			
<b>Importance in terms of being European of:</b>			
Christian religion	5.6	5.5	5.6
Common history and culture	6.4	6.2	7.0
<b>Degree identification with:</b>			
Country	7.5	7.2	8.0
Region	6.8	6.6	7.3
<b>POLITICAL / INSTITUTIONAL FACTORS</b>			
<b>EU effectiveness</b> (Not so effective)			
Somewhat effective	0.36	0.33	0.42
Very effective	0.12	0.10	0.15
<b>Corruption in EU</b>	6.3	6.4	6.0
<b>CORRESPONDENCE PERSONAL &amp; CP AIMS</b>			
<b>Match needs region - CP thematic obj.</b>	0.30	0.28	0.33
<b>DEMOGRAPHIC CONTROLS</b>			
<b>Age</b>	49.5	50.3	47.6
<b>Female</b> (Male)	0.50	0.51	0.47
<b>City size</b> (Rural)			
Small town	0.39	0.41	0.35
Large city	0.21	0.19	0.24
Very large city	0.08	0.07	0.09
<b>Observations</b>	14833	10089	4744

Notes: Weighted proportions for Occupation, Income level, Perception of economic situation (and its evolution) in the region, Education, Vote EU elections, EU effectiveness, Match needs region – CP thematic obj., Female, and City size. Reference categories used in the empirical specifications in parenthesis. Weighted averages for the other variables. Age is in years. For the other variables, responses run from 0 to 10. Sample weights in the PERCEIVE survey were used in all cases.

**Table 3. Effect of the personal benefit of the Cohesion Policy on citizens' support for the EU. Univariate probit model.**

	(i)	(ii)	(iii)	(iv)
<b>Benefit CP</b>	0.2038*** (0.0175)	0.0688*** (0.0130)	0.0638*** (0.0128)	0.0619*** (0.0129)
<b>Structural Fund exp. pc (log)</b>				0.0186 (0.0166)
<b>INDIVIDUAL CONTROLS</b>				
Utilitarian Mechanisms		YES	YES	YES
Political Ideology		YES	YES	YES
Political Awareness		YES	YES	YES
Communal Identity		YES	YES	YES
Political-Institutional factors		YES	YES	YES
Demographics		YES	YES	YES
<b>REGIONAL CONTROLS</b>		NO	YES	YES
<b>COUNTRY CONTROLS</b>		NO	YES	YES

Notes: Standard errors clustered by region in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Omitted categories as described in Table 2. The number of observations is 14,833 in all specifications. The variables for every category of individual controls are reported in Table 2. Regional controls and country controls as described in section 3. Results obtained using the sample weights in the PERCEIVE survey.



**Table 4. Effect of the personal benefit of the Cohesion Policy on citizens' support for the EU. Bivariate probit model.**

	<b>Benefit CP</b>	<b>Support EU</b>
<b>Benefit CP</b>		-0.0504 (0.1054)
<b>Structural Fund exp. pc (log)</b>	0.0706*** (0.0175)	
<b>INDIVIDUAL CONTROLS</b>		
Utilitarian Mechanisms		
Occupation	YES	YES
Income Level	YES	YES
Perception economic situation in the region	NO	YES
Perception evolution economic situation in the region	NO	YES
Political Ideology	YES	YES
Political Awareness	YES	YES
Communal Identity	NO	YES
Political-Institutional factors	NO	YES
Match between needs and CP objectives	YES	NO
Demographics	YES	YES
<b>COUNTRY CONTROLS</b>	YES	YES
<b>REGION CONTROLS</b>	YES	YES
$\rho$		0.2192 (0.1908)
<b>Wald test <math>\rho=0</math></b>		1.24
<b>p-value Wald test</b>		0.27

Notes: Standard errors clustered by region in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . The number of observations is 14,833 in all specifications.  $\rho$  denotes the correlation between the errors of the two equations. See notes in Table 3 for details on the individual and country and region controls. Results obtained using the sample weights in the PERCEIVE survey.

## APPENDIX

**Table A1. Details of variables corresponding to the individual characteristics.**

<b>Variable</b>	<b>Question</b>	<b>Categories / Values</b>
<b>Occupation</b>	Sequence of questions about employment situation, current status if not employee and sector of employment if employee.	<i>Employed public sector; Employed private sector; Self-employed; Unemployed; Housewife(man); Pensioner/retired; Student/trainee; Other</i>
<b>Income level</b>	Please tell me your average total household net income per month (after taxes). .... €	<i>Low; Medium; High</i>
<b>Perception economic situation in region</b>	How satisfied are you with the current economic situation in your region today?	<i>Very unsatisfied; Somewhat unsatisfied; Somewhat satisfied; Very satisfied</i>
<b>Perception evolution economic situation in the region</b>	Compared with (5 years ago), do you think the economy in your region is: Better; About the same; Worse	<i>Worse, About the same; Better</i>
<b>More restrictions immigration</b>	Your country should have more restrictions on immigration than it does today	<i>0-Fully disagree to 10-Fully agree</i>
<b>Support redistribution</b>	The national government should take measures to reduce differences in income levels among people in your country.	<i>0-Fully disagree to 10-Fully agree</i>
<b>Strong leader</b>	Your country should have a strong leader that can solve problems quickly, who does not have to worry about elections and parliamentary rules.	<i>0-Fully disagree to 10-Fully agree</i>
<b>Education</b>	Please tell me what is the highest level in school you have completed?	<i>Less than secondary; Secondary; University; Post graduate</i>
<b>Vote 2009 and 2014 EU elections</b>	Have you voted in either of the last two EU parliamentary elections?	<i>Neither; Once; Both times</i>
<b>Christian religion</b>	How important is the Christian religion to you in terms of 'being European'?	<i>0-Not important at all to 10-Very important</i>
<b>Common history and culture</b>	How important is sharing a common European history and culture to you in terms of 'being European'?	<i>0-Not important at all to 10-Very important</i>
<b>Identification with country</b>	How strongly you identify yourself with your country?	<i>0-Don't identify at all to 10-Identify very strongly</i>
<b>Identification with region</b>	How strongly you identify yourself with your region?	<i>0-Don't identify at all to 10-Identify very strongly</i>
<b>EU effectiveness</b>	How effective do you think the EU will be at dealing with the biggest problem in your region?	<i>Not so effective; Somewhat effective; Very effective</i>
<b>Corruption in EU</b>	How would you rate the EU in term of corruption?	<i>0-There is no corruption to 10-Corruption is widespread</i>
<b>Match needs region – CP thematic objectives</b>	In the past 5 years or so, which of the following do you think has been the biggest problem facing your region?  Combined with the thematic objectives of CP in period 2007-2013	<i>1: Main perceived problem in region is close to CP thematic objective (poor education, poor infrastructure &amp; transportation, Environmental concerns; 0: Otherwise (Corruption and poor governance, Unemployment, Poor wages / poverty, Other</i>
<b>Age</b>	Please tell me your age.	<i>Years</i>
<b>Female</b>	Indicate gender of respondent.	<i>1: Female; 0: Male</i>
<b>City size</b>	About how many people live in the place the interview was conducted?	<i>Rural (&lt;10K inhab.); Small town (10K-100K); Large city (100K-1M); Very large city (&gt;1M)</i>

**Table A2. Effect of Structural Fund expenditures in the region on the personal benefit of the Cohesion Policy. Univariate probit model.**

	(i)	(ii)	(iii)
<b>Structural Fund exp. pc (log)</b>	0.0990*** (0.0104)	0.1110*** (0.0090)	0.0726*** (0.0174)
<b>INDIVIDUAL CONTROLS</b>			
Utilitarian Mechanisms			
Occupation	NO	YES	YES
Income Level	NO	YES	YES
Perception economic situation in the region	NO	NO	NO
Perception evolution economic situation in the region	NO	NO	NO
Political Ideology	NO	YES	YES
Political Awareness	NO	YES	YES
Communal Identity	NO	NO	NO
Political-Institutional factors	NO	NO	NO
Match between needs and CP objectives	NO	YES	YES
Demographics	NO	YES	YES
<b>REGIONAL CONTROLS</b>	NO	NO	YES
<b>COUNTRY CONTROLS</b>	NO	NO	YES

Notes: Standard errors clustered by region in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. The number of observations is 14,833 in all specifications. See notes in Table 3 for details on the individual and country and region controls. Results obtained using the sample weights in the PERCEIVE survey.

## **SUPPLEMENTAL MATERIAL**

Tables SM1 to SM3 report the estimated average marginal effects from the corresponding univariate and recursive bivariate probit specifications. They are the counterparts of the tables included in the main text of the paper. Table SM4 reports the results of the estimation of the bivariate probit model that does not use the sample weights and does not consider the clustered standard errors.

**Table SM1. Estimated effects on citizens' support for the EU from the univariate probit model.**

	(i)	(ii)	(iii)	(iv)
<b>Benefit CP</b>	0.2038*** (0.0175)	0.0688*** (0.0130)	0.0638*** (0.0128)	0.0619*** (0.0129)
<b>Structural Fund exp. pc (log)</b>				0.0186 (0.0166)
<b>INDIVIDUAL CONTROLS</b>				
<b>Age</b>		0.0024 (0.0017)	0.0023 (0.0017)	0.0023 (0.0017)
<b>Age (sq.)</b>		-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
<b>Female</b>		-0.0119 (0.0096)	-0.0130 (0.0097)	-0.0130 (0.0096)
<b>Occupation</b>				
Employed private sector		0.0338*** (0.0129)	0.0316** (0.0128)	0.0323** (0.0128)
Self employed		0.0081 (0.0158)	0.0045 (0.0156)	0.0043 (0.0156)
Unemployed		-0.0140 (0.0182)	-0.0069 (0.0182)	-0.0070 (0.0182)
Housewife / Houseman		0.0142 (0.0259)	0.0152 (0.0252)	0.0148 (0.0252)
Pensioner, retired		0.0260 (0.0178)	0.0259 (0.0174)	0.0272 (0.0173)
Student / Trainee		0.0955*** (0.0304)	0.0958*** (0.0304)	0.0974*** (0.0302)
Other		-0.0067 (0.0298)	0.0049 (0.0294)	0.0041 (0.0293)
<b>Income level</b>				
Medium		0.0188 (0.0131)	0.0221* (0.0131)	0.0215 (0.0131)
High		0.0581*** (0.0146)	0.0582*** (0.0155)	0.0587*** (0.0156)
<b>Education</b>				
Secondary		-0.0006 (0.0145)	-0.0032 (0.0141)	-0.0023 (0.0141)
University		0.0694*** (0.0152)	0.0663*** (0.0153)	0.0678*** (0.0154)
Post graduate		0.0954*** (0.0195)	0.0878*** (0.0202)	0.0884*** (0.0203)
<b>More restrictions immigrants</b>		-0.0179*** (0.0019)	-0.0173*** (0.0019)	-0.0173*** (0.0019)
<b>Support redistribution</b>		0.0064*** (0.0018)	0.0062*** (0.0019)	0.0061*** (0.0019)
<b>Strong leader</b>		-0.0090*** (0.0019)	-0.0082*** (0.0019)	-0.0083*** (0.0020)
<b>Vote EU elections</b>				
Once		0.0132 (0.0166)	0.0174 (0.0157)	0.0169 (0.0156)
Both times		0.0377*** (0.0127)	0.0457*** (0.0118)	0.0459*** (0.0118)

**Table SM1 (cont.). Estimated effects on citizens' support for the EU from the univariate probit model.**

	(i)	(ii)	(iii)	(iv)
<b>Perception economic situation in region</b>				
Somewhat unsatisfied		-0.0109 (0.0163)	-0.0126 (0.0163)	-0.0125 (0.0162)
Somewhat satisfied		0.0486*** (0.0154)	0.0398** (0.0164)	0.0402** (0.0164)
Very satisfied		0.0945*** (0.0245)	0.0825*** (0.0254)	0.0814*** (0.0256)
<b>Perception evolution economic situation in region</b>				
About the same		0.0322*** (0.0123)	0.0356*** (0.0121)	0.0352*** (0.0121)
Better		0.0984*** (0.0149)	0.0958*** (0.0151)	0.0944*** (0.0152)
<b>Importance in terms of being European of:</b>				
Christian religion		-0.0042*** (0.0015)	-0.0034** (0.0015)	-0.0033** (0.0015)
Common history and culture		0.0258*** (0.0020)	0.0268*** (0.0020)	0.0266*** (0.0020)
<b>Degree identification with:</b>				
Country		0.0158*** (0.0028)	0.0147*** (0.0029)	0.0146*** (0.0029)
Region		0.0048* (0.0026)	0.0046* (0.0027)	0.0046* (0.0026)
<b>EU effectiveness</b>				
Somewhat effective		0.1156*** (0.0128)	0.1057*** (0.0122)	0.1058*** (0.0122)
Very effective		0.1965*** (0.0206)	0.1842*** (0.0202)	0.1853*** (0.0200)
<b>Corruption in EU</b>				
		-0.0250*** (0.0022)	-0.0246*** (0.0023)	-0.0249*** (0.0022)
<b>City size</b>				
Small town		-0.0006 (0.0132)	0.0008 (0.0130)	0.0006 (0.0131)
Large city		-0.0050 (0.0142)	-0.0106 (0.0152)	-0.0113 (0.0152)
Very large city		0.0427** (0.0167)	0.0375* (0.0198)	0.0386* (0.0199)
<b>REGION/COUNTRY CONTROLS</b>				
<b>Employment rate</b>			0.0011 (0.0017)	0.0023 (0.0019)
<b>GDPpc (PPS as % EU average)</b>			0.0001 (0.0003)	0.0003 (0.0003)
<b>Skill endowment</b>			0.0011 (0.0012)	0.0007 (0.0012)
<b>Net contribution EU budget (% GDP)</b>			-2.7103* (1.3946)	-2.9203** (1.4445)
<b>Exports to EU</b>			-0.0001 (0.0001)	-0.0001 (0.0001)
<b>Inflation rate</b>			-0.0499** (0.0199)	-0.0534*** (0.0203)
<b>Member of Eurozone</b>			-0.0000 (0.0465)	-0.0076 (0.0489)
<b>Spread</b>			-0.0103 (0.0187)	-0.0120 (0.0192)
<b>Years since accession</b>			-0.0020*** (0.0006)	-0.0017*** (0.0006)

Notes: Standard errors clustered by region in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Omitted categories as described in Table 2. The number of observations is 14,833 in all specifications. Results obtained using the sample weights in the PERCEIVE survey.

**Table SM2. Estimated effects on the personal benefit of the CP and citizens' support for the EU from the bivariate probit model.**

	<b>Benefit CP</b>	<b>Support EU</b>
<b>Benefit CP</b>		-0.0504 (0.1054)
<b>Structural Fund exp. pc (log)</b>	0.0706*** (0.0175)	
<b>INDIVIDUAL CONTROLS</b>		
<b>Age</b>	-0.0008 (0.0019)	0.0021 (0.0018)
<b>Age (sq.)</b>	-0.0000 (0.0000)	-0.0000 (0.0000)
<b>Female</b>	-0.0293*** (0.0097)	-0.0162 (0.0105)
<b>Occupation</b>		
Employed private sector	-0.0131 (0.0112)	0.0297** (0.0127)
Self employed	-0.0050 (0.0180)	0.0045 (0.0160)
Unemployed	0.0109 (0.0231)	-0.0058 (0.0187)
Housewife / Houseman	-0.0198 (0.0290)	0.0137 (0.0249)
Pensioner, retired	-0.0247 (0.0189)	0.0223 (0.0180)
Student / Trainee	0.0050 (0.0300)	0.0949*** (0.0305)
Other	-0.0197 (0.0281)	0.0026 (0.0295)
<b>Income level</b>		
Medium	0.0438*** (0.0121)	0.0280* (0.0144)
High	0.1106*** (0.0134)	0.0716*** (0.0176)
<b>Education</b>		
Secondary	0.0434*** (0.0152)	0.0010 (0.0154)
University	0.1086*** (0.0177)	0.0781*** (0.0190)
Post graduate	0.1703*** (0.0201)	0.1070*** (0.0263)
<b>More restrictions immigrants</b>	-0.0098*** (0.0015)	-0.0186*** (0.0021)
<b>Support redistribution</b>	0.0039* (0.0021)	0.0066*** (0.0020)
<b>Strong leader</b>	-0.0042** (0.0019)	-0.0087*** (0.0020)
<b>Vote EU elections</b>		
Once	0.0393*** (0.0151)	0.0225 (0.0156)
Both times	0.0829*** (0.0101)	0.0554*** (0.0145)

**Table SM2 (cont.). Estimated effects on the personal benefit of the CP and citizens' support for the EU from the bivariate probit model.**

	<b>Benefit CP</b>	<b>Support EU</b>
<b>Perception economic situation in region</b>		
Somewhat unsatisfied		-0.0123 (0.0164)
Somewhat satisfied		0.0396** (0.0164)
Very satisfied		0.0826*** (0.0251)
<b>Perception evolution economic situation in region</b>		
About the same		0.0359*** (0.0121)
Better		0.0966*** (0.0151)
<b>Importance in terms of being European of:</b>		
Christian religion		-0.0033** (0.0015)
Common history and culture		0.0269*** (0.0020)
<b>Degree identification with:</b>		
Country		0.0147*** (0.0030)
Region		0.0046* (0.0027)
<b>EU effectiveness</b>		
Somewhat effective		0.1055*** (0.0124)
Very effective		0.1831*** (0.0196)
<b>Corruption in EU</b>		-0.0245*** (0.0023)
<b>City size</b>		
Small town	-0.0229** (0.0113)	-0.0012 (0.0135)
Large city	0.0122 (0.0130)	-0.0084 (0.0152)
Very large city	0.0232 (0.0238)	0.0397* (0.0205)
<b>Match needs region - CP thematic obj.</b>	0.0385*** (0.0114)	
<b>REGION/COUNTRY CONTROLS</b>		
<b>Employment rate</b>	0.0014 (0.0021)	0.0007 (0.0018)
<b>GDPpc (PPS as % EU average)</b>	0.0002 (0.0005)	-0.0000 (0.0003)
<b>Skill endowment</b>	0.0028** (0.0012)	0.0018 (0.0013)
<b>Net contribution EU budget (% GDP)</b>	-5.0016*** (1.6747)	-3.3373** (1.4580)
<b>Exports to EU</b>	0.0004*** (0.0001)	0.0000 (0.0001)
<b>Inflation rate</b>	-0.0240 (0.0303)	-0.0523*** (0.0188)
<b>Member of Eurozone</b>	-0.0857** (0.0429)	-0.0052 (0.0441)
<b>Spread</b>	0.0137 (0.0176)	-0.0053 (0.0197)
<b>Years since accession</b>	-0.0022*** (0.0007)	-0.0023*** (0.0007)

Notes: Standard errors clustered by region in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Omitted categories as described in Table 2. The number of observations is 14,833 in all specifications. Results obtained using the sample weight in the PERCEIVE survey.



**Table SM3. Effect of Structural Fund expenditures in the region on the personal benefit of the Cohesion Policy from the univariate probit model.**

	(i)	(ii)	(iii)
<b>Structural Fund exp. pc (log)</b>	0.0990*** (0.0104)	0.1110*** (0.0090)	0.0726*** (0.0174)
<b>INDIVIDUAL CONTROLS</b>			
<b>Age</b>		-0.0012 (0.0021)	-0.0008 (0.0019)
<b>Age (sq.)</b>		0.0000 (0.0000)	-0.0000 (0.0000)
<b>Female</b>		-0.0270*** (0.0097)	-0.0294*** (0.0098)
<b>Occupation</b>			
Employed private sector		-0.0111 (0.0119)	-0.0125 (0.0111)
Self employed		0.0053 (0.0187)	-0.0047 (0.0181)
Unemployed		-0.0395* (0.0231)	0.0111 (0.0230)
Housewife / Houseman		-0.0447 (0.0276)	-0.0182 (0.0287)
Pensioner, retired		-0.0206 (0.0201)	-0.0261 (0.0188)
Student / Trainee		-0.0135 (0.0305)	0.0066 (0.0300)
Other		0.0182 (0.0313)	-0.0205 (0.0279)
<b>Income level</b>			
Medium		0.0461*** (0.0129)	0.0441*** (0.0121)
High		0.1234*** (0.0150)	0.1106*** (0.0134)
<b>Education</b>			
Secondary		0.0429*** (0.0145)	0.0443*** (0.0152)
University		0.1093*** (0.0183)	0.1093*** (0.0176)
Post graduate		0.1919*** (0.0209)	0.1708*** (0.0202)
<b>More restrictions immigrants</b>		-0.0123*** (0.0017)	-0.0098*** (0.0015)
<b>Support redistribution</b>		0.0039* (0.0023)	0.0038* (0.0021)
<b>Strong leader</b>		-0.0073*** (0.0019)	-0.0041** (0.0020)
<b>Vote EU elections</b>			
Once		0.0304* (0.0162)	0.0402*** (0.0147)
Both times		0.0604*** (0.0127)	0.0836*** (0.0100)

**Table SM3 (cont.). Effect of Structural Fund expenditures in the region on the personal benefit of the Cohesion Policy from the univariate probit model.**

	(i)	(ii)	(iii)
<b>City size</b>			
Small town		-0.0336*** (0.0123)	-0.0222** (0.0113)
Large city		0.0125 (0.0158)	0.0125 (0.0130)
Very large city		0.0509 (0.0356)	0.0240 (0.0238)
<b>Match needs region - CP thematic obj.</b>		0.0529*** (0.0126)	0.0371*** (0.0116)
<b>REGION/COUNTRY CONTROLS</b>			
<b>Employment rate</b>			0.0015 (0.0021)
<b>GDPpc (PPS as % EU average)</b>			0.0002 (0.0005)
<b>Skill endowment</b>			0.0027** (0.0011)
<b>Net contribution EU budget (% GDP)</b>			-5.0820*** (1.6671)
<b>Exports to EU</b>			0.0004*** (0.0001)
<b>Inflation rate</b>			-0.0246 (0.0303)
<b>Member of Eurozone</b>			-0.0856** (0.0430)
<b>Spread</b>			0.0149 (0.0175)
<b>Years since accession</b>			-0.0021*** (0.0006)

Notes: Standard errors clustered by region in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Omitted categories as described in Table 2. The number of observations is 14,833 in all specifications. Results obtained using the sample weight in the PERCEIVE survey.

**Table SM4. Results from the bivariate probit model without weighting and without clustered standard errors.**

	<b>Benefit CP</b>	<b>Support EU</b>
<b>Benefit CP</b>		-0.0712 (0.0560)
<b>Structural Fund exp. pc (log)</b>	0.0642*** (0.0068)	
<b>INDIVIDUAL CONTROLS</b>		
Utilitarian Mechanisms		
Occupation	YES	YES
Income Level	YES	YES
Perception economic situation in the region	NO	YES
Perception evolution economic situation in the region	NO	YES
Political Ideology	YES	YES
Political Awareness	YES	YES
Communal Identity	NO	YES
Political-Institutional factors	NO	YES
Match between needs and CP objectives	YES	NO
Demographics	YES	YES
<b>COUNTRY CONTROLS</b>	YES	YES
<b>REGION CONTROLS</b>	YES	YES
$\rho$		0.2687 (0.1021)
<b>LR Test <math>\rho=0</math></b>		6.27
<b>p-value LR test</b>		0.01

Notes: Standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Omitted categories as described in Table 2. The number of observations is 14,833 in all specifications.  $\rho$  denotes the correlation between the errors of the two equations. See notes in Table 3 for details on the individual and country and region controls.