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Editorial

Editorial

Linkages and channels between Cohesion Policy and European Identity

Jordi Suriñach, Edoardo Mollona***

While a Euro-sceptic attitude challenges the European integration project with increasing disbelief, the EU allocates a large portion of its budget to Cohesion and regional policy (CRP) for counterbalancing economic pressures and equilibrating the economic disparities among European regions. In this context, PERCEIVE project (Perception and Evaluation of Regional and Cohesion Policies by Europeans and Identification with the Values of Europe)[1], a three-year EU-funded research project, investigated how European Union communicates CRP and how European citizens perceive the role of CRP and of the EU.

Specifically, the aim of PERCEIVE project was to both mapping and explaining inter- and intra-regional variations in: a) the experiences and results of cohesion policy implementation, b) citizens' awareness and appreciation of EU efforts for delivering cohesion and c) European identities and citizens' identification with the EU.

The ambition of PERCEIVE was to attain a better understanding of the channels through which European policies contribute to create both different local understandings of the EU and different levels of European identification across profoundly different European regions.

This special issue collects and organizes a number of papers that report key findings of the PERCEIVE project. In designing the special issue, the Editors made an effort to describe the fundamental themes that motivated and inspired this important research endeavor.

Readers will appreciate that the panoply of papers presented in this special issue mobilizes two theoretical perspectives. A rational choice perspective that puts forward an idea of institutions as "rules of the game" and that emphasizes the calculative rationality of actors as determinants of European identities and identification. A social constructivist perspective that stresses the idea that European identities and identification emerge from a process of "social learning" associated with different institutional discourses.

In this light, the papers presented display the multidisciplinary portfolio of competences and the connected variety of qualitative and quantitative analytical methods applied in the PERCEIVE project that includes surveys, focus groups, case studies, econometric modelling and innovative methods such as quantitative discourse analysis, which has been used to elicit the meaning structures in public discourse about the EU.

The special issue that we are presenting collates six papers that, together, we propose, offer a sufficiently comprehensive picture of the insights that PERCEIVE produced. In addition, the paper written by Giovanni Perucca, adds to the picture the results produced within another EU-funded project – Cohesify–that, as well, in parallel, investigated the mechanisms underpinning the formation of European identity and perceptions of the EU.

To open the special issue, two papers report empirical research to describe the general features of the phenomena under investigation.

[1] For more details of the objectives, partners and project deliverables, see https://www.perceiveproject.eu/

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Specifically, in the paper *Do Citizens Support Cohesion Policy? Measuring European support for redistribution within the EU and its correlates*, Nicholas Charron presents the results of a survey that investigates how citizens feel about economic integration within the Union and what attitudes they have towards cohesion policy. Grounding on 17,200 interviews to European citizens, the survey shows the variation in citizens' support for EU Cohesion policy between countries and describes how support varies between demographic groups. To speculate on the relative exploratory power of rational versus cultural approaches, the survey studies as well as the extent to which utilitarian and ideational factors underpin support.

On the other hand, the paper written by Rosina Moreno, *EU Cohesion Policy Performance: Regional Variation in the Effectiveness of the management of the Structural Funds*, investigates the dynamics of absorption of EU cohesion funds at NUTS2 level. The effectiveness in the absorption of funds is a crucial challenge for EU member states and this article takes an original perspective by focusing on the regional variation in the absorption of the structural funds. A dimension, this latter, that has been overlooked in previous literature. The paper suggests that full absorption is more the exception than the rule and high regional heterogeneity in the absorption of the Structural Funds is not only observed across countries but also within the regions in a country.

After the description of the general phenomenon, the special issue tackles the process of EU identity formation. In particular, the impact of Cohesion Policy on citizens' perceptions of the policy and identification with the EU is at the core of both PERCEIVE and COHESIFY projects and is the topic that inspires the work presented in following three papers presented in this special issue.

A thoughtful review of the theoretical arguments that explain the process of creation of a European identity is provided in the article written by Vicente Royuela and Enrique López-Bazo, *Understanding the process of creation of European identity – the role of Cohesion Policy*. In the article, the authors discuss the grounds of mechanisms and determinants driving citizens' identification with Europe, stressing the role of the territorial dimension on European identity formation. The authors analyse the main theoretical arguments on the construction of European identity. They also analyse the role of Cohesion Policy by confronting the concepts of spatial identities with a historical perspective of the European project. Finally, they inspect the role of European institutions by providing some basic figures on the regional expenditure on Structural Funds and its association with the awareness, support and identification with the EU project

In their paper, *Profiling identification with Europe and the EU project in the European regions* Cristina Brasili, Pinuccia Calia and Irene Monasterolo investigate to what extent do EU citizens identify with Europe and the EU project, whether European regions have different patterns and level of identification and what, if any, is the role of socio-economic variables. The authors develop a novel probabilistic classification model, IdentEU, and use micro-level data from a survey implemented within the PERCEIVE project. The reported empirical research reveals that trust in the EU institutions, the effectiveness of EU Cohesion Policy and spending, and the level of corruption are three relevant drivers of citizens' identification with the European project.

To conclude the group of papers addressing the formation of EU identity, the paper by Giovanni Perucca, *When Country Matters More than Europe: What Implications for the Future of the EU?* studies the determinants of the imbalance between the identification of a citizen's with her/his country, on the one hand, and with Europe on the other. The work reported in the paper moves off from noting how recent empirical evidence shows an increasing imbalance in favor of the identification with individuals' country of residence. This phenomenon, the author suggests, may be connected with the increasing support to nationalisms and eurosceptic parties almost everywhere in the EU. The results presented, based on a panel data model using data from five Eurobarometer survey studies conducted between 2014 and 2017, suggest that individuals with lower education and income, and those living in the lagging-behind regions of the EU, are more likely to identify more with their own country than with Europe. Thus, the paper supports the hypothesis that unequal distribution (among individuals and regions) of the benefits from EU integration is a determinant worth considering of the emerging antagonism between European and national identity.

A second thread of investigation reported in this special issue addresses whether and how the communication strategies of Cohesion Policy affect the perception of the policy and the identification with the EU.

In their paper, Luca Pareschi, Edoardo Mollona, Vitaliano Barberio and Ines Kuric (*The use of social media in EU policy communication and implications for the emergence of a European public sphere*) analyze cohesion policy communication on social media of ten Local Managing Authorities (LMAs) that manage structural funds at the local level and communicate to stakeholders information concerning Cohesion Policy. The authors use semi-automatic text analysis techniques to elicit shared meaning structures as they emerge in the discussion on social media. The aim is to understand whether an European public-sphere exists in which a shared EU identity can emerge. The reported results show the emergence of an internationally articulated cluster of topics that showcases a negative attitude towards the EU funding scheme and a generally skeptic attitude towards the Europe Union. This fact suggests that, counter-intuitively, Euroscepticism seems to facilitate, the emergence of a European public sphere.

To complete the special issue, to offer a general understanding of cohesion policy, we propose a paper that presents a map of the many interconnected processes that are involved in the implementation and communication of Cohesion Policy. The paper by Giovanni Cunico, Eirini Aivazidou and Edoardo Mollona (*European Cohesion Policy performance and citizens' awareness: A holistic System Dynamics framework*) integrates the analysis of implementation and communication. Namely, based on the interviews to policy-makers, stakeholders and beneficiaries of cohesion policy, the paper develops a holistic qualitative framework that elicits the causal structure underpinning the distribution of the Cohesion Policy funds, the impact on projects' quality of the management capability at local managing authority level, and the related, communication processes. The authors developed the qualitative causal model with the aim at stimulating a focused discussion on Cohesion Policy. The motivation behind this modelling effort is to provide policy-makers, stakeholders and scholars interested in Cohesion Policy analysis with a conceptual tool able to elicit the interconnections among the key processes at work and, more specifically, between the dynamics of funds absorption, policy communication and the mechanisms that produce awareness about the policy.

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Articles

Do Citizens Support EU Cohesion Policy? Measuring European support for redistribution within the EU and its correlates

Nicholas Charron, Monika Bauhr***

Received: 15 February 2019
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Abstract:

As the European Union enters into the next decade, its leaders seemingly strive towards more future integration rather than less, despite the recent setback of Brexit and the rise of anti-EU populist parties. In his state of the Union in 2018, Jean Claude Junker emphasized s 'European solidarity'. One key policy 'expression of solidary' would be Cohesion Policy and the Structural Funds, which are "the only real, significant redistributive mechanism in the EU…" (Fratesi 2017). . Despite elite commentary, we know surprisingly little about what EU citizens think of the rationale behind the policy of Cohesion – e.g. economic redistribution within the EU. As part of the PERCEIVE Horizon2020 project, we launched a unique survey to investigate how citizens feel about economic integration within the Union, where 17,200 citizens were interviewed. In this paper, we show how we measure support for the policy, the results as well as a host of correlates. Our analysis shows the variation in citizens' support for EU Cohesion policy between countries, how support varies between demographic groups, as well as the extent to which support is correlated with utilitarian and ideational factors as well as cue taking. Implications for future developments of this policy are discussed.

Keywords: European Union; Cohesion Policy; Redistribution: Public Opinion: Survey Research.

JEL classification: F35; F53; R11; R58.

¿Apoyan los ciudadanos la política de cohesión de la UE? Medida del apoyo europeo a la redistribución dentro de la UE

Resumen:

A medida que la Unión Europea ingresa en la próxima década, sus líderes aparentemente luchan por más integración futura en lugar de menos, a pesar del reciente revés del Brexit y el surgimiento de los partidos populistas anti-UE. En su estado de la Unión en 2018, Jean Claude Junker hizo hincapié en la "solidaridad europea". Una política clave de "expresión de solidaridad" sería la Política de Cohesión y los Fondos Estructurales, que son "el único mecanismo redistributivo real y significativo en la UE..." (Fratesi 2017). A pesar de las opiniones de la élite, sorprendentemente sabemos poco sobre lo que piensan los ciudadanos de la UE sobre la lógica detrás de la Política de Cohesión, de la redistribución económica dentro de la UE. Como parte del proyecto PERCEIVE Horizon2020, llevamos a cabo una encuesta única para investigar cómo se sienten los ciudadanos acerca de la integración económica dentro de la Unión, entrevistando a 17.200 ciudadanos. En este documento, mostramos cómo medimos el apoyo a la política, los resultados y

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una serie de elementos relacionados. Nuestro análisis muestra la variación en el apoyo de los ciudadanos a la política de cohesión de la UE entre países, cómo varía el apoyo entre los grupos demográficos, así como la medida en la que el apoyo se correlaciona con factores utilitarios e ideológicos. Se discuten las implicaciones para futuros desarrollos de esta política.

Palabras clave: Unión Europea; Política de cohesión; Redistribución; Opinión pública; Encuesta de investigación.

Clasificación JEL: F35; F53; R11; R58.

1. Introduction

Cohesion Policy currently constitutes the second largest budget item of the European Union[1]. While several recent studies have tested models explaining support for EU bailouts to member states in need (Bechtel et al. 2014; Kuhn and Stoeckel 2014; Bauhr and Charron 2018) or greater economic integration (Daniele and Geys 2015), none to date have actually tested the extent to which citizens support the general, and continual occurrence of inter-EU redistribution. And while several rounds of Eurobarometer surveys have asked about awareness of EU Cohesion/Regional policy, there has been a lack of attempt in fact gauge the public's actual opinion of this important policy, which make up roughly one third of the EU budget. This study introduces newly collected data of what is to the best of our knowledge one of the first investigation of European public opinion that attempts to directly capture attitudes of EU Cohesion Policy.

The primary objective of the data collection, carried out through the Horizon 2020 funded research program PERCEIVE ("*Perception and evaluation of Regional and Cohesion Policies by Europeans and Identification with the values of Europe*"), is to investigate citizen knowledge, attitudes and experience with Cohesion policy, along with elucidating factors – both original to the project and others drawn from the literature – that are associated with support (or lack thereof) for the policy in question. The survey includes over 35 substantive questions as well as seven demographic and background questions of the respondents. In all, 17,147 interviews were carried out in 15 EU member states, which represent 85% of the total EU28 population.

The questions included in the survey are grounded in the burgeoning academic literature on public support (and scepticism) for European Integration. The majority of these questions are included to provide researchers with as many tools as possible to test various theories about why citizens would support (or not) the idea of Cohesion Policy. Cohesion policy includes structural funds, and is a set of transfers that go from wealthier EU member states to predominantly to regions (e.g. sub-national units) that fall below a certain threshold of economic development[2]. The proportion of funding for this policy in relation to the overall EU budget is sizeable (roughly 1/3rd) – and for a comparative perspective, the expenditures on Cohesion policy during the 2014-2020 budget period equate to roughly 57 billion Euros per year, which is just greater than the total public annual expenditure of Finland in 2013 (OECD.stat)[3].

The paper here presents a motivation for the questions included, with focus on how to measure support for a Cohesion Policy. Since cohesion policy is a policy that a majority of EU citizens have never heard of, we also introduce how we dealt with this in the survey design to gain more valid responses of support (or lack thereof). Finally, the paper elucidates individual level correlates with support for the policy according to expectations from the literature on EU integration and posits several paths forward for future research with the use of the dataset. The dataset, along with a codebook, are made freely available for scholarly use online[4].

[1] For details, see: https://europa.eu/european-union/about-eu/eu-budget/expenditure_en

[2] For more information on Cohesion Policy, its history, outcomes and critics, see Piattoni and Polvarari (2016).

[3] https://stats.oecd.org/

[4] The data can be accessed here: https://zenodo.org/communities/perceiveproject/search?page=1&size=20

2. Public support for redistribution within the EU

The literature on public support for European integration or more recently Euroskeptisim (e.g., Hooghe 2007; Hakhverdian et al. 2013), has made significant advances in recent years. This literature has sought to explain why citizens would support or be skeptical towards European integration in general and, more recently, specific policies related to it. The explanations entail everything from benchmarking, or cue taking based on the national political context, to more utilitarian or identity driven explanation (Hobolt and De Vries 2016; Bauhr and Charron 2018, Bauhr and Charron 2019). These explanations are in turn often seen as the reason why support for the EU and its policies varies across different segments of the population or societal groups such as citizens' level of education, gender or income.

Research on both domestic and international redistribution (i.e. Alesina and Ferrera 2005) suggest that redistributive preferences can partly be derived from economic self-interest, i.e. that support should be stronger among citizens that rely on the welfare state and in countries with poor macroeconomic performance. Yet unlike aid transfers from the wealthiest countries to the poorest ones or interpersonal transfers from wealthy to poor individuals, Cohesion policy involves geographic, inter-EU transfers – that is to say resources from some of the wealthiest states, to regions that are well above the world average. Due to its redistributive nature, support for specific polices such as Cohesion policy could also be influenced by different factors than integration in general. . In the literature on EU integration, attachment with the Europe is often seen as an important explanation for support for the EU (Hooghe and Marks 2009; Hobolt and de Vries 2016; Börzel and Risse 2018). Conversely, holding an exclusive national identity is seen as detrimental to support for EU integration (Hooghe and Marks 2009; Hobolt and de Vries 2016; Börzel and Risse 2018). Furthermore, studies show that cosmopolitanism may be important for support for the EU and its policies (Paxton and Knack 2012; Bechtal et al 2014; Daniele and Geys 2015)[5]. Some recent evidence suggests that civic European identity predicts support for inter-EU redistribution, while a religious European identity does not (Bauhr and Charron 2020).

Studies also point to the notion of benchmarking being important for citizens' assessment of policies and that citizens' use cues of their own domestic (or regional) institutions as a heuristic when assessing the EU and support for EU integration, such as economic performance of corruption. This idea originates from Hoffmann (1966), who posited that national legitimacy could be a potential obstacle to future European integration. Building on this, Andersson (1998) suggests that since citizens oftentimes have insufficient knowledge about Europe, they base their assessment of the EU on perceptions of national level institutions. Benchmarking the EU based on domestic institutions could lead to one of at least two potential outcomes. On the one hand, citizens could use "cues" or heuristics based on domestic institutional performance, which they presumably know more about and simply transfer their level of trust in domestic institutions to international ones. This type of cue-taking based on the domestic political contexts thus typically reproduce patterns of trust or dissatisfaction across the multilevel government system; citizens that are dissatisfied with their own domestic institutions are likely to be dissatisfied also with international institutions, such as the EU and vice versa. [6] On the other hand, some have pointed to 'compensation' at the individual level as well – and consequently that one's preferences for further EU integration instead will be higher (lower) in settings with poorer (better) performing institutions. Kritzinger (2003) finds that individual assessments of one's own nation state are negatively associated with

[5] Bechtel et al. (2014) show that German citizens that express cosmopolitan and altruistic views are significantly less likely to oppose financial bailouts for crisis-stricken EU countries; a finding supported by Daniele and Geys looking at an EU-wide sample (2015).

[6] This implies that positive (negative) evaluations of national institutions increase (decrease) support for the EU and its policies among citizens – what has been called the *'congruence' hypothesis*. For instance, Munoz et al (2011) find that individual level trust in national level institutions positively predicts trust in EU parliament. Others find evidence that positive (negative) individual level evaluations of one's own domestic institutions predict positive (negative) attitudes about the EU and satisfaction with EU democracy (Rorscheider 2002; Hobolt 2012). Armigeon and Ceka (2014) look at the dynamic relationship and find that aggregate drops in national trust have caused a reduction in EU trust, yet others find less consistent patters when comparing prior to and after the financial crisis (Serricchio et al 2013).

support for EU integration in the EU's four largest members, yet she finds mixed evidence with respect to the link between citizens' assessments of national level economy and EU integration support. Others find 'compensation' effects with sociotropic level variables. For example, Sanchez-Cuenca (2000) that finds that people living in countries with higher levels of corruption tend to trust the EU more on average, a factor which the authors argue conditions national level trust.

However, the vast majority of studies on public support for the EU do not focus directly on economic redistribution.[7] Factors explaining general levels of support for or trust in the EU may be different from the factors explaining public support for specific policy transfers to the EU, such as intra EU financial assistance, bailouts or Cohesion Policy (Kuhn and Stoeckel 2014; Bauhr and Charron 2018). These policies often come with a more concrete price tag, and economic redistribution within the EU can be perceived to be fundamentally different from the market liberalization often associated with EU integration efforts (Kuhn and Stoeckel 2014). Support for redistributive policies may therefore require a different level of or form of solidarity across borders.

However, a comprehensive analysis of support for cohesion policy would have to build on an analysis of what exactly it is that we seek to investigate and the potential pitfalls involved in doing so. Unlike inter-personal transfers from the wealthy to the poor within countries, or international foreign aid from the world's most developed to least developed areas, the redistribution within the EU is neither inter-personal, nor necessarily to the world's 'most needy' areas. This type of redistribution, as well as the contemporary relevance of this question in particular for the EU, offers a number of potentially interesting avenues for future research. This is where we see that our new survey contributes to the advancement of the field, and an issue to which we turn next.

3. Introducing the survey

The PERCEIVE original survey is intended to help researchers better understand the micro and macro level dynamics that drive support (or lack thereof) of EU regional polices. The survey includes over 35 substantive questions as well as seven demographic and background questions of the respondent. Each respondent is geo-coded at the NUTS 1, NUTS 2 and NUTS 3 level. The fieldwork was conducted during the summer of 2017 by an international survey firm based in Rheims, France (Efficience3, 'E3'). The results were returned to the researchers in September, 2017.

The interviews were conducted in several countries and used sub-contracting partners in others[8]. In all, 17,147 interviews were carried out in 15 EU member states (see appendix for full sample and response rates). The respondents, from 18 years of age or older, were contacted randomly via telephone in the local language. Telephone interviews approximately 12-15 minutes in length were conducted via both landlines and mobile phones, with both methods being used in most countries. All interviews were made by

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[7] Recently, scholars have investigated how domestic cues condition support for economic integration and intra-EU financial bailouts more specifically. For example, Kuhn and Stoeckel (2014) point to more national economic heuristics – people living in countries that have higher GDP per capita are predicted to support EU economic integration less, in particular when they have strong national identity. Daniele and Geys (2015) report mixed findings on the effect of national deficits and debt on citizen support for various economic forms of integration. Bauhr and Charron (2018) argue that low quality of domestic institutions undermines societies collective action capacity and in particular the willingness to pay taxes and trust in governments redistributive capacity. This suggests, much in line with a "congruence" hypothesis (Muñoz et al 2011; Kristinger 2003; Andersson 1998), that citizens' use "cues" about domestic government performance to form opinions about the likelihood that international aid and financial assistance will reach desired ends. However, research increasingly suggests that public support for the EU is multifaceted (Boomgaarten et al 2011) and the factors explaining public support for sending financial assistance to other countries in times of need may consequently be different than the factors explaining public support for Cohesion policy, an annual budget expenditure. Furthermore, much of this economic integration literature focuses one or few countries, such as Germany (for example, Bechtel et al 2014), thus we still have a limited understanding how institutional and economic contexts are used as sues for citizens' support of ideas regarding economic integration.

[8] http://www.efficience3.com/en/accueil/index.html. For names of the specific firms to which Efficience 3 sub-contracted in individual countries, please write cati@efficience3.com

employees with at least one year of professional experience and used *Computer Assisted Telephone Interviewing* (CATI)[9]. Decisions about whether to contact residents more often via land or mobile lines was based on local expertise of market research firms in each country, with mobile being first choice in all cases.

With respect to mobile phone respondents, randomized digit dialling was employed, while for landlines, the sampling method employed was the 'next birthday method'. The next birthday method is an alternative to the so-called 'quotas method'. When using the quota method for instance, one obtains a (near) perfectly representative sample – e.g. a near exact proportion of the amount of men, women, certain minority groups, people of a certain age, income, etc. However, as one searches for certain demographics within the population, one might end up with only 'available' respondents, or those that are more 'eager' to respond to surveys, which can lead to less variation in the responses, or even bias in the results. The 'next-birthday' method, which simply requires the interviewer to ask the person who answers the phone who in their household will have the next birthday, still obtains a reasonably representative sample of the population. The interviewer must take the person who has the next coming birthday in the household (if this person is not available, the interviewer makes an appointment), thus not relying on whomever might simply be available to respond in the household. So, where the quota method is stronger in terms of a more even demographic spread in the sample, the next-birthday method is stronger at ensuring a better range of opinion.

4. Measuring citizen support for Cohesion Policy

Measuring public support for Cohesion Policy is not as straightforward as other policy areas, such as support for the Euro, which can be asked more or less directly. For example, previous Eurobarometer surveys of 'Awareness of Regional Policy in the EU' show a relatively consistent and low level of awareness throughout the EU over the past eight years in which the question was asked to the public[10].

In addition, the Eurobarometer has also tried to indirectly capture the level of support for Cohesion – by asking "do you support investing on 'all regions' or 'only poor regions' for example. Such question formulation is insufficient for our purposes for two reasons. First, the Eurobaromter survey has not allowed for people NOT to support this idea – that is top say giving people an option of 'not wanting to spend at all' or something to this effect. Second, there is not a sense of the intensity with which people may or may not like the idea of CP. Our original measures of support for this policy aim to remedy these shortcomings.

Due to relatively low awareness of the policy in question – in particular in wealthy northern EU countries (Eurobarometer 2013; 2015), respondents are given a bit of primer information about the policy in question prior to the question.

The priming information is then followed by the following question of support:

"In your opinion, the EU should continue this policy, where <u>wealthier countries contribute more</u>, and <u>poorer EU regions receive more</u> funding." 1. Strongly agree, 2. Agree, 3. Disagree, 4. Strongly disagree, 5. don't know

Figure 2 shows a breakdown by country. Here the bar graph shows the proportion of respondents who 'strongly agreed' and 'agreed'. The results reveal some significant country-level differences. While all countries on average show a relatively high degree of support for CP in general (weighted country average = 79%), there is a 24% gap between the lowest supporter (Netherlands 67%) and the highest (Slovakia 91%). Newer member states (in general the largest recipients of CP) are most likely to agree with Q20 –

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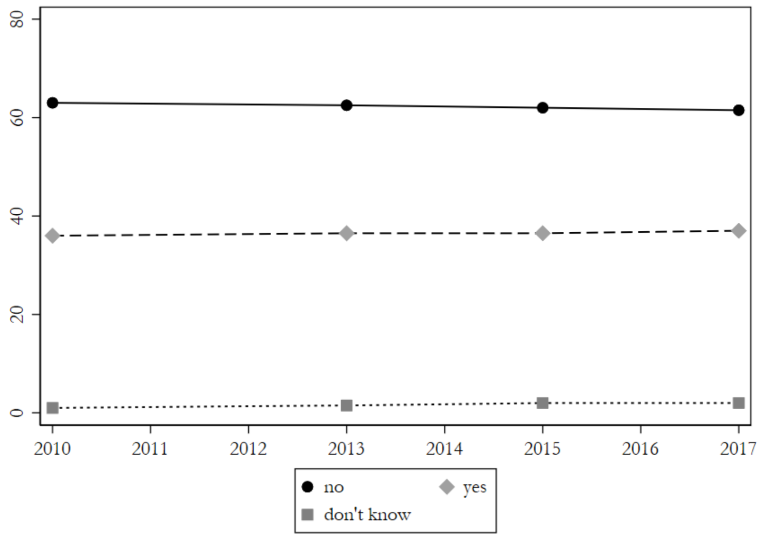
[9] Between 12%-15% of all interviews were randomly check for quality control by supervisors, with no reported irregularities.

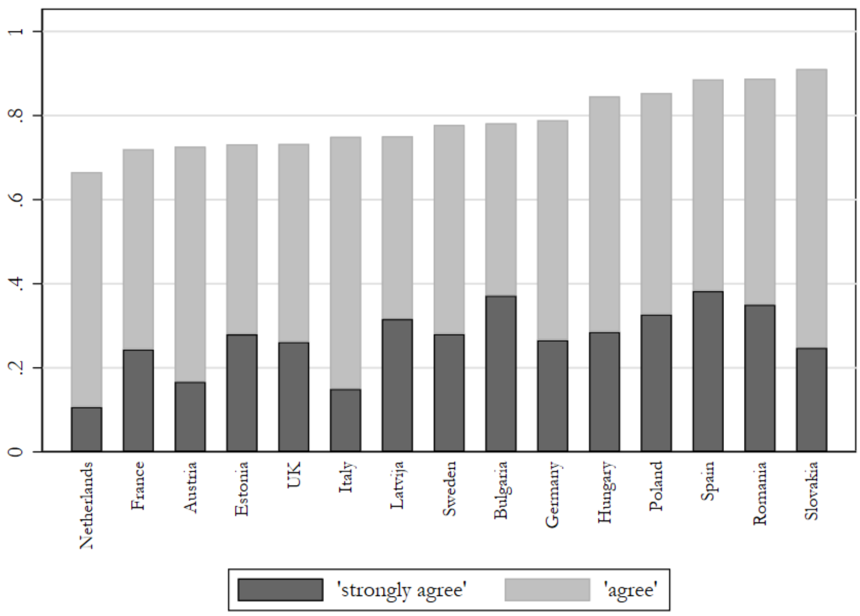
[10] The question was framed in each Eurobarometer survey: "Europe provides financial support to regions and cities. Have you heard about and EU co-financed projects to improve the area where you live?"

FIGURE 1.
Awareness of EU Regional Policy



Note: weighted EU averages of each response reported.
Source: Eurobarometer.

FIGURE 2.
Support for Cohesion policy (strongly agree and agree) by country



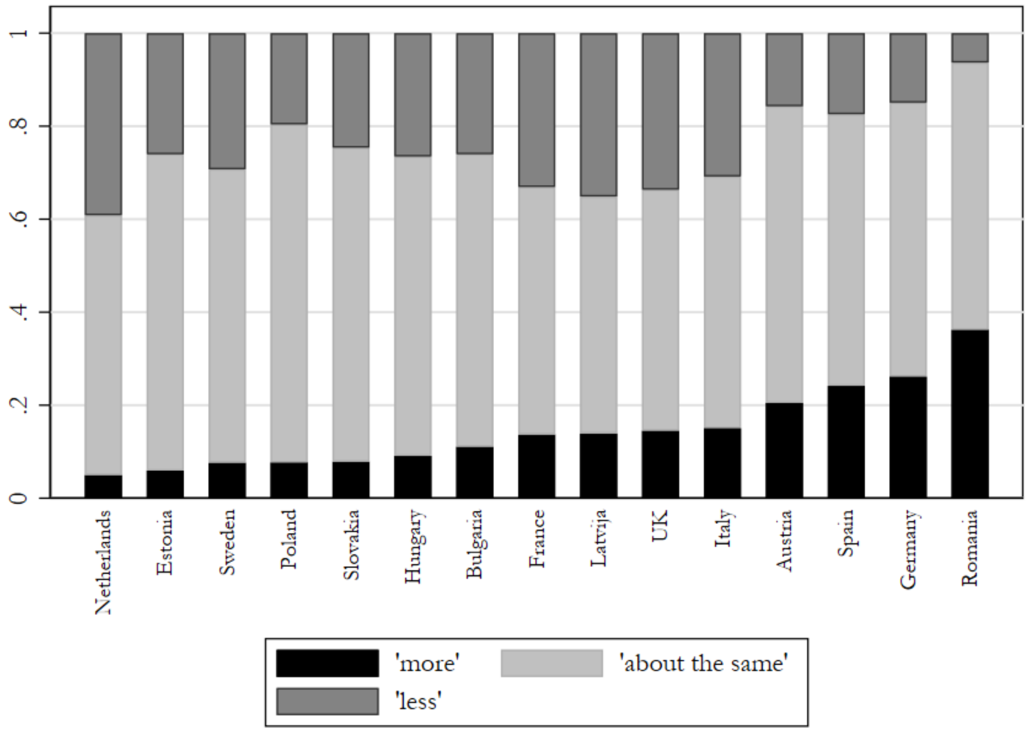
Note: weighted percentages reported. Sample weighted average is 79% for strong agree or agree.

with the highest support coming from Slovakia, Romania, Poland and Hungary, with E15 country Spain also in the top five. Older members, with the exception of Estonia, tend to be less favorable. Looking at the two responses separately, Bulgaria and Spain have the highest proportion of 'strongly agree', while Netherlands and Italy have the lowest in such response category.

Next, we add a dimension of 'intensity' of support, which we draw from Bechtal et al (2014). Intensity is measured by one's willingness for their home country to contribute more to this policy than the current status quo. Here the respondents are asked about whether they would like tax money from their own countries to go more, about the same or less toward this policy. Figure 3 summarizes the findings by country.

In your opinion, compared with what it spends today, should (COUNTRY) contribute, more, about the same, or less to this EU policy? 1. More, 2. About the same, 3. Less

FIGURE 3.
Preferences for spending by country



Note: weighted proportions reported.

Again, there are fairly clear-cut differences from country to country in terms of preferences for more or less spending on CP from one's own country. Romanian's are on average the most enthusiastic, with 36% of respondents claiming that they would like their country to send more money toward CP, with just 6% saying less. Germany, Spain and Austria are more on the supportive side as well; all having larger proportions of respondents saying 'more' than 'less'. On the other side, respondents from the Netherlands are least supportive of investing more from their country's tax base toward CP, with 39% saying 'less', and just 5% saying 'more'. In 6 of the countries in the sample – Hungary, Slovakia, Poland, Sweden, Estonia and Netherlands, we see support for more contributions from one's own country on Cohesion Policy is under 10%, and all but four are under 20% in this respect. However, over 30% of people in France, Italy, Latvia, Netherlands, and UK want to spend less. People in Estonia and Poland are either the most satisfied (or the most indifferent) to Cohesion Policy, as roughly 70% or more support their country spending 'about the same'.

5. The questions: possible correlates of support for Cohesion Policy

The questions included in the survey are grounded in the academic literature on public support (and scepticism) for European Integration. Investigating citizen attitudes to cohesion policy is somewhat uncharted territory, despite the prominence of Cohesion Policy in the EU budget Thus the questionnaire is a mix of novel and established questions.

As per accounting for established ideas, we draw on a rich literature of public support for EU integration, along with the emerging literature on public support for inter-EU economic redistribution and financial support (recently, see Daniele and Geys, 2015; Bansak et al., 2016; Stoeckel and Kuhn, 2017; Bauhr and Charron 2018). Most all studies point to several standard explanatory factors of public support for EU integration in general – 'utilitarian', 'ideational' and 'cue-taking' (see Hobolt and de Vries 2016). For 'utilitarian'/ (self-interest) type we sought to include survey items that captured both individual level and sociotropic items. As per the individual's own circumstances, we capture measures of income, level of education, one's place in the labor market. As per sociotropic items, we inquire about subjective views of the economic situation in their region, and the relative performance of the current economy relative to five years ago as well (see Gabel 1998) along with the self-placement of one's region relative to all others in the EU in economic terms (Balcells et al 2014).

A second line of relevant explanatory factors highlighted in the literature are political attitudes, values and ideology have strong explanatory power (Hooghe and Marks 2005; 2009; McLaren, 2002). Here we attempt to capture these established factors in several ways, along with incorporating newer ideas about European identity from the PERCEIVE project. As per established items, it is more or less established by now that strong, exclusive national identity with one's country is consistently found as critical negative predictor of support for EU policies and that strong identity/attachment with Europe tends to correlate with support for further policy integration (Hooghe and Marks 2005; Risse 2014). In the questionnaire, respondents were asked to place their attachment to three levels of governance – regional, national and European on a 0-10 scale. One's political party also serves as an important heuristic as citizens tend to take cues from the platforms of party elites (Steenburg and Jones 2002; Hooghe and Marks 2009) and several studies have found that 'cue taking' effects regarding EU support work through one's political party (Hobolt 2007; Stoeckel and Kuhn 2017), thus we inquire about which party the respondents support. Political values could also be confounding factors in our model. We designed several questions in the survey to account for the 'gal-tan' dimension (Kitschelt 1994)[11], as respondents with higher 'tan' values have found to be both less supportive of EU integration and more prone to rating corruption in their institutions as higher (Hooghe and Marks 2009). Left-right ideology and preferences for domestic redistribution could also play a role in preferences for a redistributionary policy such as Cohesion (Bansak et al 2016). We account for this factor via a question on the extent to which respondent's feel their own government should 'take measures to reduce income levels' in their country (0-10).

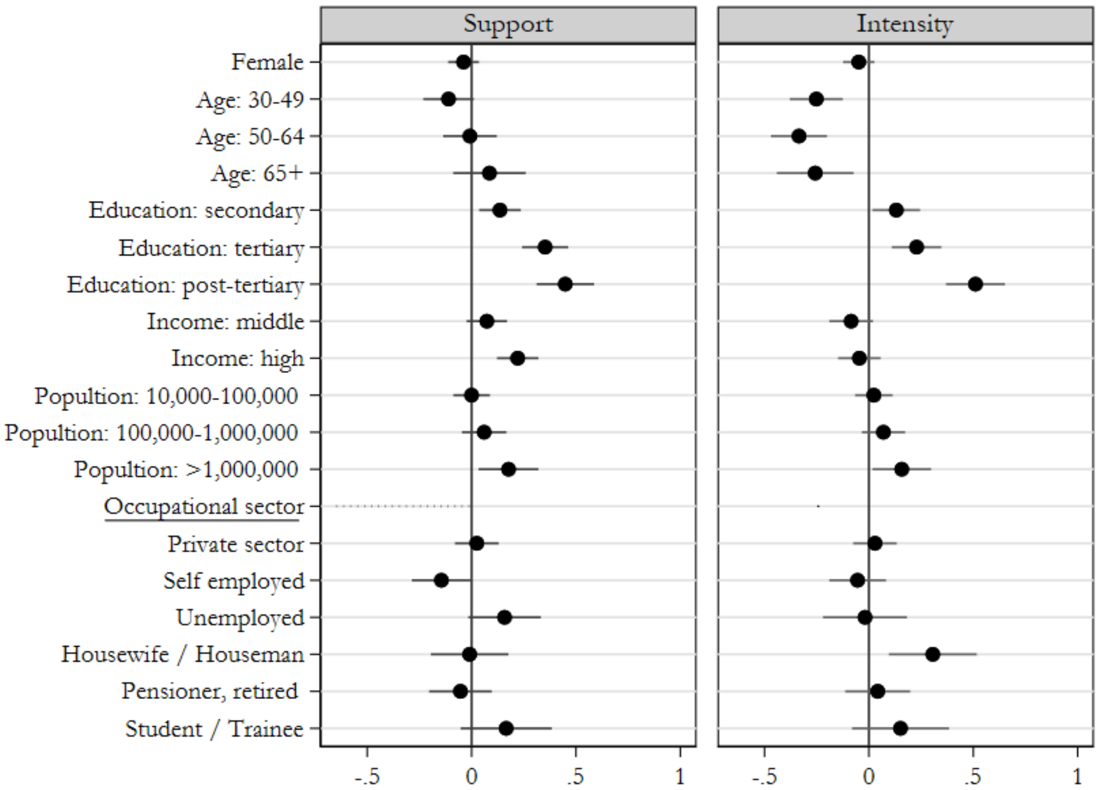
Adding to this line of research, we include several, more in depth questions about specific channels of European identity, with five questions drawn up by the researchers of PERCEIVE, meant to capture various dimensions of European identity, such as civic, cultural and utilitarian (Bruter 2003).

Another fruitful line of research in the EU public opinion literature is the extent to which citizens use domestic proxies to determine their support for EU integration and various policies (Anderson 1998; Sanchez-Cuenca 2000). Here we are interested in incorporating our ideas about perceptions institutional quality 'Quality of Government' (QoG) and corruption in a multi-level structure. As recent studies have

[11] The survey questions regard the extent to which people feel the Christian religion is an essential 'European value', the extent to which respondents want to' restrict immigration' and the extent to which respondents would prefer a 'strong leader' who can 'get things done in spite of parliamentary rules of elections'. The question formulations are found in the appendix.

shown the limitations of utilitarian models that explain support for the EU (see Crescenzi et al., 2019), we expect our focus on perceptions of institutional quality to be salient in explaining support for EU policies, in particular in a time of diminished trust and political polarization across Europe (Algan et al., 2017). We ask respondents the extent to which the respondents perceive corruption in their own national and regional governing institutions as well as those of the European Union. As institutional and administrative quality is now a key goal of EU Cohesion policy (Charron et al., 2019), this topic has clear policy relevance. A full list of the survey's questions and formulations can be found in the appendix.

FIGURE 4.
Ordered logit estimates of support and intensity for Cohesion Policy: Demographic factors



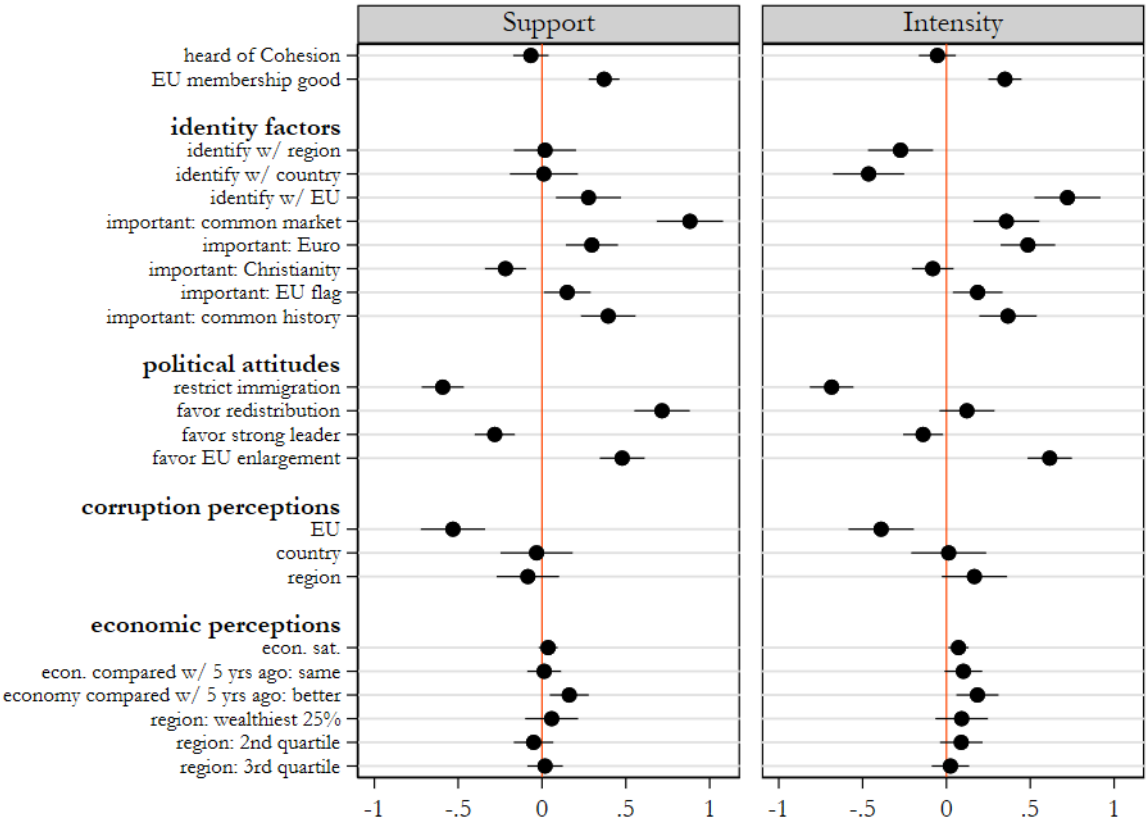
Note: Effects (logged odds) presented with 95% confidence intervals. Models include survey design weights and country fixed effects (not shown).

Labor market position is in line with Bechtel et al (2014) findings in that students and retirees show more intensity of support for the policy (compared with public sector employees), while differences in the public and private sector are ambiguous, also found in Kuhn and Stoeckel (2014). The self-employed also support the policy less on average. Finally, we find no systematic gender effects, and age, when accounting for occupation, is a slight negative predictor of intensity.

Figure 5 build on the models in Figure 4 and adds the additional attitudinal, identity a political factors to the model. For the sake of presentation, the demographic and occupational factors are not shown, yet are included in the estimations. We find several noteworthy factors that are strongly associated with positive views of Cohesion Policy, all things being equal. First, positive assessments of EU membership relates with support and intensity for EU redistribution. Second, geographic identity has a mixed relationship with the outcomes. Holding constant all other factors, a stronger regional and national identity play no role in the support outcome, yet reduce the willingness to contribute financially from one's home country (intensity). On the other hand, a stronger identity with the Europe is positively correlated with both outcomes.

Figure 5.

Ordered logit estimates of support and intensity for Cohesion Policy: Attitudes, Identity and Political Beliefs



Note: marginal effects reported (95% confidence intervals) from ordered logit estimation. All models include the demographic variables from Figure 1, along with design weights and country fixed effects. All variables are scaled between 0 and 1 for purposes of comparison. In terms of the identity questions, the phrase 'important' refers to the importance a respondent places on that item with respect to what it means to 'be European'.

Third, we include several specific components of European identity, along the lines of the multi-dimensional 'civic' and 'cultural' ideas of Brueter (2003). For these five questions, respondents are asked about the relative importance of these items in terms of what it means to 'be European' (see appendix for exact wording). The models shows that believes that the EU common market is what constitutes 'being European' have the strongest, positive association with the two outcomes, while the Euro currency and a 'shared history' also are positive indicators. Beliefs that the EU flag is important have a small positive effect, while believing that the Christian religion is what unites Europe leads to less support of Cohesion Policy on average.

Political attitudes also have strong effects on the two outcomes. Those that maintain that immigration in their home country should be more restricted and profess to want a 'strong leader' ruling their country are significantly less likely to favor Cohesion, either in terms of overall support or intensity, while those that favor EU enlargement in general express the opposite. We see some mixed results for attitudes of redistribution; while this attitude is positively related with support, it is negligible in terms of intensity.

Perceptions of corruption across the three levels of governance also have mixed effects. While citizens who view the EU as corrupt, ceteris paribus, are less supportive of Cohesion, attitudes on regional or national level corruption have ambiguous effects on the two outcomes. Finally, perceptions of the economy play a slight role, with current economic satisfaction having a positive and significant effect on willingness to contribute, and positive retrospective assessments (economy better than five years ago) correlating positively with both outcomes. Other factors are negligible.

6. Conclusion

While future European integration may partly build on a willingness to share resources across borders, we have thus far had very limited knowledge about the extent to which European citizens' actually support the EUs most significant tool for redistribution: cohesion policy. This study introduces a new survey on public support for cohesion policy and its determinants. This survey offers opportunities to gain insights into public support for this policy. The survey can be used to understand differences between different countries, regions, demographic groups as well as to investigate potential explanatory factors and effects of support for this policy, and is, to the best of our knowledge, the most comprehensive survey in this field thus far.

Although the survey is to the best of our knowledge the first comparative regional level survey that investigates the determinants of support for cohesion policy, the survey is firmly rooted in the impressive body of work on the determinants of European integration and support for specific EU policies. In addition, the regional level focus of this study offers many advantages relative to the country level for anyone interested in analyzing pan European patterns, for research or policy purposes.

Since patterns of support for specific EU policies may potentially look very different from patterns of regime level type of support for the European union or integration in general, understanding both determinants of and effects of public support for cohesion policy is an interesting research avenue to explore for anyone interested in redistributive preferences and social solidarity across borders. Understanding these patterns and correlates is also interesting for anyone concerned about future directions of European integration, since public support, skepticism or resentment of these policies can potentially pose important obstacle to the implementation of cohesive policies across Europe.

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Appendix

Further background information on the survey

This study presents an original survey that is intended to help researchers better understand the micro and macro level dynamics that drive support (or lack thereof) of EU regional polices. The survey includes over 35 substantive questions as well as seven demographic and background questions of the respondent; geo-coded at the NUTS 1, NUTS 2 and NUTS 3 level. The survey was funded largely in part from an EU Horizon 2020 grant (GA number 693529). The fieldwork was conducted during the summer of 2017 by an international survey firm based in Rheims, France (Efficience3, 'E3'), who have conducted several other large EU-wide surveys on behalf of the EU Commission. The data was delivered to the authors in September 2017.

E3 conducted the interviews themselves in several countries and used sub-contracting partners in others[12]. In all, 17,147 interviews were carried out in 15 EU member states. The respondents, from 18 years of age or older, were contacted randomly via telephone in the local language. Telephone interviews approximately 12-15 minutes in length were conducted via both landlines and mobile phones, with both methods being used in most countries. All interviews were made by employees with at least one year of professional experience and used *Computer Assisted Telephone Interviewing* (CATI). Between 12%-15% of all interviews were randomly check for quality control by supervisors, with no reported irregularities. Decisions about whether to contact residents more often via land or mobile lines was based on local expertise of market research firms in each country, with mobile being first choice in all cases. For purposes of regional placement, respondents were asked the postcode of their address to verify the area/ region of residence if mobile phones were used.

Sampling method

Ideally, a survey would be a mirror image of actual societal demographics – gender, income, education, rural-urban, ethnicity, etc. However, sampling on demographics is much more costly. Based on E3's expert advice, to achieve a random sample, the 'next birthday method' was employed. The next birthday method is an alternative to the so-called quotas method. When using the quota method for instance, one obtains a (near) perfectly representative sample – e.g. a near exact proportion of the amount of men, women, certain minority groups, people of a certain age, income, etc. However, if one searches for certain demographics within the population, one might end up with only 'available' respondents, or those that are more 'eager' to respond to surveys, which can lead to less variation in the responses, or even bias in the results. The 'next-birthday' method, which simply requires the interviewer to ask the person who answers the phone who in their household will have the next birthday, still obtains a reasonably representative sample of the population. The interviewer must take the person who has the next coming birthday in the household (if this person is not available, the interviewer makes an appointment), thus not relying on whomever might simply be available to respond in the household. Therefore, where the quota method is stronger in terms of a more even demographic spread in the sample, the next-birthday method is stronger at ensuring a better range of opinion.

The next-birthday method was thus chosen because we felt that what we might have lost in demographic representation in the sample would be made up for by a better distribution of opinion. In attempt to compensate for some key demographic over/under-representation, we provide weights based on age and gender for each region, comparing the sample drawn to actual demographic statistics from

[12] http://www.efficience3.com/en/accueil/index.html. For names of the specific firms to which Efficience 3 sub-contracted in individual countries, please write cati@efficience3.com

Eurostat. A breakdown of the sample response rate, landline vs. mobile phone use, etc. is listed in the table below by country.

Sample and further survey information

The survey included 15 EU countries. These 15 countries in this sample represent over 85% of the proportion of the EU population. Countries were selected for purposes of the selected case study reports as well as on the bases of variation with respect to geography, size, and institutional quality. The countries in the sample of this survey are the following and they are often refereed to via the following official abbreviations:

Table A1.
Sample information

Country	Abbreviation	respondents	Mobile rates	landline rates	response rate	refusal rate
Austria	AT	1000	30%	70%	10,0%	46,5%
Bulgaria	BG	503	82,10%	17,90%	32,0%	21,0%
Estonia	EE	5000	92%	8%	13,5%	38,0%
France	FR	1500	65%	35%	10,0%	26,0%
Germany	DE	1500	35%	65%	12,5%	46,5%
Hungary	HU	1000	100%	-	22,0%	33,0%
Italy	IT	2000	38,5	61,5	16,2%	9,3%
Latvia	LV	500	100%	0%	13,0%	24,0%
Netherlands	NL	500	57%	43%	9,8%	29,1%
Poland	PL	2000	80%	20%	12,1%	15,7%
Romania	RO	1015	100%	0%	10,0%	47,0%
Slovakia	SK	1014	100%	0%	10,0%	48,0%
Spain	ES	2014	68%	32%	7,5%	17,1%
Sweden	SE	580	5,5%	94,5%	12,5%	28,3%
UK	UK	1500	37%	63%	12,5%	46,5%
		Total= 17147				

Survey questions used in analysis (see main text for dependent variables)

Awareness of Cohesion Policies

In general, have you ever heard about the following EU policies? (yes, no) *a. EU Cohesion Policy, b. EU Regional Policy, c. Structural Funds , d. any EU funded project in your region or area?*

Attitudes on EU membership

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

Attitudes on EU enlargement

"The EU should continue to let more countries become members, under the condition that they meet all of EU's membership requirements" (0-10, 0=fully disagree, 10=fully agree)

Corruption perceptions

'On a 0-10 scale, with '0' being that 'there is no corruption' and '10' being that corruption is widespread, how would you rate the following institutions?'

a. the European Union, b. your country, c. your region

Territorial identity

'On a 0-10 scale, with '0' being 'I don't identify at all, and '10' being 'I identify very strongly', how strongly you identify yourself with the following?':

a. your region, b. your country, c. Europe perceptions of one's relative regional wealth within EU.

Perceptions of regional wealth

In terms of the per person economic wealth, as in GDP per head, if we were to rank all EU regions from wealthiest to poorest and put them into four equal groups, with group 1 being the wealthiest group and 4 the poorest group, which of the 4 groups do you believe your region is in today?"

a. Group 1 (In the wealthiest 25% of EU regions), b. Group 2, c. Group 3, d. Group 4 (The poorest 25% of EU regions)

Economic satisfaction

"How satisfied are you with the current economic situation in your region today?"

(1-4, very satisfied – very unsatisfied)

Attitudes on redistribution

(COUNTRY's) national government should take measures to reduce differences in income levels among people in (COUNTRY) (0- fully disagree – 10 fully agree)

Gal Tan

1. (COUNTRY) should have more restrictions on immigration than it does today (0- fully disagree – 10 fully agree)
2. (COUNTRY) should have a strong leader that can solve problems quickly, who does not have to worry about elections and parliamentary rules. (0- fully disagree – 10 fully agree)
3. People have many different opinions about what 'being European' means. On a scale from 0-10, where '0' means "not at all important" and '10' means "very important", how important are the following for you in terms of 'being European'?
    a. The right for all EU citizens to live and work in any other EU country
    b. Having the Euro currency
    c. The Christian religion
    d. Having a European flag and passport
    e. Sharing a common European history and culture

EU Cohesion Policy Performance: Regional Variation in the Effectiveness of the management of the Structural Funds

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Abstract:

The effectiveness in the absorption of funds is a permanent challenge for EU member states, and therefore, the analysis of the absorption capacity is needed. The present paper deals with the dimension of the absorption of EU resources and focus on an aspect that has been widely forgotten so far in previous literature: the regional variation in the absorption of the structural funds. Based on EU regional aggregate data on funds allocation and payments provided by the European Commission for the Operating Program 2007-2013 at the NUTS2 level, we observe that full absorption was more the exception than the rule. In addition, the high regional heterogeneity detected in the absorption of the Structural Funds is not only observed across countries but also within the regions in a country, contradicting some explanations that were given in the past about the effect of administrative structures on the absorption capacity. Finally, we offer a discussion on how lack of timely available regional data on EU fund payments hinders the analysis of the effectiveness of the regional absorption of the funds.

Keywords: Funds allocation; Absorption rate; NUTS 2 regions; Funds effectiveness; OP 2007-2013.
JEL classification: R10; R11; R58.

La política de cohesión de la UE: Variabilidad regional en la efectividad en la gestión de los Fondos Estructurales

Resumen:

La efectividad en la absorción de fondos es un desafío permanente para los estados miembros de la UE y, por tanto, resulta necesario analizar la capacidad de absorción de los mismos. Este trabajo aborda la absorción de los recursos de la UE y se centra en un aspecto que hasta ahora ha sido obviado en la literatura anterior: la variabilidad regional en la absorción de los Fondos Estructurales. A partir de los datos agregados regionales de la UE sobre asignación de fondos y pagos proporcionados por la Comisión Europea para el Programa Operativo 2007-2013 en el nivel NUTS2, observamos que la plena absorción fue más la excepción que la regla. Además, la alta heterogeneidad regional detectada en la absorción de los Fondos Estructurales no solo se observa en todos los países sino también entre las regiones de un mismo país, contradiciendo algunas explicaciones que se dieron en el pasado sobre el efecto de las estructuras administrativas en la capacidad de absorción de los fondos. Finalmente, el trabajo ofrece una discusión sobre cómo la falta de datos regionales disponibles a tiempo sobre los pagos de fondos de la UE dificulta el análisis de la efectividad de la absorción regional de los mismos.

Palabras clave: Asignación de fondos; Tasa de absorción; Regiones NUTS 2; Efectividad de los fondos; OP 2007-2013.
Clasificación JEL: R10; R11; R58.

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1. Introduction: Aims and scope

To reduce disparities across the territories within the European Union (EU), the Regional Policy "targets all regions and cities in the European Union in order to support job creation, business competitiveness, economic growth, sustainable development, and improve citizens' quality of life" (European Commission. The EU's main investment policy [online]). The funding for such policy is delivered through two different funds, namely, the European Regional Development Fund (ERDF) and the Cohesion Fund (CF), which together with the European Social Fund (ESF), the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF), make up the European Structural and Investment (ESI) Funds (European Commission, 2014).

As the ERDF basically aims to assist less developed regions, these funds are mainly allocated to EU regions characterized by low development in terms of per capita GDP (below the 75% of the EU average) as well as to regions with declining traditional industries facing restructuring challenges among others (https://ec.europa.eu/regional_policy/index.cfm/en/funding/erdf/). The orientation implies a clear spatial dimension (Dignan, 1995; McCann, 2015). This is also the case of the ESF which aims at addressing the problems of the labour market in some regions (https://ec.europa.eu/esf/home.jsp; Harrop, 1996). During the 2007-2013 programming period, due to the 2007 and 2014 rounds of enlargements of the EU and the consequent relative increase in the per capita GDP of some regions of the old MS, a transition period was adopted for some of them: 15 phasing-out regions covered by objective 1 (within the Convergence budget) and 15 phasing-in regions included in objective 2 (within the Competitiveness budget). The CF provides assistance to the member states (MS) whose national income per capita is below 90% of the EU average, which were Greece, Spain, Portugal and Ireland at the beginning of the fund in 1992. With the enlargements in 2004 and 2007 this Fund incorporated 10 new MS from Central and Eastern Europe plus Cyprus and Malta and also considered Greece and Portugal. All in all, these funds have been used as a key redistributive mechanism (Leonardi, 2005; Blom-Hansen, 2005).

As highlighted by Pylak (2007, pg 71) "Effective institutions and public administration is a key factor in designing and implementing the growth policy and the economic and social development….. Organisation of the system influences deeply the efficiency and effectiveness of the structural aid and simultaneously the level and quality of resources used". Indeed, the effectiveness in the absorption of funds is a permanent challenge for EU MS and regions, and therefore, the analysis of the absorption capacity is needed in its different spheres: its scope (the description of the magnitude of such absorptive capacity), its determinants (its main drivers) and its effects (the impact that a high/low absorptive capacity may have on the regional performance). Most of the research on the topic has focused on the two latter aspects, determinants and effects, whereas the literature on the scope of the funds effectively absorbed is almost inexistent. The present paper tries to fill in this gap and deals with the scope of the absorption of EU resources and focus on an aspect that has been widely forgotten so far: the regional variability in the absorption of the Structural Funds (SF) for the whole EU, both countries and regions.

Therefore, the main objective of this paper is to describe the performance of the EU CP in terms of EU funds effectiveness based on EU regional aggregate data on funds commitment and payments provided by the European Commission (EC). Given that the target of the CP are the regions (at NUTS2 level), our spatial analyses are provided at this level. This analysis can give some light on how a policy which is common to all regions in the EU, such as the Cohesion Policy (CP), could be misleading since not all the regions absorb the funds equally.

The paper is outlined as follows. After this introduction, we discuss the different measures that have been used in the literature so far to proxy for the CP performance in terms of the effectiveness in the use of the EU funds and review in which kind of analyses they have been used for. Then, we present the data and discuss the method to construct the indicators of effectiveness at the NUTS2 level. Afterwards, we present a comparative analysis across EU regions on these measures showing the regional differences both within countries and across countries. Finally, in section 5 we offer a review with the main limitations suffered to make this regional analysis and conclude the main findings in section 6.

2. Measures of CP implementation effectiveness: Literature review

Among the indicators commonly used for measuring the CP implementation effectiveness, we find the volume of funding allocated and/or payed and the rate of absorption of the funds. In this section we review the papers that have used these indicators and give information on the way they have been computed.

2.1. Scale of allocations and payments

Focusing on the scale (volume) and structure (distribution across thematic areas) of the funding allocated and/or payed gives information on how the funding was provided to regions across the EU, how it was used and what the money was spent on. Several studies use either the allocations or the payments of the different Structural Funds (SF) for different purposes: i) description of the scale in the use of the SF; ii) study of the determinants of the amounts allocated or payed within the CP for different regions/countries; iii) analysis of the impact of the CP.

Among the studies that describe the regional implementation and performance of the CP (i), we find the report by Gorzelak et al (2016) which analyses the volume of financial allocation in the Operating Programme (OP) 2007-2013 at the NUTS2 regional level (both in per capita and as a share of GDP) as well as their structure across areas. As expected, the allocation of CP funds per capita strongly varied across European regions as a consequence of this policy which is foremost focused on Cohesion countries and less developed regions.

Second, with the objective of studying the determinants of the effectiveness in the implementation of the CP (ii), Fratesi and Perucca (2014) assess the role of specific territorial conditions on ERDF and CF commitments at different category levels in the NUTS3 EU regions in the new MS (NMS) in the period 2000-2006. According to their results, regions more endowed with specific types of territorial capital are more able to gain from policy investment in related fields. With a similar objective, Bouvet and Dall'erba (2010) examine which variables, economic and political, determine the actual funds allocation for each cohesion objective over 1989-99, concluding that economic criteria are not the only determinants of funds allocation, but the political situation within a country/region and the relations between various layers of governance also influence the allocation process.

Third, a significant number of papers analyse the impact of the effectiveness in the CP on economic growth (iii). In order to do it, Percoco (2017) focuses on SF expenditures in the programming period 2000-2006 in the NUTS3 regions. The same is done in Gagliardi and Percoco (2017) concluding that European funds positively contributed to generate economic growth in lagging areas, a phenomenon mostly driven by the successful performance of rural areas close to relevant urban agglomerates. In a similar manner, Mohn and Hagen (2010) analyse the economic growth effects of EU SF, making use of the payments for 126 NUTS1/NUTS2 regions, distinguishing between Objective 1, 2, and 3 payments. Among others, they obtain that Objective 1 payments promote regional economic growth, whereas the total amount of Objectives 1, 2, and 3 do not have a positive and significant impact on the EU regions' growth rates. Similarly, Rodríguez-Pose and Novak (2013) obtain an increasing impact of SF expenditure over time, with more impact in recent programming periods, partly attributed to policy learning mechanisms. Finally, Iatu and Alupui (2011) analyse the progress of Romania in the absorption of SF, through allocations, identifying a number of economic, social, administrative or policy factors affecting the low absorption (measured through allocations) at NUTS3 administrative level for the 2007-2013 period, finding the major influence of policy factors.

2.2. Absorption capacity

Despite part of the literature use the allocations/payments as a proxy of the effectiveness in the implementation of the CP, the primary indication is measured as the level of spending out of the allocated resources, which is known as the absorption rate and computed as the rate that expenditures represent as a percentage of allocation. The absorption capacity can be understood as the degree to which a state/region is able to fully spend the allocated financial resources from the EU funds in an effective way. Boot et al (2001) is considered the first work which systematically put forward the notion of absorption capacity and Cace et al (2009) addressed the concept in relation to EU enlargements, showing how the European diversity reveals different administrative systems in the absorption of the funds.

As signaled in SWECO (2008), "the funding actually received depends on the absorption capacity of the MS and their regions, i.e. their ability to use the financial resources made available from the ERDF and the Cohesion Fund on the agreed actions and according to the agreed timetable" (page 26). This capacity is necessary for making a maximum contribution to economic and social cohesion with the resources available from the EU funds, although it is not a sufficient condition. In any case, the absorption rate is considered a key indicator for the monitoring of the programmes.

Many papers use the absorption rate of the different SF as a proxy of the effectiveness in their use, albeit with different purposes: description of the absorption capacity of different states/regions; analysis of the determinants of the absorption capacity; study of the impact of such absorption capacity on economic, social and territorial cohesion.

Within the first group, one of the first studies measuring and describing absorptive capacity is Hervé and Holzmann (2008), who bring empirical proofs on the capacity of the less developed regions to absorb important amounts of funds allocated to decrease the difference of development across regions. They make a classification of absorption problems based on the concept of government failure. Later, the report by Gorzelak et al (2016), by computing the share that the payments represent over the total funding in the OP 2007-2013, get the picture that implementation began slowly, accelerated in 2012 and by the end of March 2016 more than 90% of the allocations to the ERDF and CF had been paid to MS.

With the objective of investigating the determinants of regional absorption capacity in the EU, Kersan-Skavic and Tijanic (2017), in a recent paper based on 272 NUTS2 regions (the 86 NUTS2 convergence regions and the 186 developed regions with GDP per capita above 75% of the EU average) during the period 2000-2013, confirm that the absorption of EU funds is conditionally affected by regional economic characteristics. Other papers on the determinants of absorptive capacity at the EU level are Iatu and Alupului (2011), Tosun (2014) and Mohl and Hagen (2010), whereas most of the remaining ones are usually focused on case studies or comparison analyses. These papers obtain that labour market characteristics (workers' educational level and unemployment rates), decentralisation, investments, institutional framework and infrastructure development are significant determinants of the absorption capacity. For our purposes, looking at the proxies these papers use for the measurement of the absorption capacity, Mohl and Hagen (2010) use payments over commitments and Tosun (2014) uses the percentage of ERDF allocations that have been paid out. The latter shows that there are significant differences in absorption performance between old and new MS, the latter performing better new MS absorbed 94.37 per cent of ERDF allocations vs 91.03 for old MS in the 2000-2006 period). Tobit models conclude that ERDF absorption performance is positively correlated with government capacity and negatively with fiscal decentralization and also that those countries with higher income levels are less likely to maximize absorption.

Most of the literature on the determinants of the absorption of the funds are case studies. Markovic et al (2008) analyse if higher absorption effectiveness is connected with a certain form of administration and implementation framework of funds. They focus in the 3 countries with good absorption success: Ireland as the leading country among the EU-15 countries and Estonia and Slovenia as the leading countries among the new accession countries. For their study, they consider that there are different ways to measure absorption: i) the share of the application over total commitments, ii) the share of signed contracts over total commitments, and iii) the share of certified expense claims over total commitments. They focus in the last one, which according to their opinion represents how much money has been transferred to the final recipients. Regarding administration and implementation systems of Cohesion funds in those countries, the authors confirm a high diversity: Ireland has a decentralized managing system with several managing authorities and paying authorities, also on the regional level, while Estonia and Slovenia have a more centralized system on a national level. However, they could not come to a conclusion on which of the three structures facilitates more the absorption of EU funds, concluding that different implementation structures can lead to high absorption results.

The paper by Kersan-Skavic and Tijanic (2017) offers different proxies for absorption capacity (Committed/Decided; Paid/Committed; Paid/Decided). No matter which indicator is used, there are significant differences in the levels of absorptive capacity across EU countries and regions. However, in their regression analysis, they decided to use the indicators payments per capita and payments over commitments as indicators of the regional absorptive capacity.

The absorption capacity of the candidate countries have also been the focus of an important part of the empirical research, such as in Horvat (2003, 2005), Wostner (2008) and Cace et al (2010). In addition to the recommendations they give as to how SF can be used in most effective manner, Horvat (2003) notes the absence of a conceptual framework to comprehensively assess the issue of absorption problems relating to SF, and makes explicit use of the development economics and public choice literatures. Horvat (2005) gives a 'golden rule' on the virtuosity of concentrated implementation systems, stating that "the smaller the number of institutions (usually sectoral Ministries) involved at the levels of Management and Programmes (Sectoral and Regional) presented at the level of Programming in the Candidate Countries, the clearer the picture and higher the possibility of better administrative absorption of SF" (*Ibíd.*, p.13). This paper also points to the need to ensure continuity of personnel as well as having close political relationship between the Managing Authority and the Prime Minister. Cace et al (2010) point to the transfer of responsibility towards the new MS, including the absorption of the European funds, which implies an infrastructure harmonized with the European criteria, but lacking the experience to match with the new parameters of competitiveness.

Finally, many papers investigate the impact of the absorption capacity of the funds on economic, social and territorial cohesion both in individual MS and at the EU level: Rodríguez-Pose and Fratesi (2004), Bachtler and Gorzelak (2007), Marzinotto (2012), Molle (2015), McCann (2015), Gorzelak (2017) and Bachtler et al (2017) are among the most well-known and recent ones. There are not common main findings since some obtain that funding under the CP does not affect territorial differentiation, whereas some others observe that the CP drives territorial convergence within individual countries but widens territorial divergence in the whole EU. These discrepancies in the results are not strange, given the different economic and social objectives addressed by the CP, which are often impossible to separate with the data available. A recent special issue in Regional Studies offers some papers showing in what contexts and under what conditions CP can be more effective. All in all, these papers show the relevance of the context in explaining the effect of CP, especially with respect to economic and geographical structure, as well as administrative capacity (Fratesi and Wishlade 2017). At the end of the day, as signalled by Mohl (2013), the impact of CP would depend on the quality of the institutions and government structures. As pointed by Gorzelak et al (2016), CP can be understood as a means to counter the deficiencies in less developed regions and as a way to get the necessary conditions for growth. But it does not assure the impulse of economic activity which is mainly driven by the investments of private actors.

As observed in the literature review made in the paragraphs above, the gap that is missing in the previous literature is the analysis of the scale of the absorption rates at the regional level and covering the whole European Union. There are papers that use the absorption rate at the regional level to analyse its determinants or its effects. However, the analysis of its scope at the regional level is missing for the whole EU. There is no previous literature that considers the variability that exists in the absorption of the funds across countries and across regions. In our opinion, given that the CP is provided in the same way to all the regions that accomplish the requisites for the specific funds, this analysis can give some light on how a policy which is common to all regions in the EU, such as the Cohesion Policy, could be misleading since not all the regions absorb the funds equally.

3. Data and Method

3.1. Data: Availability and limitations

The information with data on the SF and their impact is given in several webpages of the European Commission, with certain overlapping in their content in some cases, making it difficult to follow the information available.

With the specific aim of constructing the different indicators for the effectiveness in the use of the CP we use the regional information provided in the webpage of the DGRegio, Regional Policy, in its second section: Historic data on SF by MS (European Commission. Regional Policy. Data for research [online]).

Although the CP funds include the ERDF, CF and ESF, the latter have very scarce data for the 2007-2013 period, many times not consistent with the data for the former two and with no regional disaggregation given. According to Gorzelak et al (2016), as a consequence of the division of the responsibility between DG REGIO (responsible for ERDF and CF) and DG Employment (responsible for ESF), the data collection was affected, making it difficult to elaborate a common regional database. This is why the ESF, although part of the CP, is not going to be considered in the analysis herein.[1]

Table 1.
Limitations and improvements in data to evaluate CP performance along time

	Data period 1994-99	Data period 2000-06	Data period 2007-13	Data period 2014-20
Limitations	• Only expenditures • Not consistency across MS • Objectives and Funds not separated • Expenditure typologies incompatible • No reliable regional breakdown	• Still some important gaps at the regional level • Estimations needed for expenditure data in some cases	• The quality of the indicators measuring the impact of the CP is limited (given the non-obligation of this monitoring tool) • Difficulty to assign regions to a particular operational programme • Different NUTS2 classification for allocations and payments	• Too early. Only information on allocations and targets available
Improvements			• Data on allocations and expenditures available (without need of estimation) at NUTS level • Consistency improved (for 86 priority themes; 4 form of finance; 10 territorial types; 23 economic activities; NUTS system) • Monitoring of results with 40 core indicators for assessing the outputs of ERDF/CF	• Change from 86 priority themes to 123 intervention fields • Typologies of forms of finance and of territorial dimension modified. • ESF included • Output indicators are compulsory: higher quality

Source: Own elaboration.

[1] For the new programming period, 2014-2020, the three funds are included as indicated in the *Open Data Platform.*

Before going into the detail on the statistical information available, it is worth noting that regional data available for the 2007-2013 period has increased substantially in comparison with previous programmes. There is information on both allocations and expenditures without the necessity of making estimations, as was needed in the previous period (2000-2006). In the document of the ERDF/DF 2007-2013 ex-post evaluation (European Commission, 2015b) you find information on the main limitations offered by the data, which have been summarized in Table 1.

To avoid repetition, for a detailed description of data that can be used to assess the implementation and performance of the CP for the 2007-2013 programming period across the European regions, look at the table provided in Gorzelak et al (2016, pp. 5-8). In our case, the rest of this section focuses explicitly in the data and method that have been used afterwards to construct the indicators in this paper.

3.2. Method

SF payments and allocations

In the dataset of the DG REGIO (European Commission. European Structural & Investment Funds. Historic EU payments – regionalised and modelled [online]), you can find historic long-term regionalised (NUTS2) annual EU expenditure data for different EU funds - ERDF, Cohesion Fund, EAFRD/EAGGF and ESF. We use this dataset to get the information on the most updated payments (until 2016).

The cumulative allocations to selected projects and expenditure at NUTS2 is provided in the dataset of DG REGIO[2]. The information on the Allocated amount as well as the Expenditures for the whole programming period are offered both for 2013 and 2014, broken down for CF, ERDF and CF+ERDF (not for ESF) as well as for 86 priorities and for the 4 objectives of the CP (Convergence; Competitiveness; Cooperation; Multi Objective). With this information at hand, we have two indicators that have been used in the literature as a proxy for the effectiveness in the implementation of the CP: funds' allocations and payments. However, we could argue that these two indicators reflect the scope and magnitude of the CP but not its effectiveness. We need to combine both of them in order to get a more clear picture of the effectiveness in the implementation of the CP. This combination gives place to the absorption rate.

Absorption rates

The absorption rate in one region i in a period of time t is the ratio between expenditures and allocations in such region and time period:

$$AbsRate_{it} = \frac{Payments_{it}}{Allocations_{it}}$$

To compute the regional absorption rates we need to use the data on payments and allocations analysed in the previous subsection. Depending on the information used, we can compute the absorption rate in two different ways:

a) The absorption rates can be computed with the data on allocation and expenditures as in the Geography of expenditure study (European Commission 2015b) which includes data on allocations and expenditures updated until 2014. They include information on ERDF and CF. As far as we understand, this is the information used in previous studies (e.g. Gorzelak et al 2016).

[2] You find it under the level of Historic data on SF by member state and in the section of *'Geography of expenditure study, August 2015 (Ex post 2007-2013)'*. For a detailed description, see European Commission (2015a), where a full description on how the data were gathered and estimated is provided.

b) We try to make a step forward and compute the absorption rate with the information most recently updated with corresponds to the data obtained as the historic EU payments until 2016, which were updated in June 2018.[3]

The 2007-2013 dataset on payments is based on the NUTS-2013 Classification, whereas the allocations dataset is based on the NUTS-2010 version. To match both versions, we needed to make some adjustments.[4] The main advantages and disadvantages of the absorption rates obtained with these two datasets are summarized in Table 2.

TABLE 2.
Advantages/disadvantages of computing absorption rates with data until 2014 and until 2016

	Absorption rates computed with information until 2014	Absorption rates computed with information until 2016
Advantages	• Consistent information: same regions for payments and allocations.	• It contains the most updated information.
Disadvantages	• It does not contain the most updated information.	• Inconsistent information: 19 regions in both datasets (the one for allocations and the one for expenditures) are different and cannot be matched perfectly. • After the adjustments for matching both datasets (allocations and expenditures), the absorption rate happens to be higher than 1 in 22 regions (see a deeper description in subsection 2.4.2).

Source: Own elaboration.

The absorption rates for the ERDF and CF can present a different pattern, given that the latter is designed for infrastructure investments, which tend to be large projects with long planning and implementation periods, so that payments may be substantially lower than commitments. Therefore, the degree of absorption in the case of CF programmes tends to be lower.

The Geography of expenditure study (European Commission 2015b) offers explanations of why allocations and expenditures may differ. It is commented that several programmes in the OP 2007-2013 showed a higher value of expenditures than allocations, especially the ERDF in Spain, where the difference between expenditure and allocation can be found in the Spanish accounting system. According to the LMAs, while expenditure is invariable once it takes place, allocations are subject to revisions, which tends to be the case when the financial plan of a project is modified. "When this happened in a certain year, the cumulative data up to that year may show a positive expenditure but no commitment because the entire (revised) allocation to the selected project(s) is shifted to the next year when the new operation is approved. Due to the features of the accounting systems, there are cases of priorities and/or NUTS codes, in specific OPs, characterised by expenditures larger than allocations, even if the total OP expenditures are lower than total allocations, as we would expect" (European Commission 2015b, p.33).

[3] In terms of the regionalisation of the EU payments made, this work expands and replaces previous data sets published on the ERDF and CF with additional years. As a consequence, this dataset provides the most complete historic picture available to date on the annual EU payments made under different shared management funds mapped to or estimated by NUTS2 regions.
[4] The adjustments needed are provided in http://ec.europa.eu/eurostat/c/portal/layout?p_l_id=629283&p_v_l_s_g_id=0 . For a more detailed explanation, see http://publications.jrc.ec.europa.eu/repository/bitstream/JRC104030/jrc104030.pdf

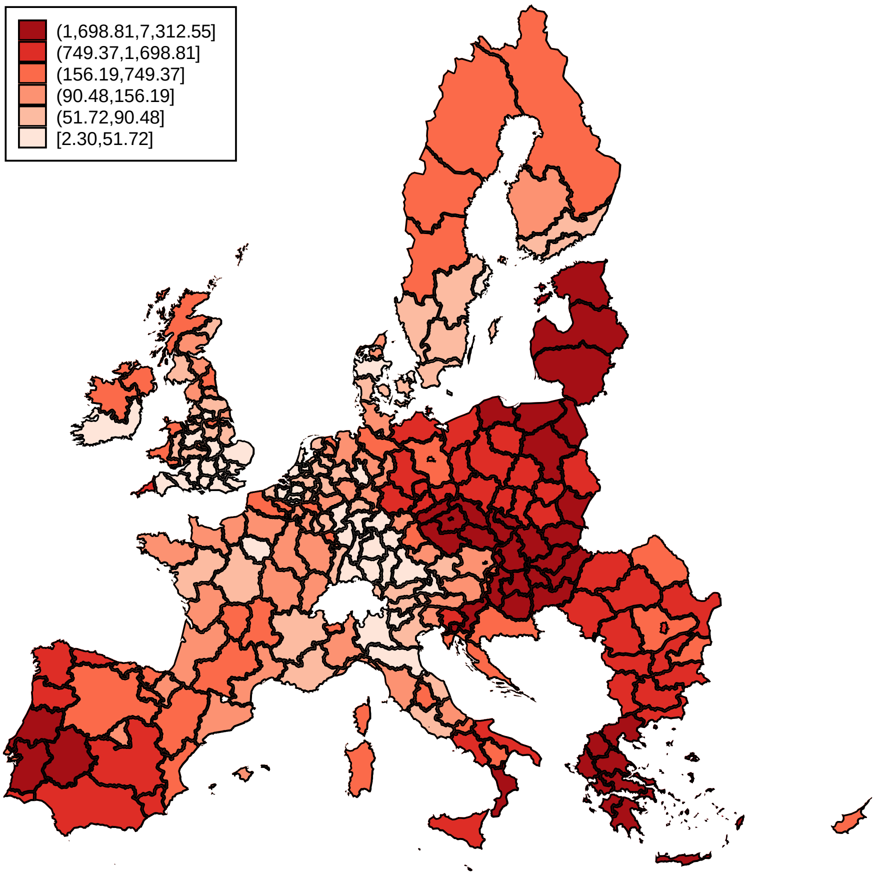
4. Regional variation in the CP effectiveness

From the revision made to previous literature and empirical evidence on the study of the effectiveness in the use of the Cohesion Funds, we observe that little emphasis has been put in analysing the variation of such effectiveness across regions in the EU. With such objective, we will use the different measures that have been used in the literature to proxy for the effectiveness in the absorption of the SF (allocations, expenditures and the absorption rates) at the NUTS2 level.

4.1. Regional variation in allocations and expenditures

As a first intent to analyse the scale of the CP in the different EU regions, Figure 1 offers the regional distribution of allocations of ERDF and CF in per capita terms in the 2007-2013 period. Among the main beneficiaries we find all the regions of Slovakia, Hungary, Czech Republic (except Praha) and Greece (except Athens) as well the uniregional countries of Estonia, Latvia, Lithuania and Malta. They are followed by some Eastern regions of Poland (5 regions out of 16) and Portugal (5 out of 7), the Eastern Slovenian region of Vzhodna Slovenija, the region of Extremadura in Spain and Calabria in Italy (all of them with values above 1,700 euros per capita for the period). All in all, this shows how the regions receiving more funding correspond to those that are eligible for receiving assistance from the Cohesion Policy. In a second level, we find most of the regions in Romania and Bulgaria, Cyprus, regions in Southern Italy, Eastern Germany (except Berlin) and several Spanish regions (except the ones in the North-East and Madrid). In the remaining regions, the allocation is substantially lower and reflects the pattern of more developed vs less developed regions in most of the countries.

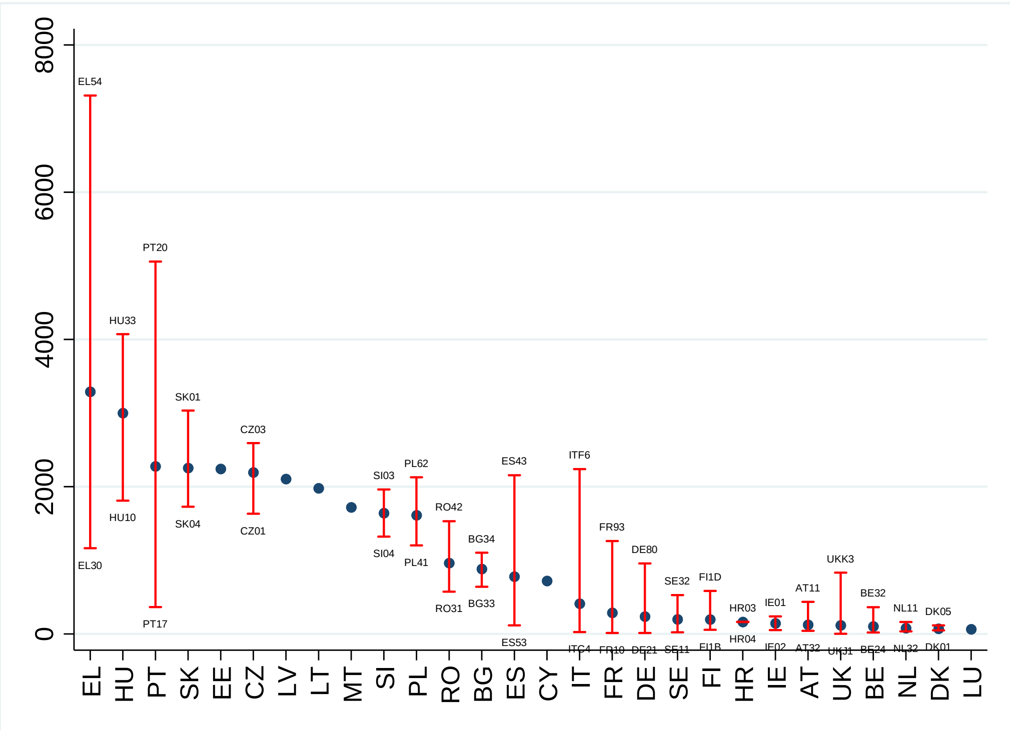
Figure 1.
Allocations per capita. ERDF+CF in OP 2007-2013



Source: Own elaboration.

Figure 2 shows the regional variation of allocations within and across countries, using a simple method of 'minimum–maximum' comparison.[5] Interestingly, it is noteworthy to mention that the within-country variation is in many cases more important than cross-country variation. Again, the regions receiving the highest funding in per capita terms follow the funding eligibility which is directly linked to its regional convergence objectives, which are based on two groups of areas, namely less developed versus the more developed regions. However, two main additional comments are worth highlighting. First, in general, the more developed countries of the EU do not only show very little values of funding per capita, but they also present a very little regional within-country variability. The only exceptions would be the regions of Cornwall (UKK3) and West Wales and the Valleys (UKL1), Mecklenburg-Vorpommern (DK80) as well as the ultramarine regions of France (FR91, FR92, FR93 and FR94). In the rest of the core countries, such as the Scandinavian ones plus Ireland, Austria, Belgium and The Netherlands, the regional variation within each of them is minimal. Second, the highest regional variability is observed in Greece, Portugal and Hungary, which also present the highest average funding per capita. Italy and Spain also present very high regional variability within each case, although with values of funding per capita much lower than in the previous cases.

FIGURE 2.
Regional variation of allocations pc. ERDF+CF in OP 2007-2013



Source: Own elaboration.

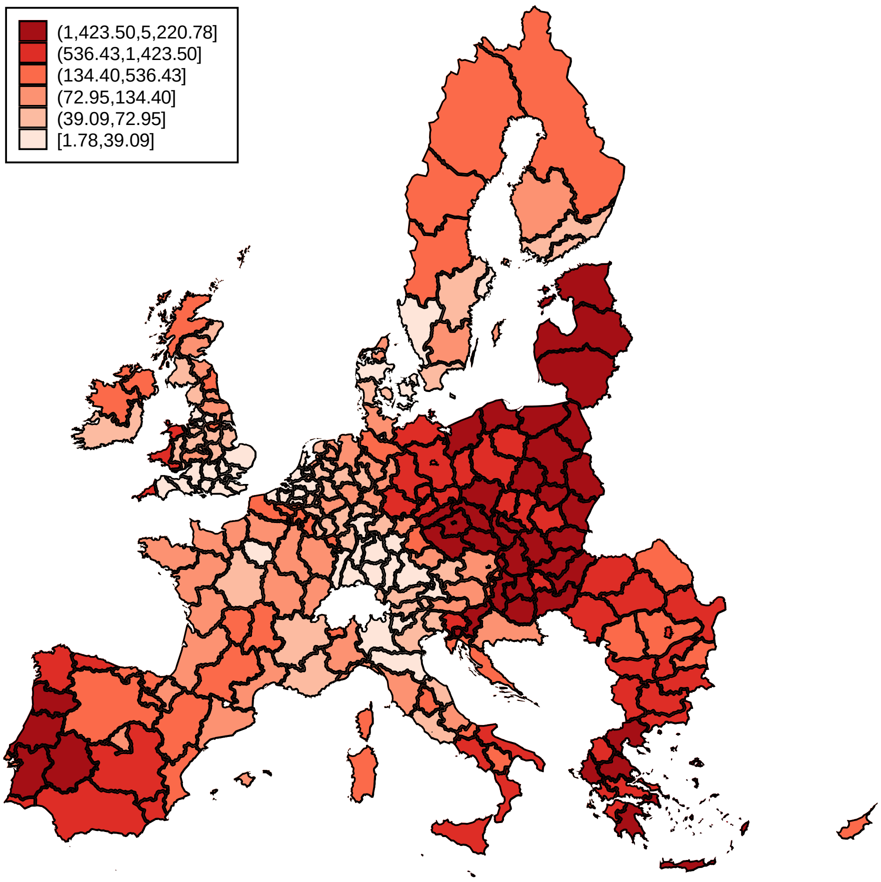
As indicated in the European Commission (2016b) document, over 90% of the funding available from the ERDF and CF for the 2007-2013 period had been paid by the end of March 2016 to member states, which, since 5% of such funding is held back until the expenditure is formally approved, implies being close to full absorption. In any case, given that allocations and expenditures do not coincide, and that the data on expenditures were updated until 2016 (whereas allocations refer to 2014), we present the spatial distribution and the regional variability for the expenditures in per capita terms to see if there are

[5] As signaled in Charron et al (2014, p.89), "although minimum–maximum is sometimes overly simplistic and can overlook variation within the minimum and maximum regions, it is worth noting that when this was compared with other measures of within regional variation, …, such as a Gini index, the coefficient of variation and the Thiel index, it was found that all measures correlate vary highly (a Spearman rank correlation of 0.85 or higher) with the measure of minimum–maximum".

significant differences in the regional distribution of allocation and expenditures. As argued in subsection 3.1, we have these data updated as for 2016 and 2014. Given the higher accuracy of the former, these are the ones commented. In any case, given that the changes between these two years can also be of certain interest, the reader can find the corresponding figures for 2014 in the Annex.

Figures 3 and 4 basically reproduce the spatial patterns observed for allocations with only very minor changes. In fact, the main difference to highlight is the lower amount of funding that is paid if compared with the one allocated, but there is no change in its spatial distribution. The only remarkable fact when analysing the regional variation within each country is that some regions in Greece (Central Macedonia EL52) and Portugal (the metropolitan area of Lisbon PT17) present a very little amount of payments made at the end of 2016 if compared to the allocations they had. In any case, the risk that the full amount of funding is not absorbed is made explicit in the computation of the absorption rate as commented in the next subsection.

FIGURE 3.
Expenditures per capita. ERDF+CF in OP 2007-2013 (update 2016)

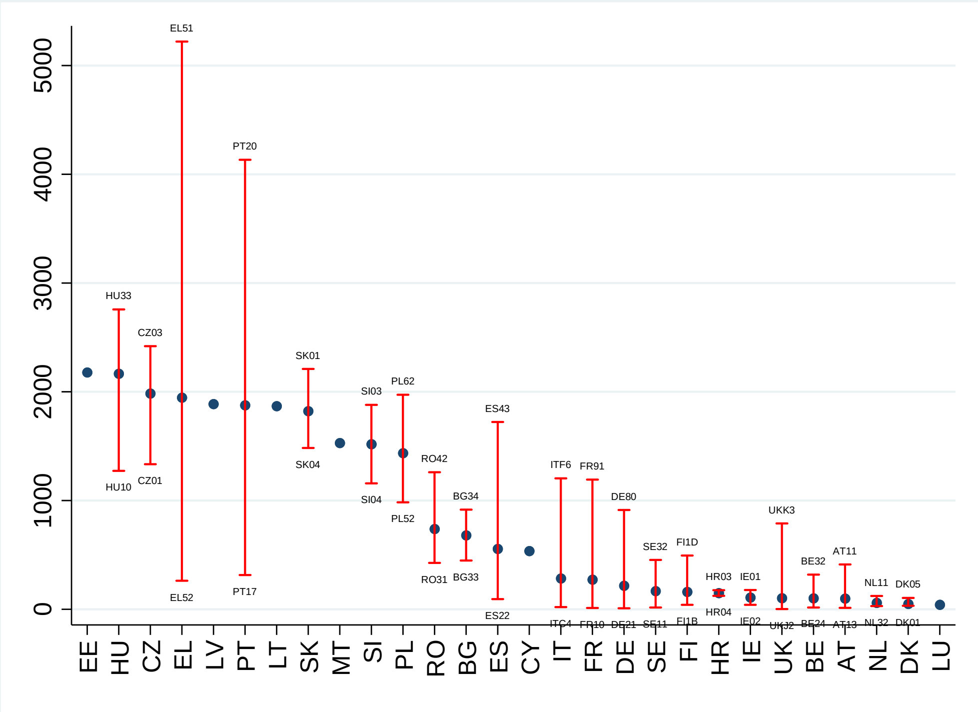


Source: Own elaboration.

From the discussion in this sub-section as well as the comparison between the figures observed for allocations and payments, several conclusions are in order.

First, since the countries receiving more funding are the ones that have regions which are eligible under the CP and this is related to their GDP per capita, allocations follow the pattern of how developed the different regions are. Consequently, although used by different papers to proxy for the effectiveness of the CP, in our view, allocations only reflect the scope of the CP and even in such a case, only partially since not all the allocations are finally spent. Several reasons such as the lack of co-funding (specially in crises times), insufficient administrative capacity or changes in national/regional governments, may lead to a low absorption of the funds allocated. Thus, the use of the payments instead of the allocations would be preferred.

FIGURE 4.
Regional variation of expenditures pc. ERDF+CF. OP 2007-2013 (updated 2016)



Source: Own elaboration.

Second, since the allocations of the OP 2007-2013 are updated only until 2014, whereas the payments are made until 2016, the changes occurred in these two years cannot be accounted for in the measure of allocations. But they are in the measure of payments, which at the end would reflect better the reality of the funding under the CP.

Third, when comparing the pattern between allocations and payments, apart from the fact that the amount of funding paid if compared to the one allocated is lower, we observe that the national/regional distribution is very similar for those countries that present lower amount of fundings/payments. The more substantial differences between allocations and payments are observed in the case of the countries with more allocations. Greece, for instance, is the first country in the ranking of allocations per capita, but goes down to the fourth position when the real payments are accounted for. Similarly, Portugal decreases from the 3rth to the 6th position and Slovakia from the 4th to the 8th one. On the contrary, Czech Republic and Latvia improve their position, since they are able to absorb the funds to a higher extent than some other countries with a lot of allocations. A better picture of the pattern of absorption of the allocated funds can be gained if the absorption rate is computed, as done in the subsequent subsection.

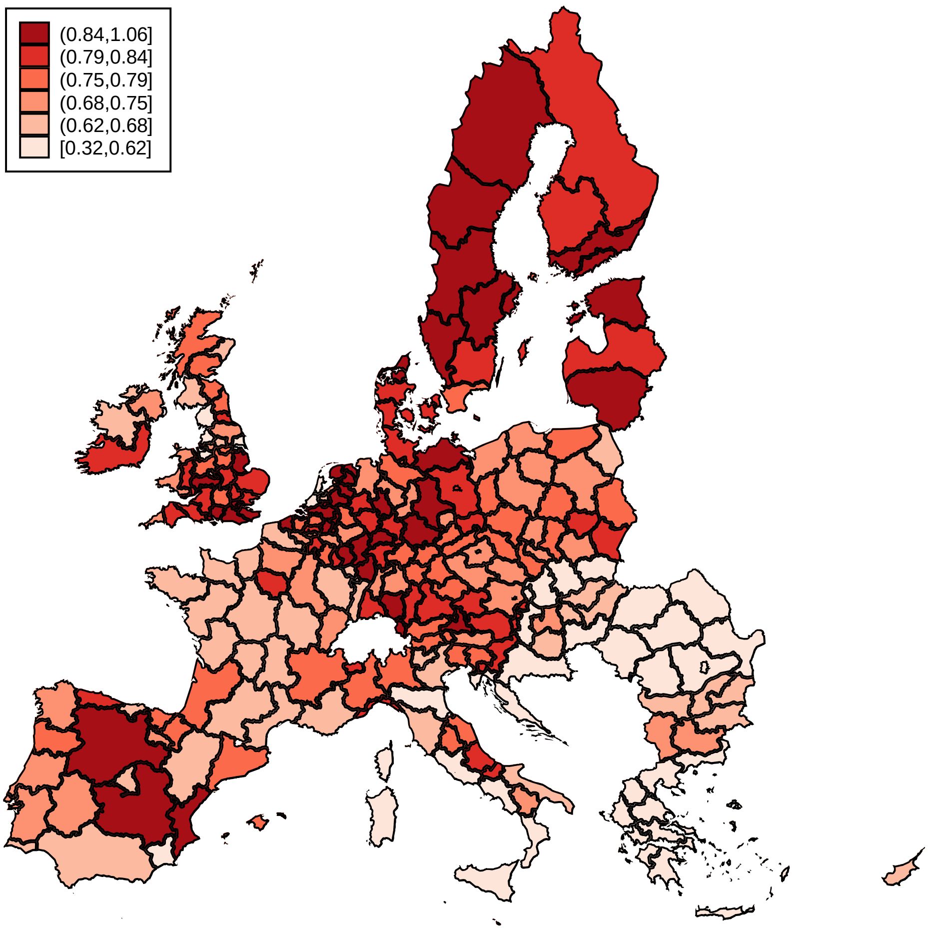
4.2. Regional variation in absorption rates

As commented in subsection 3.2, the regional absorption rates for the OP 2007-2013 can be computed with data on expenditures respectively updated until 2014 or 2016. Although one may think that it is better to use the one in 2016 given its higher correspondence to reality, we have also computed it with the data in 2014 and then analyse the differences encountered. This is done because, in many cases, researchers start working with the data as soon as they are available. Since both data on allocations and expenditures for the OP 2007-2013 were made public at the end of 2014, many contributions in the economic literature used such data. In our case, we will do the exercise of computing the absorption rates with data in both years and will compare the resulting rates in order to get conclusions on the deficiencies/limitations that using the initial released data of 2014 would imply in the studies that used it.

4.2.1. Absorption rates computed with expenditures updated until 2014

With the data available until 2014, two regions present absorption rates slightly higher than 1: the region of Herefordshire, Worcestershire and Warwickshire in the UK (UKG1, with a rate of 1.06) and the Dutch region of Overijssel (NL21, with a rate of 1.01). Looking at the detail of the data for those regions, the mismatch is caused by certain priorities of the operating program for such regions, where the cumulated expenditure increased from 2013 to 2014, without changing the amount allocated. This gives rise to an absorption rate for that priority higher than 1. It would be desirable that this type of information was more accurate, otherwise one gets a distorted image. The solution would come from checking the allocated amount at the end of the period, when the expenditures have finished. However, this information is not publicly available.

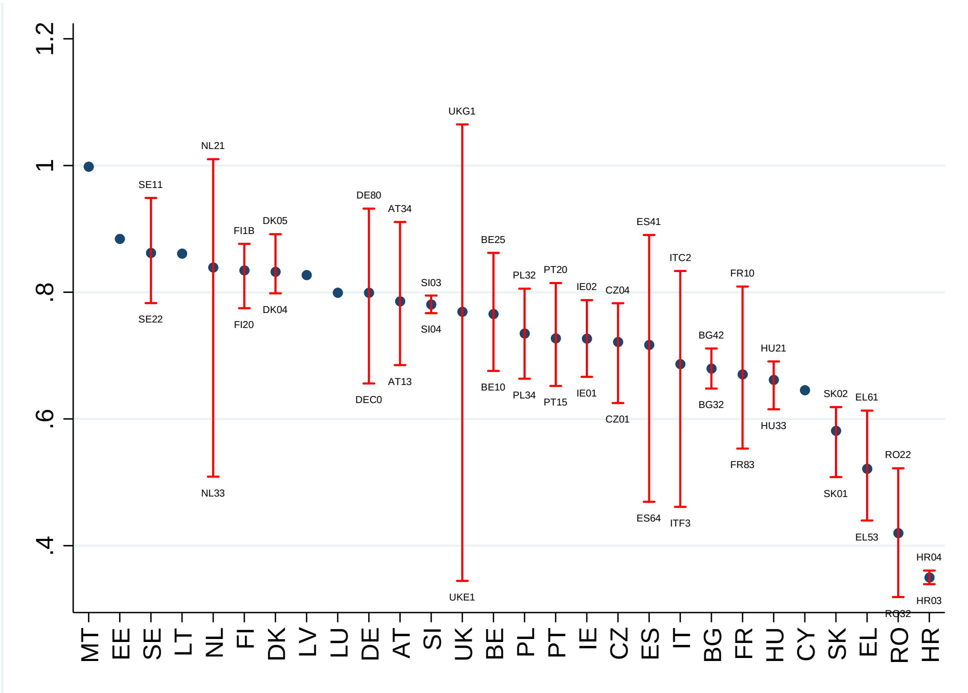
Figure 5.
Absorption rates. ERDF+CF in OP 2007-2013 (updated 2014)



Source: Own elaboration.

Leaving apart these two cases, according to Figures 5 and 6, we observe that an absorption rate of 100% is never accomplished. In the case of Malta it is almost so (99%) and 15 additional regions present an absorption of allocated resources higher than 90%. This group includes seven Dutch regions, four German, two British and one Swedish (Stockholm SE11) and Austrian (Luxembourg AT34). The lowest absorption rates are presented in the two regions of Croatia (32% and 36%) as well as seven Romanian regions (out of 8), with rates in between 32% and 44%. Also two Italian regions (Campania ITF3, and Calabria ITF6), three Greek (West Makedonia GR13, West Ellada GR23 and Creta GR43) and one Spanish (Melilla) present rates in between 44% and 50%. The average absorption rate is 73%, observing that most of the regions have absorption rates between 60% and 75%. The Scandinavian countries tend to have high absorption rates (Sweden, Finland, Denmark), which in the Gorzelak et al (2016)'s report is said to be due to their good quality of government. Although this is probably a possible reason, according to our conversations with the LMAs, it could also be related to the low amount of allocations they receive because of their high level of development, which would make it easier for the local authorities to manage the funding. In a similar manner, the regions and countries with very low absorption rates tend to be regions/countries with high amount of allocations, making it more difficult to manage the funds. This could be the case of Romania and Greece. However, there are exceptions to this difficulty in dealing with massive funds, since regions in some Baltic countries and in Spain present high levels of allocations with high absorption rates. On the contrary, Croatia presents very low absorption of resources with little funding.

FIGURE 6.
Regional variation of absorption rates. ERDF+CF. OP 2007-2013 (updated 2014)



Source: Own elaboration.

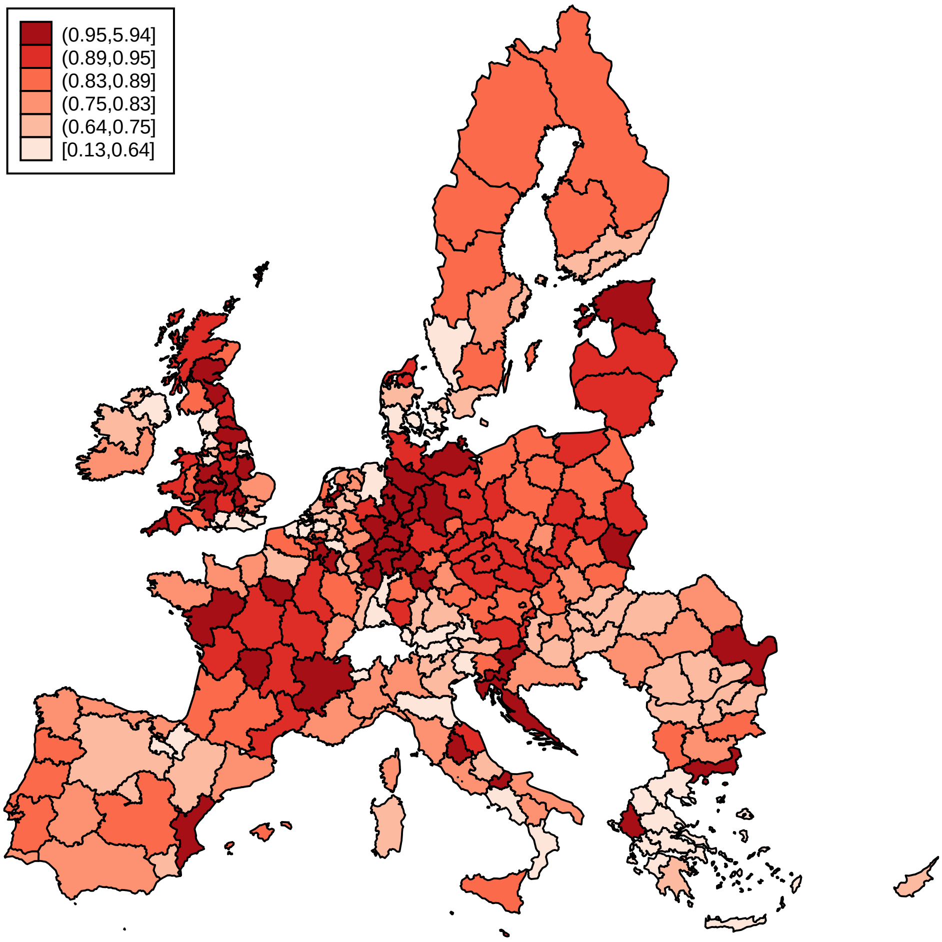
Finally, it is interesting to highlight that the highest regional variations in absorption rates are observed in the UK, followed by the Netherlands, Spain and Italy, with regions close to the full absorption together with regions that have absorbed less than 50% of the allocations until 2014.

All in all, we observe that full absorption of the structural funds was more the exception than the rule. More interesting and novel is the confirmation of the sizeable regional differences between countries, and specially regions, in the absorption of the funds allocated.

4.2.2. Absorption rates computed with expenditures updated until 2016

With the data on expenditures updated until 2016, the variability of the values obtained for the absorption rates increases. In fact, the absorption rate happens to be higher than 1 in 22 regions[6], although in 13 of those regions the absorption rate is below 1.1. The latter would not represent a major concern since some multi-regional projects are subject to regional imputation of the final expenditure which is hard to connect with the initial allocation of the budget of such projects. However, in seven regions the rate is in between 1.2 and 1.9 (one Belgian, two German, two Greek, one French and one British) and in two Belgian cases it is even higher than 2 (Brabant Wallon and Prov. Luxembourg). Among the different reasons behind these values, one may think of the possibility that some countries may have carried out transfers of expenditure between regions that are not reflected in the allocated amounts. It could also be the case that there are non-regional programs and the difference lies in the imputation of spending to one region or another after the program period is closed. Although it would be good to have information on these issues, unfortunately, this goes beyond what is in our hands with the information available online.

Figure 7.
Absorption rates. ERDF+CF in OP 2007-2013 (updated 2016)



Source: Own elaboration.

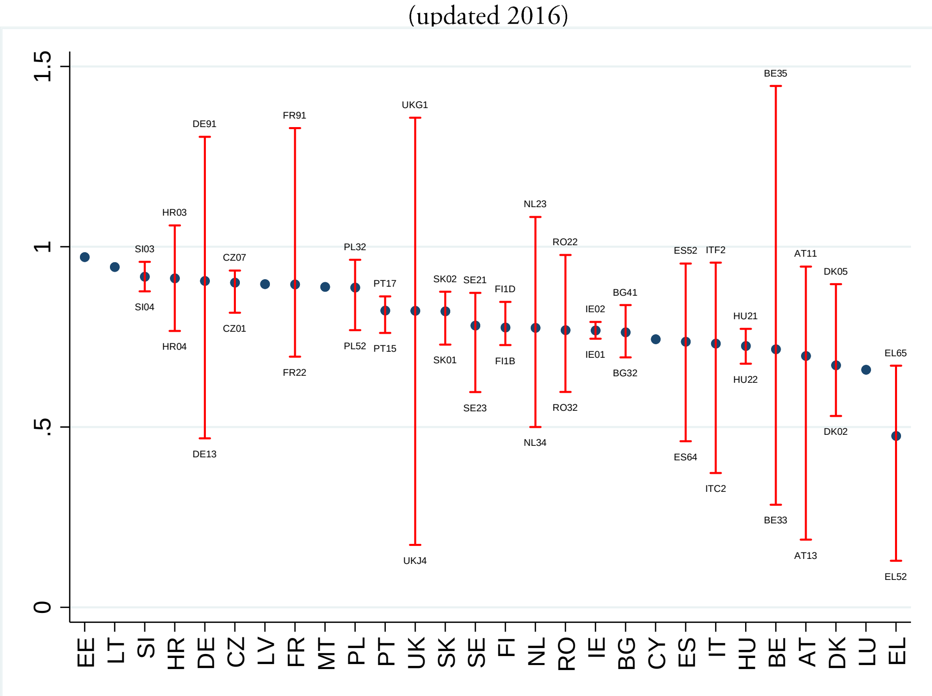
[6] These regions are (the values of the absorption rates given in parentheses): Brabant Wallon (5.94), Luxembourg (2.00), East Makedonia (1.88), Thessalia (1.58), Namur (1.45), Herefordshire, Worcestershire and Warwickshire (1.36), Guadeloupe (1.33), Braunschweig (1.30), Koblenz (1.21), Gieben (1.11), Detmold (1.11), Trier (1.09), Flevoland (1.08), Adriatic Croatia (1.06), Kassel (1.06), Rhône-Alpes (1.03), Darmstadt (1.02), South Yorkshire (1.02), Limousin (1.01), Utrecht (1.01), Lincolnshire (1.01) and Tees Valley and Durham (1.00).

Next, we analyse which is the level of correlation between the absorption rate computed with data until 2014 and the one in 2016. We have computed it for the 253 regions for which there is an exact matching in both NUTS2 classification (2006 and 2010) and we observe that it is surprisingly low (0.10). If we assume that the values for expenditures are much more accurate in 2016, we get that the picture obtained in 2014 is far from reality. Thus, Figure 7 offers the spatial distribution of the absorption rates with the information updated until 2016. Indeed, we observe important changes in the ranking of the rates of absorption between 2014 and 2016.

Again, we observe an important national variation in the rate of implementation. At the end of 2016, Greece had only claimed 67% of the funding for the period (48% if we discard the two regions with an absorption rate anomalously higher than 1.5), and Luxemburg reports 66%, values much lower than in the rest of the countries. They are followed by Denmark (67%), Austria (70%), Belgium (131% if all regions are considered and 72% without the two regions with absorption rates higher than 150%), Hungary (73%), Italy (73%), Spain (74%) and Cyprus (74%), all of them with shares lower than 75%. On the contrary, Estonia (97%), Lithuania (94%), Slovenia (92%), Croatia (91%), Germany (91%), Czech Republic (90%), Latvia (90%), France (89%), Malta (89%) and Poland (89%) presented shares over 89% in 2016.

It is difficult to extract conclusions on the reasons behind the national pattern observed, since very different countries are in both groups (the highest and the lowest values for absorption of the funding). One possible explanation of this high heterogeneity could be related to the fact that the absorption rate depends on cultural factors as well as administrative structures (Gorzelak et al 2016). However, the regional variability within each country is also very high, a fact which is especially true for some of the more developed economies in the EU (see Figure 8). Indeed, the highest within-country differences of the absorption rates among different regions are observed in the UK, Germany, Austria, France, Italy, Netherlands and Spain. This variability is very low, though, in the case of the Scandinavian countries and most of the Eastern countries.

FIGURE 8.
Regional variation of absorption rates. ERDF+CF in OP 2007-2013
(updated 2016)



Note: Regions with absorption rates higher than 1.5 not included. Brabant Wallon (BE, 3.94), Luxembourg (BE, 2.00), East Makedonia (EL, 1.88), Thessalia (EL, 1.58).
Source: Own elaboration.

Do we obtain the same conclusions on how the different EU countries and regions absorb the structural funds of the CP with the data in 2014 and in 2016? We observe important differences that can be summarised as follows. First, there are more regions in 2016 that present absorption rates higher than 1. Some potential explanations could be related to the transference of funding across regions within a country (not reflected in the data of allocations), or the characteristic of some non-regional programs whose imputation is made after the OP is closed. Second, the variability of the values observed for the absorption rates in 2016 is higher than in 2014, probably because the authorities in each country had to make some final assignments to close the program, which were not made yet in 2014. Third, the most remarkable differences between the absorption in these two years relates to countries which in 2014 presented absorption rates above the average (e.g. Sweden, Finland, Denmark, Austria, Luxembourg) that in 2016 were below the average, and the opposite for the case of Croatia, Czech Republic, France, Poland and Portugal (below the average in 2014 and above in 2016). It seems therefore that countries with more regions eligible for funding tend to absorb more in the last years of implementation of the programme. Thus, the fact of having a higher absorption rate in 2014 does not only imply that some regions have been able to use their funds earlier on, which might be related to the capability of regions to implement policies but to other reasons. As a final remark, we observed that the level of correlation between the absorption rates computed with data in 2014 and 2016 is surprisingly low. All in all, the important differences would imply that the conclusions obtained in papers using the absorption rate with the numbers updated right after (2014) would lead to misleading conclusions.

5. Discussion on data availability to proxy for the effectiveness in the implementation of the CP

An important added value of the paper is the discussion made on how lack of timely available regional data on EU fund payments hinders the analysis of the effectiveness of the regional absorption of the funds. This is expected to change in the case of the current programming period as a result of the efforts made by the European Commission in making data on expenditures readily available. However, comparability with previous programming periods will not be possible. Additionally, other shortcomings can remain due to complexities in the management and accounting of the funds of the Cohesion Policy. Since these shortcomings may affect the quality of structured quantitative analyses, we believe it is interesting to highlight the limits represented by such problems. They can be summarised as follows:

- **Lack of timely available data on EU funds payments.** Although the OP finished in 2013, the MS could make expenditures until March 2016. Therefore, it is impossible to analyse the effectiveness of the OP 2007-2013 at the regional level until the end of 2016 (3 years after the closure of the program). In addition, this paper has shown that the absorption rates computed with payments updated until 2014 and 2016 present a different scenario, so that it is necessary to wait until 3 years after the official closing of the programme to have reliable data.
- **Changes in the data of allocations along time.** In the cases in which the programme has just finished, and not all payments have been made, "commitment data may safely be used as a proxy for payments also concerning regional variations" (SWECO 2008). In any case, it is necessary to highlight that the data on allocations also change along time: in most of the cases, the amount of allocations for the OP 2007-2013 given in 2014 is higher than the allocations given in 2013; but for some categories of expenditure and for some regions, it can be the opposite, that is, the value in 2014 is lower than in 2013. The most plausible explanation for this fact seems to be that the allocations have been re-directed to different regions than initially planned. As a consequence, the analysis of effectiveness of the OP cannot be done with reliability when the programme has just finished not only because of lack of payments but also because of changes in the allocations for each region.

- **Lack of comparable data on EU funds payments and allocations.** Due to the lack of a harmonized NUTS2 classification between allocations in 2014 and payments updated until 2016 (shifts not just in codes of the regions but also in boundaries), it is not possible to make a perfect match of both magnitudes to obtain the absorption rates as well as the speed in the implementation of the funds.
- **Accounting systems that do not reflect exactly what is really done on ground.** Due to the features of the accounting systems, there are cases of priorities and/or NUTS codes, in specific OPs, characterised by expenditures larger than allocations, because the cumulative data up to a certain year may show a positive expenditure but no commitment because the entire (revised) allocation to a selected project(s) may be shifted to another following year when a new operation is approved. It can also be the case that some countries carry out transfers of expenditure between regions that are not reflected in the allocated amounts.
- **Absorption rates very different at the end of the programming period and when the program is actually closed and all payments made.** Comparing absorption rates in 2014 and 2016, the changes are very important. Thus, the computation of such indicator in 2014 does not seem to be very reliable.
- **Different reliability of the data for the different SF.** The reliability of the data payments for the ERDF and CF at the NUTS2 level is much higher than in the case of the ESF, which cannot be easily regionalized. In addition, the information for the allocations is only given for ERDF and CF. These two reasons prevent us from computing the absorption rates for the ESF. With respect to the absorption rates for ERDF and CF, we have observed that the degree of absorption in the case of CF programmes tends to be lower given that the latter are designed for infrastructure investments, which tend to be large projects with a long planning and implementation periods, so that payments may be substantially lower than commitments.
- **Difficulty in comparing data between programming periods.** Despite not being a main purpose of this paper, the data on expenditure for the 2000-2006 and 2007-2013 programmes are not fully comparable because of lack of correspondence of NUTS2 classifications and because of being created with different methods and from different sources. The 2007-2013 data on expenditures were collected from management authorities, which is different from before since in 2000-2006, expenditure was estimated on the basis of payments approved by DG Budget (European Commission, 2015a). As a consequence, although the absorption rates can be computed for both programmes, they are many issues that constrain consolidation between them.
- **No disaggregation of expenditure categories possible in the analysis of absorption rates.** We cannot compute the absorption rates for different areas of expenditure given that the information on the most updated expenditure is not disaggregated for different areas (contrary to the information on allocations which is disaggregated). Therefore, if one wants to analyse the structure of the absorption rates for different priorities, it is needed to do it with the information of expenditures available until 2014, which is not the most updated and reliable dataset (this is done in Gorzelak et al, 2016).

6. Conclusion

The effectiveness in the absorption of funds is a permanent challenge for EU MS and regions, and therefore, the analysis of the absorption capacity is needed in its different spheres. Existing literature on the topic has mainly studied the determinants and effects of the absorption capacity, whereas the literature on the scope of the funds absorbed is almost inexistent. With the idea of filling in this gap, in this paper we analyse the scope of the absorption of EU resources at the regional level. We are mainly interested in the high regional heterogeneity in the absorption of the Structural Funds (SF) for the whole EU.

Despite the multiple deficiencies in the data available, the empirical analysis in this paper has shown that full absorption of the structural funds of the European Commission in the OP 2007-2013 was more the exception than the rule. The low absorption rates can be thought to be related to the crisis that most European economies suffered during most of the OP, which may have implied delays due to the inability to carry out planned payments because of troubles of getting the co-funding or because of investing being deferred in the framework of the insecurity produced by the crisis. However, the LMAs also had the opportunity to compensate the economic recession by growing the rate of implementing programmes. Consequently, the economic cycle could have influenced the absorption rate in both directions.

Summing up, the average absorption rate in the OP 2007-2013 is 73%, mostly ranging between 60% and 75%, with the Scandinavian countries presenting mainly high absorption rates (Sweden, Finland, Denmark). Two reasons can be behind: on the one hand, their good quality of government and on the other, the fact that they receive a low amount of allocations due to their high level of development, which would make it easier for the local authorities to manage the funding. Similarly, with very low absorption rates we find regions/countries with high amount of allocations, making it more difficult to manage the funds (Romania and Greece, for instance). However, regions in some Baltic countries and in Spain present high levels of allocations together with high absorption rates, representing an exception to the beforehand rule.

Previous literature has highlighted that national differences in the absorption rates could be related to the fact that the level of absorption depends on cultural factors as well as administrative structures. Nevertheless, this contradicts the huge regional variability we also find within each country, a fact which is especially true for some of the more developed economies in the EU: UK, Germany, Austria, France, Italy, Netherlands and Spain present the highest within-country differences of the absorption rates among their regions, whereas the variability is very low for the Scandinavian and most of the Eastern countries. Therefore, cultural and administrative differences are not the only explanation for regional differences observed in the level of absorption of the EU funds.

In addition to the explanations given above, the Commission has detected some additional factors which deferred the absorption of funds in the OP 2007-2013. Among others, the late start of programmes due to the extension of the previous period, changes in EU legislation, changes in national and regional governments (with the corresponding changes in their institutions) and the national sectoral reforms to overcome the crisis.

An additional added value of the paper is the discussion made on how lack of timely available regional data on EU fund payments hinders the analysis of the effectiveness of the regional absorption of the funds. In this sense, the changes in the data of allocations along time as well as the lack of comparable data on EU funds payments and allocations complicate the reliable analysis of effectiveness of the OP. However, the reliability of the data payments for the ERDF and CF at the NUTS2 level is much higher than in the case of the ESF, which cannot be easily regionalized. In addition, it has not been possible to compute the absorption rates for different areas of expenditure given that the information on the most updated expenditure is not disaggregated for different areas (contrary to the information on allocations which is disaggregated). These shortcomings are among the main ones the European Commission should put its efforts from a statistical point of view.

Finally, the measures on absorption capacity at the regional level, as the ones computed in this paper, can be used for several future analyses. Indeed, some are already included in the PERCEIVE project and are part of the present special issue. On the one hand, the paper by Cunico, Aivazidou and Mollona (2020) analyse if the policy's performance is satisfactory as well as the extent to which the policy is effectively communicated to citizens. Through a novel qualitative framework that stimulates a holistic analysis of the causal mechanisms behind, these authors use the absorption capacity to analyse how the effectiveness in the management at a local managing authority level impact on projects' quality, and the communication processes that reinforce citizens' awareness about the Union's role in funded projects. Also, the paper by López-Bazo (2019) assesses the influence of the efficiency in the deployment of the Cohesion Policy funds in the region on its citizens' attitudes towards the EU. The author uses the so-called absorption rate that we have defined at the regional level. All in all, a measure on the effectiveness in the absorption of the funds at the regional level may stimulate a discussion on Cohesion Policy by providing policy-making insights for designing efficient schemes to improve the actual and the perceived performances of such policies.

Acknowledgement

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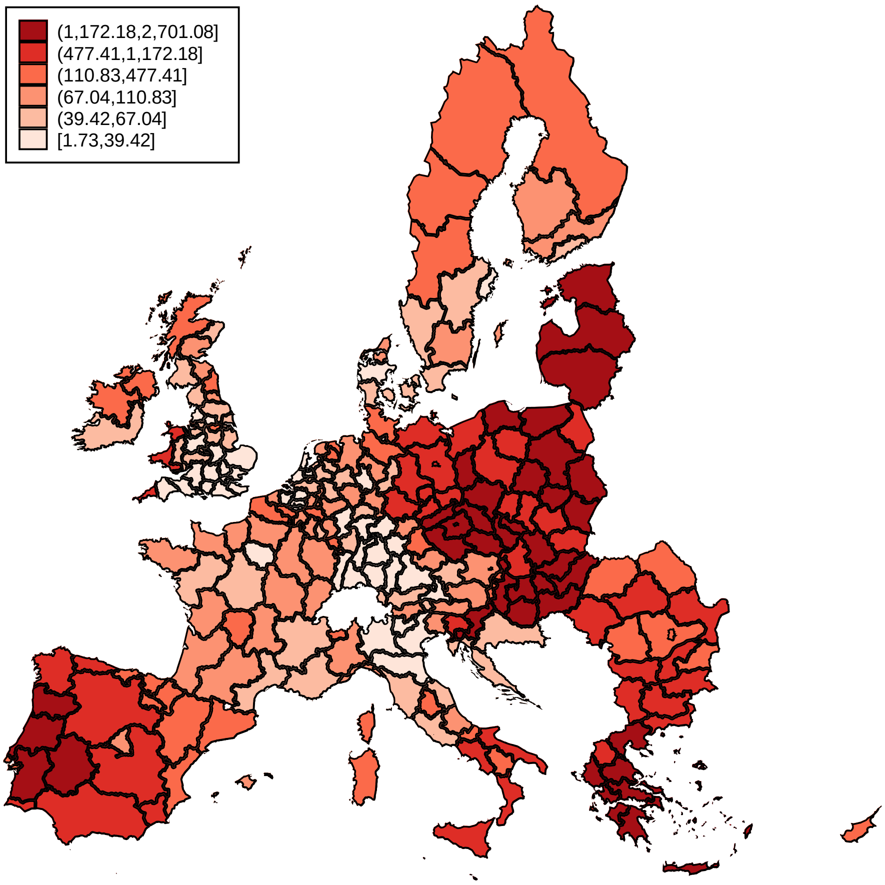
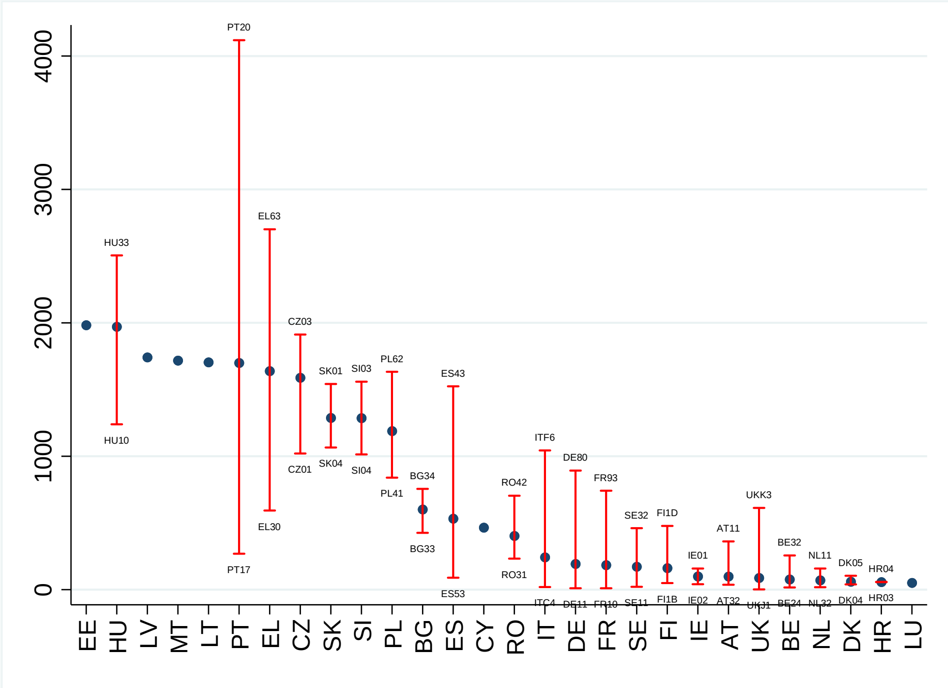
Annex. Geographical distribution of expenditures of the OP 2007-2013 (update 2014)

Figure A1.
Expenditures per capita. ERDF+CF in OP 2007-2013



Source: Own elaboration.

FIGURE A2.
Regional variation of expenditures pc. ERDF+CF in OP 2007-2013



Source: Own elaboration.

Articles

Understanding the process of creation of European identity – the role of Cohesion Policy

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ABSTRACT:
This paper reviews the theoretical arguments provided by the extant literature for understanding the process of creation of a European identity. We discuss the grounds of mechanisms and determinants driving citizens' identification with Europe, stressing the role of the territorial dimension on European identity formation. More precisely, our focus is on the literature that have considered the link between European identity and EU policies that influence the citizens' socio-economic conditions, in general, and Cohesion Policy in particular. This is a major policy within the EU that accounted for some 350 billion euros in the 2007-2013 programming period, about a third of total EU budget. Consequently, it is expected to determine the way citizens identify with the European project, both in the regions more and less benefited by the policy. The study also considers arguments supporting a sort of urban-rural divide in European identity, which could interact with the influence of the Cohesion Policy. Initial descriptive evidence on these links is provided based on results from a comprehensive survey for 15 EU member states.
KEYWORDS: Identification with the EU; Cohesion Policy; Public Attitudes; Urban-Rural divide.
JEL CLASSIFICATION: R1; R58.

El proceso de creación de identidad europea: el papel de la Política de Cohesión

RESUMEN:
Este artículo revisa los argumentos teóricos proporcionados por la literatura existente para comprender el proceso de creación de una identidad europea. Discutimos los fundamentos de los mecanismos y determinantes que impulsan la identificación de los ciudadanos con Europa, destacando el papel de la dimensión territorial en la formación de la identidad europea. En concreto, nos centramos en la literatura que ha considerado el vínculo entre la identidad europea y las políticas de la UE que influyen en las condiciones socioeconómicas de los ciudadanos en general, y en la Política de Cohesión en particular. Ésta es una política importante dentro de la UE, que representó unos 350 mil millones de euros en el período de programación 2007-2013, aproximadamente un tercio del presupuesto total de la UE. En consecuencia, es de esperar que determine la forma en que los ciudadanos se identifican con el proyecto europeo, tanto en las regiones más y menos beneficiadas por la política. El estudio también considera argumentos que respaldan una división rural-urbana en la identidad europea, que podría interactuar con la influencia de la Política de Cohesión. La evidencia descriptiva inicial de estas conexiones se proporciona en base a los resultados de una encuesta exhaustiva para 15 estados miembros de la UE.
PALABRAS CLAVE: Identificación con la UE; Política de Cohesión; Actitudes Públicas; División Urbano-Rural.
CLASIFICACIÓN JEL: R1; R58.

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1. Introduction

Why do people identify with Europe? In the absence of direct personal experiences with the EU and with people from other member states, how can the identification with the European project be developed? Despite the great number of EU competences, legislation and policy programmes, they are mostly implemented by member states. Are these EU policies amplifying citizens' exposure to the idea of the EU? And in particular, are citizens aware of the aims and perceive the benefits of the EU Cohesion Policy? If so, does it contribute to strengthening shared political values under the European Social Model and, consequently, is it a driver of identification with Europe? This work tries to shed some light on these questions by proposing the following research objectives. First, we aim at reporting a review of the main theoretical arguments on the construction of European identity. Second, we confront the concept of spatial identities with the one linked with the European project, looking at the influence of a major policy tool, the Cohesion Policy. And third, we intend to inspect the role of the European institutions, and in particular the capacity of the Cohesion Policy, to influence in individuals' European identity.

In order to achieve these aims we start reviewing the literature on European identity formation. We examine the existing theoretical framework to provide an understanding of European identity and the grounds of mechanisms and determinants driving citizens' identification with Europe. We link such exploration with Cohesion Policy, a major policy within the EU that accounted for some 350 billion euros in the 2007-2013 programming period, about a third of total EU budget. The Cohesion Policy[1] is basically a regional development policy, accounting for the fact that most imbalances in economic and social terms take place within every country and even within every region. Consequently, it has an indisputable territorial impact, affecting with varying intensity the daily life of citizens in different regions and spaces; e.g. in rural vis-à-vis urban areas. As a result, under the economic utilitarian argument, citizens' awareness and perception of the policy is likely to vary across regions depending on the extent to which they benefit from it. And through this mechanism, it could well condition the process of creation of a European identity. To be clear, we hypothesize that awareness and perception of the Cohesion Policy, as the major instrument of the regional policy in the EU, is higher among citizens in regions and spaces that receive more funds and, as a result, it contributes to the formation of a European identity in the less developed areas. In turn, we argue that the mechanisms and determinants of the European identity vary across locations of different size. In a nutshell, this may cause a sort of urban-rural divide both in the perception of the effect of the Cohesion Policy and in the formation of the European identity.

In any case, we do not neglect that for most people in Europe, their experience with the EU takes place in the national political arena. In fact, Cohesion Policy is managed mostly regionally and/or locally. When individuals think on Europe they usually do it from a local point of view, meaning that the consequences of European integration depend not only on EU policies but also on how national, regional and local bodies manage them. Therefore, this is an aspect that can also shape the citizens' perception of the EU policy and its impact on the identification with the EU project.

Building on the arguments in the revised literature, this study provides some initial evidence on territorial disparities in awareness and perception of the EU regional policy and on European identification. Descriptive evidence is obtained by exploiting data from an extensive survey produced within the PERCEIVE project[2] in 15 member states. The results distinguish between regions depending on the intensity of the EU policy and between rural areas and mid-sized and large cities.

The rest of the paper is organised as follows. In section 2, we revise the historical path of studies devoted to analyse European identity and describe the modern approaches in the topic. Section 3 uses the model of mass opinion creation based on Zaller (1992), and applied to the EU and European identity by Bergbauer (2018), to review the mechanisms and determinants of collective identity formation. The

[1] The regional and urban development policy of the European Union is abbreviated here as EU Cohesion Policy.

[2] https://www.perceiveproject.eu

territorial dimension of European identity, with a specific view of the role of Cohesion Policy and the urban-rural divide, is discussed in section 4. This section also includes a descriptive empirical analysis of the territorial variability in the citizens' perception of the Cohesion Policy and their identification with the European project. Finally, section 5 summarises the main findings and derives some policy implications.

2. Studies on European identity

Since its inception in 1957, European integration has been parallel to a general conception of Europe. According to Fligstein et al. (2012) the architects of the EU designed an initial economic integration to be followed by a political integration through a spillover mechanism (Haas, 1961), resulting in more co-operation and more supranational rule-making and even in a convergence of beliefs, values and aspirations, generating a new nationalism (Haas, 1968): a European identity.

Bergbauer (2018) points at 1973 as the first stage of the recognition of the European identity at the governmental level, when the European Communities adopted a declaration of European identity to strengthen cohesion between member states.[3]

Recently, new episodes fostered the debate on European identity: the enlargement to Central and Eastern Europe; the financial crisis; the Brexit; the ambiguous link between terrorist attacks and immigration episodes; the growth of populism; and the growth of regional identities that pursue independence of some EU regions from their corresponding national states, questioning the nested nature of territorial identities within Europe. As a result, the growth of the identification with the idea of Europe is far from being sustained. In fact, the perceived loss of legitimacy of the EU is also seen as a lack of support to the political system, which might be easier if it is perceived as an effective problem-solving system (Braun and Tausendpfund, 2014; Harteveld et al., 2013).

The rest of this section presents the main arguments suggested in the literature regarding the concepts of individual and collective identification with Europe. They are summarised in Box 1.

Mendez and Batchler (2017) and Bergbauer (2018) use social psychology to build the concept of *individual* identification with Europe, defined as citizens' self-categorisation as European. According to Tajfel (1981), individuals have a subjective social identity, which he defines as "that part of an individual's self-concept which derives from his knowledge of his membership in a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel, 1981, p. 255). This subjective perception implies three dimensions. The *cognitive* dimension refers to the self-categorisation as member of a group, which is to say whether people categorise themselves as European. The *evaluative* dimension is associated with value connotations, comparing people from the group with people out of the group. According to Mendez and Batchler (2017), this dimension relates to the defining content that braces this classification –the civic and cultural/ethnic distinctions of EU identity research. In turn, the *affective* dimension implies emotional attachment, developing feelings of care, love and concern for the members of the collective, relating to the emotional significance, the 'we-feeling'. This triple distinction does not imply that all identity dimensions need to be simultaneously present. Based on these arguments, Bergbauer (2018) defines individual identification with Europe as "citizens' self-categorisation as European together with their evaluations of their membership in the European collective and their affective attachment to Europe and other Europeans" (Bergbauer, 2018, p. 18).

Along with the idea of individual identification with Europe, there is the concept of the *collective* European identity. Bergbauer (2018) lists two approaches to analyse it. The collective identity approach, based on social psychology, suggests that the collective identity is "a situation in which individuals in a society identify with the collective and are aware that other members identify with this collective as well"

[3] See Barberio et al. (2017) for a review of the historical phases of the study of European integration.

(David and Bar-Tal, 2009, p. 361). This implies that individuals are aware that other group members identify with the group, what is necessary, for instance, for collective mobilisation, what associates some sort of functionalism to collective identities at the group level. The sociological approach to collective identity is based on the idea of "sense of community" or "we-feeling" (Easton, 1965), the affective ties and degree of political cohesion and solidarity between members of a community.

Agirdag et al. (2012) list two main theories to explain *collective* European identity. The social identity theory (Tajfel, 1981; Tajfel and Turner, 1986) assumes that any *collective* identity is part of an *individual* social identity, understanding than an individual is a member of a social group; while the self-categorization theory (Oakes et al., 1994) develops the idea of the former and affirms that *social contexts* provide the conditions for individuals' identities becoming relevant.

A collective identity is linked with the idea that a collection of individuals (a group) accepts a central similarity, leading to a feeling of solidarity within the group. This concept assumes that there are other individuals, with which there are social interactions. There is a wide list of fundamentals acting as drivers of similarities: religion, ethnicity, language, social class, gender, and of course, nations. Fligstein et al. (2012) quote Anderson (1983, p. 5) to establish a definition of a nation: "it is an imagined political community – and imagined as both inherently limited and sovereign. (…) Regardless of the actual inequality and exploitation that may prevail in each, the nation is always conceived as a deep, horizontal comradeship. Ultimately it is this fraternity that makes it possible, over the past two centuries, for so many millions of people, not so much to kill, as willingly to die for such limited imaginings". This definition declares nations as communities, capable of creating social rules and even limits and boundaries when they become states. In fact, nation-states actually create rules for reproducing the national side of the social construct.

Hooghe and Verhaegen (2017) distinguish two streams in the academic literature on European identity, which are linked with the ideas on collective identities. On the one hand, the society based-approach assumes that individuals have to identify themselves with other European citizens in order to establish a European community. Trusting other Europeans, feeling that one is part of a democratic community of citizens is key to determine the legitimacy of the process of European integration (Habermas, 2011; Risse, 2014). On the other hand, the functionalist institutional approach proposes that the European identity is based on trust on the way European institutions are promising and effective in promoting economic growth and prosperity. In fact, it is easier to understand European citizenship linked with rights granted by European laws, than a European identity associated with a feeling of belonging to the European Union, which is an integral part of an individual's social identity (Risse, 2010). This feeling of belonging can be separated into two components. The first one is cultural: Europeans share a common cultural background, including the right wing sentiment that Europeans are Christians sharing common history (Holmes, 2009). This component, therefore, includes common history, traditions and moral norms and values (Bruter, 2003). The other one is civic, built on rights and duties derived from European treaties and laws (Reeskens and Hooghe, 2010).

Box 1.
Individual and collective European Identity. Summary

Individual identification with Europe: "that part of an individual's self-concept which derives from his knowledge of his membership in a social group (or groups) together with the value and emotional significance attached to that membership" Tajfel's (1981).

This definition implies three dimensions: i) cognitive, ii) evaluative and iii) affective. (Mendez and Batchler, 2017, and Bergbauer, 2018)

Collective European identity. It derives from the individuals' social identity. Studied from:

- social psychology: implies that individuals are aware that other group members identify with the group (David and Bar-Tal, 2009). According to the self-categorization theory social contexts provide the conditions for individuals' identities becoming relevant (Oakes et al., 1994).
- sociology: based on the idea of "sense of community" or "we-feeling" (Easton, 1965). The feeling of belonging can be associated to trust in other Europeans, sharing the same values and culture, or trust in European institutions, when rights and duties become prevailing (Hooghe and Verhaegen, 2017).

3. Mechanisms and Determinants of European identity

Having defined the concept of European identity, next we describe how different theoretical approaches explain the creation and inflection of such identification. In order to do that, we follow the model of mass opinion towards the EU and European identity (Zaller, 1992; Fuchs, 2011; Bergbauer, 2018) based on how individuals form political preferences on issues beyond their immediate experience and full personal understanding, this is, where citizens have little first-hand experience. The basic of this approach is that political attitudes are a function of information in the discourse and the attention paid by individuals. Next, following Bergbauer (2018), we review the mechanisms through which citizens develop a collective identification, and the determinants that promote or hinder the European identity.

3.1. Mechanisms of European identity

According to Bergbauer (2018), the *mechanisms* of individual identification with Europe refer to how citizens develop such a collective identification. Two main types can be described: information-based and experience-based.

The *information-based mechanism* rests on the idea of convincing messages as a source of group identification, and if and how individuals are *exposed* to such messages. From the supply side, messages are provided by political elites and mass communication as sources of public opinion, and also by other people transmitting such messages in personal communication. From the demand side, exposure to Europe-related information depends on the level of *awareness* of citizens about EU issues and to citizens' attentiveness and interest to such type of messages, what includes their cognitive resources, such as their level of education. Consequently, both the provision and the processing of information will affect individuals' identification with Europe.

The *experience-based mechanism* is built on the idea of personal contacts and direct experiences as a source of identification with Europe: increased contacts and personal connections change group members' perceptions. There are several types of contacts, such as personal contacts with other Europeans (e.g. the Erasmus exchange program); personal experience with the repercussions of EU integration in national contexts such as free movements of goods and labour, and also citizens' exposure to EU policies (e.g. the Cohesion Policy); and historical experiences within the collective memory of every context, as national identities filter how the EU is perceived (e.g. Europe is seen as a reconciliation mechanism for Germans after World War II and a way to democratisation in Spain after Franco's dictatorship).

3.2. Determinants of European identity

The *determinants* of individual identification with Europe listed in Bergbauer (2018) are differentiated at two levels. At the individual level, she lists three determinants: political awareness, attitudes towards the European and national bodies, and personal transnational experiences. At the system (country) level, she proposes party messages related to European and national community, the economic position and the degree of international integration, and the ethnocultural identification.

Determinants at the level of individual

Political awareness. Interest in politics and political knowledge, both in general and in EU matters, are two aspects that are associated with European identity. Both interest and knowledge will positively (negatively) affect identification with Europe the higher the information on the benefits (risks and downsides) of European integration.

Attitudes towards the European and national bodies. There is widespread consensus that one can distinguish between civic (inclusive) and ethnic (exclusive) identities, an oversimplification but still useful and influencing binary division (Kohn, 1944). As for the idea of Europe, two linked conceptions of the civic side include an emphasis on the values of human rights, civil liberties, and democracy, and the cultural thought, rooted in the ideas of the Enlightenment, Greco-Roman legacy, humanism and roots in Christianity.

The strength of national identification can also affect the European identity. One can accept the possibility of multiple or nested identities, and consequently realize that both feelings are complementary. On the contrary, concerns on integrity and sovereignty can drive to conflicting identities. The type of nation is important in fact. Bergbauer (2018) quotes Anderson (1991) and Brubaker (1992, 2004) by distinguishing two types of nations: the cultural type, based on ethnic, language, religion grounds, with a sharp differentiation from outsiders; and the universalistic type, based on common beliefs in democratic values, civil rights, etc. A strong national identity can have a positive or negative association with a European identity depending on the type of national grounds. The question whether European identity is more civic oriented than cultural or ethnic in character is of course an empirical matter. Fligstein et al. (2012) review the empirical literature (Green, 2007; Kufer, 2009; Risse, 2010) and argue that both aspects are linked. People with a European identity are in favour of tolerance, peace, democracy, rule of law, etc., what they label as Enlightenment values. As such values are also shared within nations, it is possible, consistent, and actually a reality, holding dual identities, what Díez Medrano and Gutiérrez (2001) describe as nested identities, from European to national, regional and even local identities, which may or may not be in conflict or be complementary.

According to Hooghe and Verhaegen (2017), sharing these values is not enough to developing a collective identity, as some form of trusting relationship is needed. Using the words of Scheuer and Schmitt (2009, p. 559) "trust is a fundamental condition for the development of a sense of community", as it facilitates co-operation and pursuing collective action. Such trust can take place with other individuals, what can be promoted at the European level trough physical interaction, such as the Interrail Global Pass and Erasmus educational program, and trust with political institutions, the European Union as a whole in this case. Political trust evaluates the political structure, which would include the legislative, the executive and the judicial divisions of administration, and also the running and effectiveness of political bodies.

One issue here is whether individuals perceive the EU as a common effort and endeavour, with a shared political destiny, or as a means to improve individual material benefits, such as freedom to travel or to do business.

Personal transnational experiences. Frequent personal contacts with other EU citizens are expected to improve the identification with Europe. This includes cross border trips, and living together with intra-European immigrants, and even with people born beyond the EU.

Personal characteristics and perceptions. Together with the external determinants affecting at the individual level, there are personal characteristics, which have a clear influence in the shape of European identity. In this line, the literature has considered a wide list of individual features, both demographic and related with the individual's predisposing characteristics. Age, gender, ethnicity, religion, education, occupation, the perceived situation of the economy and/or the society (e.g. perceived financial situation of the household), and even psychological traits, such as life satisfaction, partly (or even mostly) driven by external circumstances. Many of these personal characteristics are linked with political awareness and attitudes as well as with experiences. Younger Europeans are expected to have more different transnational experiences. Similarly, more educated people are expected to have higher levels of awareness and different political perspective in many matters kindred with European affairs.

Beyond such individual traits and characteristics, the literature has considered several variables to put under empirical scrutiny one or several theoretical arguments. Some refer to the political capital, including cognitive mobilization (e.g. higher education increases the ability to process political information and thus reach their own political decisions, depending less on party and media cue), satisfaction with domestic democracy, perceived benefits from EU membership, and trust in institutions (although this variable is also considered as a proxy to identification with such institutions). Ideological stances are also usually considered, such as left-right placement and democratic satisfaction at the EU and country level.

Determinants at the country level

Party messages related to European and national community. This includes national party messages related with EU matters. These messages can have an economic or a political-cultural dimension. Parties can be more liberal or more regulatory oriented. Similarly, parties can favour national sovereignty of EU governance. The more parties are pro-EU in a country, the higher will be the exposure of citizens to messages signalling the benefits of the European integration. The opposite is also true. Recently, Gross and Debus (2018) show that regional parties have also varying and leeway positions in different matters, including economic, societal and also European issues.

National economic position and degree of international integration. Since its inception, the European project has had an economic dimension, and consequently most debates on the EU have had a strong economic accent. Aspects such as membership to the EU or using the Euro are positively associated with European identity. Besides, the net balance on the EU budget is also an important determinant of identification with Europe and with the EU project. The way EU policies in general, and the Cohesion Policy in particular, are implemented is, then, an important aspect to account for. Besides explicit EU policies, membership to the EU implies economic benefits, such as a positive trade balance for some countries. Consequently, trade openness in general and intra-EU trade in particular, and the trade balance of an economy are expected to be two important determinants of the identification of individuals with Europe, as far as they drive to a positive or negative perception of the benefits and costs of integration. In this sense, Verhaegen et al. (2014) review the work of Cram (2012), Gabel and Palmer (1995) and McLaren (2004) and argue that the support to European integration depends on the economic benefits that individuals can get from the EU. Similarly, Jiménez et al. (2004) conclude that such support can be primarily instrumental.

Ethnocultural identification. This dimension captures the opportunities of citizens to interact with non-nationals. This can include the share of EU nationals in another member state, and also the overall share of immigrants. Both positive and negative effects of these interactions can be expected, as far as one can gain experiences that influence their identification with Europe by contacting with other Europeans, but at the same time one can experience the costs associated with migration, such as domestic labour market competition or loss of national identity and traditions.

Individual identification with citizens of your country or from other parts of the EU links to the idea of trust in others and, subsequently, trust in political institutions at each level. There is a clear link between political trust at different levels: trust in regional, national and European institutions are connected, and actually there is a positive correlation between trust on national and European institutions (Arnold et al. 2012). As indicated in Hooghe and Verhaegen (2017, p. 166) “if citizens have a trusting attitude toward their own national institutions, apparently this is also extended toward the European Union”.

Socio-economic context. Most recent works consider the role played by the socio-economic context in the European identity formation. Some as mere control variables in empirical models, such as GDP growth, inflation and unemployment (Verhaegen et al., 2014), others considering the duality between rural-urban environments (Luhman, 2017), and others the EU membership from a temporal perspective (old versus new EU member states or years since the accession). Still, many works use country level variables to analyse the influence of the social context on different dimensions of European identification, such as the corruption index, the scope of the welfare state, and some related with the economic benefits of belonging to the EU, such as the net contribution to the EU budget, the amount of structural funds received, spread on sovereign bonds, and intra EU exports. However, almost no attention has been paid to within country variations or, in other words inter-regional disparities, in European identification that can result from differences across territories in the mechanisms and determinants discussed so far. This exercise is crucial to frame the discussion in the next section about the spatial differences in the degree of identification with Europe, and how it is shaped by the EU Cohesion Policy and the perception that citizens have of this policy.[4]

4. The regional dimension of European identity. The role of Cohesion Policy and the urban-rural divide

4.1. Theoretical background

There is a spatial component of the European identity. Paasi (2001) called for understanding place as a cumulative archive of personal spatial experience with common spaces such as Europe, "experiencing a dramatic change in its institutionalization: territorial shapes are being sought, symbols are under construction and institutions are in the making at all spatial scales" Paasi (2001, p.25). Thus, spaces are always social constructions that have the capacity to feed the political processes of identification (Barberio et al., 2017). In this line, Antonsich and Holland (2014) study if economic and political de-/re-territorialization processes transform the associated identities, although they find no signs of a re-scaling of territorial identities. In any case, they declare that both personal and regional-contextual factors should be taken into account in order to disentangle the complexity of the formation of identities.

Among the factors and determinants influencing individuals' identification with Europe, previous contributions to the literature have pinpointed a list of EU policies and institutions with a clear impact on the everyday life of citizens, such as the adoption of a common currency, having a common flag, the Erasmus program, etc. Still, as stressed by Capello and Perucca (2018, 2019), the evidence verifying the role of Cohesion Policy on the construction of European identity is surprisingly scarce. These authors list up to four reasons for expecting a positive impact of Cohesion Policy on the citizens' identification with Europe: i) the Cohesion Policy is designed to solve specific regional needs and, consequently it is a "tangible manifestation" of the EU in citizens' everyday lives; ii) it is a relevant investment tool as it represents about a third of the total EU budget (some 350 billion € over the 2007-2013 programming period); iii) the request and management of the Cohesion Policy interventions is developed mostly at the regional level, with an important participation of local actors; and iv) over 80% of the Cohesion Policy budget is allocated to less developed regions, what implies a strong redistribution effect of the policy over the EU, strengthening the idea of solidarity and care for others within Europe, a pillar of the civic dimension of the European identity.

The incentive of governments to strategically allocate regional transfers in order to influence the public opinion has been the focus of the extant literature. But, as indicated by Osterloh (2011), the empirical literature has not analysed in detail the reaction of citizens. The Osterloh's study assumes a sizeable effect of the EU Structural Funds on the attitudes of citizens in regions that benefited most from these funds. This is so because of the amount of funds allocated and due to their wide visibility. His results confirm that the EU regional policy affects the awareness of citizens and, through this mechanism, it impacts their support for the EU. The study also finds that awareness and support is conditioned by some socio-economic characteristics, such as education.

The regional dimension of Cohesion Policy is out of doubt. In fact, we hypothesize that there are regional particularities in the process of building a European identity that can have to do with the impact of the EU regional policy, which may even differ between rural and urban areas within a region. As for the mechanisms of individual identification with Europe, the levels of awareness of individuals may well vary dramatically within countries. For instance, differences between regions and, more importantly, between urban and rural areas in terms of education are quite significant (Rodríguez-Pose and Tselios, 2009, 2011).

[4] In a parallel literature, Mols et al. (2009) demonstrates that European identification is context-dependent by looking at the role of regional identity.

Overall, educational inequality is fundamentally a within-region phenomenon, as 90 percent of the educational inequality in Europe occurs between citizens living in the same region.

Regional variations in the experience-based mechanism could also be sizeable. Clearly, contact with other European citizens is easier in urban than in rural areas, what favours the growth of a European identity in cities compared to smaller villages. The perception of the impact of EU policies with a territorial dimension can dramatically differ as well. For example, the European Agricultural Policy is, by definition, mostly rural. As for the Cohesion Policy, one can expect that a spatially differentiated implementation will matter as well to produce a more positive impact on citizens of particular areas.

As for the determinants of European identity, the existence of important regional identities within each country can mediate the way in which territorial identities, either civic or ethnic, are built. If a strong regional identity grounded on ethnic aspects is present, it can hinder the growth of identification with Europe. Still, a European orientation can arise if it is associated with the possibility to overcome the national identity by the regional identity, being the former substituted by the European one. As for the rural-urban dimension, there are no clear arguments to support that the ethnic or civic dimensions of local identities are stronger in one type of area vis-à-vis the other. It can be argued, for instance, that this is linked with the ethnocultural identification of every territory. The opportunities to interact with EU non-nationals can be different in cities than in rural areas. In addition, the areas can largely differ in terms of the type of EU immigrant residents, as more educated and wealthier EU15 citizens residing in other Member States are expected to live in a greater proportion in larger cities, while citizens from EU13 living in other EU countries may be distributed more homogeneously over the territory. In any case, it may well exist a sort of rural-urban divide in the building of European identification due to differences in the civic/ethnic aspects. Therefore, empirical scrutiny could shed light in this interesting aspect.

Finally, in our view there are two additional elements that could originate spatial disparities in the European identity process. On the one hand, the particular structure of the political system in general and of the system of parties in each country in particular. A system with strong regional parties, as opposed to a structure of predominant national parties, is an important feature that can affect the determinants of European identity throughout the territory. Among other ways, by creating a differentiation in the messages transmitted to citizens in different regions/areas. On the other hand, the economic performance of the country and its regions, in absolute terms and in relation to other EU countries and territories, is a crucial aspect that, as previously discussed, have been shown to affect the building of the European identity. To be clear, the Cohesion Policy is regionally defined, and consequently there are net beneficiary regions and net paying regions. Under the economic utilitarian arguments, this should result in differences between citizens across territories in the degree of their European identification. In addition to this type of economic effect, there is another one in connection with the territorial incidence of the on-going process of economic integration. This is so if citizens from the poorest regions see themselves, and their regions, as losers in the free-trade open market competition that is under the EU building. In contrast, those in the economic core areas can value to more extent the benefits of such a process. This disparity in perceptions can clearly hinder the identification with Europe, and in particular with the EU, in some areas and strengthen it in others.

4.2. Some descriptive evidence

After reviewing the arguments supporting our hypothesis on the territorial variation in the degree of citizens' identification with Europe and the European project, this section shows and discusses preliminary evidence based on a simple descriptive analysis, using information from a comprehensive survey carried out under the umbrella of the PERCEIVE project. 17,147 individuals from 15 selected EU member states were interviewed during the summer of 2017. The set of surveyed countries were selected on the basis of variation in terms of geography, size and institutional quality, representing over 85% of the EU population.[5] The survey asks about the identification with Europe in two separate questions, which are similar to questions included in the Eurobarometer.[6] The PERCEIVE survey also includes questions about the citizens' awareness, perception of benefits, and support to the EU Cohesion Policy. This results in a rich dataset on identification with Europe and the citizens' assessment of the Cohesion Policy for a representative sample of individuals in a group of countries covering most of the EU population. The survey, then, is the most convenient data source for our analysis.

As discussed in section 3, the formation of collective identification with Europe depends on the European discourse and the commitment paid by individuals. In that regard, the awareness and perception of the policies designed and developed by the EU in general, and the Cohesion Policy in particular, are expected to play a crucial role on the formation of a European identity. For the Cohesion Policy to contribute to the identification with the EU project, citizens must be aware of it (information based mechanism), and they should evaluate that such policy interventions benefit them in a way or another. Besides, and even if they are not directly benefited by the policy, they should agree with a territorial redistribution of opportunities and wealth. Consequently, the analysis in this section exploits the information contained in the PERCEIVE survey about awareness, perception and support for the EU Cohesion Policy, and about identification with Europe. To be clear, we have analysed the responses to the following questions:

- Citizens' identification with the EU Project:
  - *In general, do you think that (YOUR COUNTRY'S) EU membership is:* ***a good thing****, a bad thing, neither good nor bad, not sure. (UK not included).*
  - *On a 0-10 scale, with '0' being 'I don't identify at all, and '10' being 'I identify very strongly', how strongly you identify yourself with Europe?*

- Citizens' awareness of the EU Cohesion Policy:

  In general, have you ever heard about

  - *the EU Cohesion Policy? (Yes, No)*
  - *the EU Regional Policy? (Yes, No)*
  - *the Structural Funds? (****Yes****, No)*
  - *any EU funded project in your region or area? (****Yes****, No)*

- Citizens' perception of benefits and support for the Cohesion Policy:
  - *To your knowledge, have you ever benefited in your daily life from any project funded by the EU? Yes; No; Don't know*
  - *In your opinion, the EU should continue Cohesion Policy, where wealthier countries contribute more, and poorer EU regions receive more funding."* ***Strongly agree; Agree****; Disagree, Strongly disagree*

As a crucial aspect for our analysis, the survey includes the size of the place of residence of respondents. This allows us to distinguish three categories to capture the rural-urban dimension: i) large towns, as those places with more than 100,000 inhabitants, ii) middle-sized towns, whose number of

[5] Countries included are Austria, Bulgaria, Estonia, France, Germany, Hungary, Italy, Latvia, Netherlands, Poland, Romania, Slovakia, Spain, Sweden, and UK. See Charron and Bauhr (2017) for further details. It is important to stress that the PERCEIVE survey includes comprehensive information on both the citizens' identification with the EU project and their awareness and perception of the EU Cohesion Policy. This feature makes it more appropriate than the information available in the Eurobarometer for the type of analysis we are interested in.

[6] Mendez and Bachtler (2017) identify up to 14 different survey questions on European identity, grouped in five categories: geographical belonging, thinking of self as European, attachment to Europe/EU, national versus European and proud to be European. Still, no measure is free of critique, as all suffer from limitations.

inhabitants range from 10,000 to 100,000, and iii) rural areas when inhabitants are less than 10,000. Finally, the survey also includes the region in which the respondent lives. This has allowed us to merge the individual information in the survey with the data on the regional breakdown of the total Structural Funds expenditures per inhabitant (SFpc) in the programming period 2007-2013. Based on the corresponding figures, four groups of regions in the 15 surveyed countries were defined based on the quartiles of the SFpc distribution. The group based on the first quartile is the one with the least SFpc, whereas the one based on the fourth quartile corresponds to the set of regions that receive the highest amounts. Additionally, we have considered the distinction between the group of regions eligible as *Less Developed* in the current programming period 2014-2020 and those that are not in this group of EU regions.[7]

Tables 1 and 2 summarise the descriptive evidence on citizens' identification with the European project resulting from the PERCEIVE survey, and how it varies between regions depending on the intensity of the Cohesion Policy. They include the distinction between urban and rural areas to facilitate the assessment of variations in identification in this territorial dimension. As discussed above, the tables also include results for the four awareness-of-policy questions and for the degree of positive perception and support for the Cohesion Policy. In all cases, we report the percentage of positive responses to the corresponding question (marked in bold in the description of the questions above). The only exception is the information provided for the *Identification with Europe*; in that case, the median is reported.[8] In the computation of the descriptive measures we used the corresponding sampling weights provided in the PERCEIVE's survey database in order to derive estimates for the represented populations.

As a first stage, Table 1 shows results for the total sample and distinguishing by the rural-urban dimension, but neglecting regional differences due to the incidence of the EU policy under analysis. It can be observed that about half of respondents were aware of the EU policies with a regional impact. Interestingly, the percentage of respondents who were aware of the Structural Funds is almost six points higher than that of the Cohesion Policy, while the figure is even higher when the question refers to any fund in the region or area where the individual lives. As for the urban-rural dimension, figures suggest that awareness is somewhat higher in large cities than in rural areas. This is particularly true in the case of the Structural Funds, with fewer differences for the Cohesion Policy and the Regional Policy, and no differences at all when the question refers to any EU funded project in the region or area. Interestingly, there seems to be a non-monotonic relationship between awareness and size of the place of living. The percentage of positive responses in middle-sized towns is lower than in large cities but also than in rural areas. A similar picture can be deduced from responses on the positive perception of the Cohesion Policy, which is more widespread among respondents from large cities than from rural areas, with the lowest percentage in middle-sized towns when referred to perceived benefits from EU projects. Interestingly, the same is not observed in the case of support for the Cohesion Policy, as the percentage of respondents supporting this EU policy increases with urban size, although differences are moderate. Whatever the case, these figures reveal that support for the Cohesion Policy is far more prevalent than the citizens' perception of having direct benefits of the EU policy interventions on their everyday life.

The final two rows in Table 1 show the results of the measures of identification with the EU project. About two thirds of respondents declared that their country's membership to the EU is a good thing, whereas the median value for the degree of identification with Europe is 7, in a scale that goes from 0 to 10. The two indicators provide quite similar values regardless of the size of the place of living, the only exception being a higher percentage in large towns for the first indicator, which is also observed in the mean values of the degree of identification with Europe (see Table A.1 in the Appendix). Overall, our

[7] Although figures on the amount of SFpc allocated to each region in the current programming period can also be computed, we have preferred to use in this analysis the (almost) final amount of expenditures in the previous programming period as, in our opinion, this is a closer measure of the actual impact of the EU policy in each region. In contrast, eligibility as a *Less Developed* region in the current programming period is, in our opinion, a more appropriate proxy on the relative socio-economic situation of the region when the survey was carried out and, therefore, on the current intensity of the Cohesion Policy in the set of regions under analysis. In any case, the results in this section are qualitatively similar when using the previous programming period.

[8] We also computed the mean values of this magnitude. Table A.1 of the Appendix reports the corresponding results.

reading of these results is that a moderate rural-urban divide could exist as for awareness, perception, and support for the EU Cohesion Policy. However, it may not necessarily translate into large differences in identification with the EU project.

TABLE 1.
Awareness, perception and support to the Cohesion Policy and identification with the EU project by type of area

	Rural	Middle town	Large town	Total
Awareness of EU Cohesion Policy				
Heard Cohesion Policy	44.6	42.8	47.9	45.0
Heard Regional Policy	49.6	46.8	51.3	49.1
Heard Structural Funds	49.1	48.9	55.2	50.9
Heard any EU fund	54.8	52.7	54.5	53.9
Perception of the EU Cohesion Policy				
Benefit from EU funds	34.6	30.4	39.5	34.6
Support EU Cohesion Policy	78.8	79.7	81.4	79.9
Support for the EU & Identification with Europe				
EU membership a good thing	60	60	65.6	61.7
Identification with Europe	7	7	7	7

Notes: Figures correspond to the percentage of positive responses to the questions on hearing about each particular policy, having benefited from EU funds, supporting the EU Cohesion Policy, and thinking that the membership of the individual's country to the EU is a good thing. Median values are reported for the degree of identification with Europe. Rural is defined as less than 10,000 inhabitants, Middle-sized town as between 10,000 and 100,000, and Large town as greater than 100,000.

Table 2 introduces the regional dimension in terms of the incidence of the EU regional policy. The first panel reports the results by groups of regions based on the distribution of the SFpc (quartiles). As expected, awareness of the EU policy interventions is more frequent in regions that receive more funds per inhabitant (i.e. in the third and fourth quartiles). This is so for all responses to these four questions, although the percentage varies markedly among them, as it does the gap for the different quartiles. Regarding the urban-rural divide, an unambiguous pattern cannot be derived. Whereas awareness seems to be more frequent in large towns of regions receiving more EU funds in the case of the Cohesion Policy and the Structural Funds, a less clear pattern is observed for the Regional Policy and for the knowledge about any EU fund in the region or area of the respondent.

As also expected, the percentage of individuals that declared having benefited in their daily life from any EU funded project increases along the SFpc distribution. Using this indicator, we can conclude that citizens' perception of the EU policy is more than three times higher in regions that received the largest amount of SFpc in comparison to those that received the lowest. Interestingly, despite some peculiarities, this increasing trend in perception along the SFpc distribution is observed both in rural areas and in cities of middle and large size. However, this common pattern does not prevent a marked urban-rural divide in perception all over the SFpc distribution. Therefore, combining both dimensions, we can conclude that there are substantial disparities in perception across the territory. As a matter of example, the difference between rural areas in regions at the bottom of the SFpc distribution (16.2%) and large towns in regions of the upper quartile (59.3%) is as large as 43 percentage points. As regard support for the Cohesion Policy, figures indicate that it is higher in regions that receive more funds, particularly when the comparison is made with respect to the group of regions in the first quartile (receiving the lowest amount of SFpc). It is also observed that support is somewhat higher in mid-sized and large towns than in rural areas, although only from the second quartile onwards. However, overall we can conclude that territorial differences in support for the Cohesion Policy are far less intense that the ones observed for the perception of the direct benefits of EU interventions.

Territorial differences in awareness and, particularly, in the perceived benefits of projects financed with EU funds suggest that the level of identification with the European project may vary depending on the amount of received funds and on the degree of urbanization. This could well be despite citizens from different territories tend to similarly support the aim of the EU's Cohesion Policy. The results for the two questions capturing identification with the European project in Table 2 confirm the existence of differences across groups of regions and between urban and rural areas. On the one hand, and somewhat surprisingly, results reveal that the percentage of respondents that assess positively their country's EU membership is lower in regions receiving less EU funds and also in those in which the policy intervention is more intense (at least in term of funds per inhabitant expended in the region). However, the fact that these regions are the largest recipients of funds because they have the lowest level of development could be confounding the estimation of the effect of the policy on the degree of citizens' identification in this simple bivariate analysis. In any case, this pattern is consistent in areas of different urban intensity. Besides, results confirm that positive assessments are more frequent in large than in middle-sized towns and rural areas. It is interesting to remark that the lowest support for EU membership is found in rural areas of regions that received the highest amounts of SFpc and, therefore, being among the less developed EU regions. The median value of responses on the degree of identification with Europe is as high as eight (in a 0-10 scale) in large towns of the group of regions receiving the largest amounts of SFpc, while it equals six for rural areas and middle-sized town in the groups of regions receiving less funds. Similar disparities are observed in terms of the mean values (Table A.1 in the Appendix).

Results that differentiate between the regions eligible as *Less Developed* and those that do not, are reported in Panel B of Table 2. The general pattern regarding awareness, perception, and support for the EU policy in this case is similar to that discussed above for the groups of regions based on the amount of SFpc. If something, the differences between the regions most and least benefited by the EU regional policy are now more evident. Awareness and perception of the benefits are far more frequent in the *Less Developed* group, regardless of urbanisation. Support for the Cohesion Policy is also higher in that group, although the gap is narrower than for awareness. However, this is not reflected in greater identification with the EU project in regions eligible as *Less Developed*. This result is in line with those commented above for the lower level of identification in the group of regions receiving the largest amount of SFpc. Therefore, when interpreting this result we should not neglect that these regions are those with the lowest level of economic development. As long as citizens in poor regions perceive greater economic integration as a threat, they may be less prone to identify with the EU project.

TABLE 2.
Territorial variation in awareness, support and identification with the EU project

Panel A. Structural Funds in the region

	Heard Cohesion Policy				Heard Regional Policy				Heard Structural Funds				Heard any EU fund			
	Rural	Mid town	Large town	Total	Rural	Mid. town	Large town	Total	Rural	Mid. town	Large town	Total	Rural	Mid. town	Large town	Total
1st quartile	45.1	40.2	39.5	41.4	46.1	43.9	47.5	45.7	40.6	41.6	45.5	42.5	33.4	36.6	34.3	34.9
2nd quartile	45.5	45.1	51.3	47.5	44.2	43.7	47.1	45.1	44.1	47.7	57.4	50.3	51.7	55.7	61.9	56.9
3rd quartile	46.8	48.9	58.4	51.2	50.4	47.4	60.1	52.3	64.6	61.4	71.2	65.5	63.0	60.9	65.6	63.0
4th quartile	47.3	48.6	55.3	49.4	61.2	61.1	63.6	61.6	52.8	60.0	63.6	57.7	77.3	79.5	77.7	78.2
	Benefit from EU funds				**Support to EU Cohesion Policy**				**EU membership a good thing**				**Identification with Europe**			
	Rural	Mid. town	Large town	Total	Rural	Mid. town	Large town	Total	Rural	Mid. town	Large town	Total	Rural	Mid. town	Large town	Total
1st quartile	16.2	14.5	20.4	16.9	74.0	72.0	74.6	73.4	58.3	56.1	61.4	58.3	6	6	7	7
2nd quartile	23.6	25.7	38.0	29.7	78.6	81.7	84.0	81.7	59.6	57.7	69.1	62.5	6	6	7	7
3rd quartile	50.1	33.5	55.9	45.7	83.5	85.4	86.3	85.1	65.7	67.0	69.1	67.3	7	7	7	7
4th quartile	49.9	57.1	59.3	54.5	81.3	84.6	83.2	83.0	55.9	60.2	61.8	58.7	7	7	8	7

Panel B. Less developed regions.

	Heard Cohesion Policy				Heard Regional Policy				Heard Structural Funds				Heard any EU fund			
	Rural	**Mid. town**	**Large town**	**Total**	**Rural**	**Mid. town**	**Large town**	**Total**	**Rural**	**Mid. town**	**Large town**	**Total**	**Rural**	**Mid. town**	**Large town**	**Total**
Other type	42.0	38.9	44.3	41.6	42.5	41.5	46.1	43.3	42.4	42.8	50.5	45.3	40.5	42.1	45.7	42.9
Less Developed	48.3	51.0	57.0	51.5	59.4	57.5	64.3	60.0	58.2	61.4	67.1	61.7	74.4	74.7	76.4	75.0
	Benefit from EU funds				**Support to EU Cohesion Policy**				**EU membership a good thing**				**Identification with Europe**			
	Rural	**Mid. town**	**Large town**	**Total**	**Rural**	**Mid. town**	**Large town**	**Total**	**Rural**	**Mid. town**	**Large town**	**Total**	**Rural**	**Mid. town**	**Large town**	**Total**
Other type	21.2	20.3	29.0	23.5	76.1	78.1	80.7	78.4	61.3	59.6	66.1	62.3	6	6	7	7
Less developed	53.1	50.9	65.8	55.6	82.4	82.8	83.2	82.8	58.4	60.8	64.5	60.8	7	7	8	7

Notes: Figures are the percentage of positive responses to the corresponding questions, except in the case of Identification with Europe, where median values are reported. The quartiles refer to the distribution of the yearly average of the Structural Funds per inhabitant in each region in the programming period 2007-2013. *Less Developed* indicates if the region falls under the "Less Developed" status in the 2014-2020 programming period parlance. Total refers to the entire sample of individuals in the PERCEIVE's Survey. Rural is defined as less than 10,000 inhabitants, Middle-sized town as between 10,000 and 100,000, and Large town as greater than 100,000 inhabitants.

5. Conclusions

The modern study of *European identity* is strongly grounded on social constructivism, assuming that social processes are based on the construction of ideas: the legitimacy of the EU is assumed to depend on the existence of a European identity. These studies strongly emerged in the post-Maastricht period, and have been even fostered by the expansion of the EU to Central and Eastern European countries, the financial crisis, the Brexit, the ambiguous link between terrorist attacks and immigration episodes, the growth of populism, and the growth of regional identities aiming at becoming independent states. The revision of the extant literature allows us to state that both individual and collective definitions of a European identity imply an evaluative episode balancing the costs and benefits of being part of the EU project. In that regard, an evaluation of the impact of EU policies in general, and of the Cohesion Policy in particular, on the formation of a European identity seems to be crucial.

The literature agrees that citizens develop a collective identification through two main mechanisms: information and experience. They depend on the exposure to messages and awareness of citizens to EU issues, on personal contacts with other Europeans, experience with the repercussions of EU integration, and historical experiences within the collective memory of every context. In turn, the determinants that promote or hinder the European identity can be individual or system based. At the individual level, studies have pinpointed the role of political awareness, attitudes towards the European and national bodies, and personal transnational experiences. At the system (country) level, party messages related to European and national community, the economic position and degree of international integration, and the ethnocultural identification would be among the most important determinants.

In addition to these mechanisms and determinants of identity formation, we can conclude that individuals' identification with Europe is likely to be conditioned by a list of EU policies and institutions with a clear impact on the everyday life of citizens. In particular, in this study we have stressed the role played by the Cohesion Policy. Its focus, design, management, and the amount of funds allocated makes this EU policy a clear candidate to influence the citizens' identification with the EU project. Its regionally differentiated impact can even explain a big deal of variations across territories in identification. Together with this policy-source of territorial disparities, the rural-urban divide could be strongly influencing the experience-based mechanism, and in particular how the Cohesion Policy is perceived. There may be rural-urban differences, among others, in terms of the ethnocultural identification of every territory, the party system, the economic position within Europe and within every country, and in the degree of international integration. Preliminary evidence from the PERCEIVE survey confirms that awareness and perception of the Cohesion Policy vary depending on the intensity of the EU regional policy in the respondents territory. It also supports a sort of urban-rural divide in awareness and perception. However, the evidence is less supportive as regard differences in identification with the EU project associated to the incidence of the Cohesion Policy. A plausible explanation is that the positive effect on identification of the policy is counterbalanced by the lower propensity of citizens in poorer regions to identify with the European project, as they could see themselves, and their territories, as net losers in the process of increasing economic integration. This argument is linked with the new debate on the geographies of discontent and the rise of a sort populism with stronger territorial than social foundations (Rodríguez-Pose, 2018). Further analysis, in a multivariate context, is therefore in order to validate or refute this argument.

In any case, since social processes are strongly grounded on the construction of ideas, the legitimacy of the EU nowadays is viewed to depend on the existence of a European identity. Both individual and collective definitions of a European identity imply an evaluative episode balancing the costs and benefits of being part of the EU project. In this respect, it is not only important if and how Cohesion Policy is applied, but also how citizens are aware of it and whether and how they experience the benefits and costs of being part of the EU project. This is supportive of the social constructivism approach, stressing the need for a discourse to allow citizens to evaluate the EU project. Therefore, we can conclude that further efforts should be devoted to improve the way in which citizens perceive the Cohesion Policy, as it may be an effective way to counterbalance the negative effect on European identification of low levels of economic development. In this respect, further evidence about the way in which the territorial dimension (both across countries and regions, and the urban-rural divide) influences the mechanisms for identity formation would be very informative to guide actions aiming at improving communication of the benefits of the policy. That is to say, we advocate for explicit spatial analyses of the formation of a European identity and their mechanisms and determinants.

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Appendix

Table A.1.
Results based on the mean values of Identification with the EU project

Panel A. *Structural Funds in the region*

	Identification with Europe (mean)			
	Rural	**Mid. town**	**Large town**	**Total**
1st quartile	6.0	6.1	6.5	6.2
2nd quartile	6.0	5.9	6.8	6.3
3rd quartile	6.8	6.5	7.0	6.7
4th quartile	6.5	6.9	6.9	6.8
Total	6.3	6.3	6.8	6.5

Panel B. *Less developed regions*

	Identification with Europe (mean)			
	Rural	**Mid. town**	**Large town**	**Total**
Other type	6.0	6.0	6.6	6.2
Less developed	6.7	6.9	7.1	6.9
Total	6.3	6.3	6.8	6.5

Profiling identification with Europe and the EU project in the European regions

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Abstract:

Recent political events in the European Union (EU) highlighted a growing dissatisfaction of citizens in several EU regions with the EU institutions' management of socio-economic and financial challenges. This eventually led to a political legitimization crisis, whose drivers are partially shared among EU regions and partially area-specific. However, the relation between citizens' identification with the EU project and the regions' characteristics has not been analysed yet. In this article, we fill in this gap by addressing three research questions: i) To what extent do EU citizens identify with Europe and the EU project? ii) Do European regions have different patterns and level of identification? iii) Are the results driven by specific socio-economic variables?

Answering these questions is crucial to inform a more inclusive and resilient design of the EU Cohesion Policy in a crucial period for reforming the EU. To this purpose, we develop a novel probabilistic classification model, IdentEU, which embeds with the concept of individual identification with Europe. We use micro-level data from a survey implemented within the PERCEIVE project. We find that the influencing variables that mostly affect (citizens and) regions' identification with the European project are: trust in the EU institutions, the effectiveness of EU Cohesion Policy and spending, and the level of corruption. These issues gain relevance at the light of three main challenges that affected the EU socio-economic development path in the last decade, i.e. the 2008 financial crisis, the globalization process, and Brexit.

Keywords: Identification; Citizens' perception of the EU; Cohesion Policy; probabilistic model; IdentEU.

JEL classification: C38; R58.

Describiendo la identificación con Europa y con el proyecto de la Unión Europea en las regiones europeas

Resumen:

Los recientes acontecimientos políticos en la Unión Europea (UE) pusieron de relieve una creciente insatisfacción de los ciudadanos en varias regiones de la UE con la gestión de los desafíos socioeconómicos y financieros de las instituciones de la UE. Esto eventualmente condujo a una crisis de legitimidad política, cuyas causas son parcialmente compartida entre las regiones de la UE y parcialmente específicas de cada área. Sin embargo, la relación entre la identificación de los ciudadanos con el proyecto de la UE y las

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características de las regiones aún no se ha analizado. En este artículo, llenamos este vacío abordando tres preguntas de investigación: i) ¿En qué medida los ciudadanos de la UE se identifican con Europa y el proyecto de la UE? ii) ¿Tienen las regiones europeas diferentes patrones y niveles de identificación ? iii) ¿Los resultados se basan en variables socioeconómicas específicas?
Responder estas preguntas es crucial para generar un diseño más inclusivo y resiliente de la Política de Cohesión de la UE en un período crucial para la reforma de la UE. Con este fin, desarrollamos un nuevo modelo de clasificación probabilística, IdentEU, que se integra con el concepto de identificación individual con Europa. Utilizamos datos a nivel micro de una encuesta implementada dentro del proyecto PERCEIVE. Encontramos que las variables que principalmente afectan la identificación de (ciudadanos y) regiones con el proyecto europeo son: confianza en las instituciones de la UE, la efectividad de la Política de Cohesión y el gasto de la UE, y el nivel de corrupción. Estas cuestiones cobran relevancia a la luz de tres desafíos principales que afectaron la trayectoria del desarrollo socioeconómico de la UE en la última década, es decir, la crisis financiera de 2008, el proceso de globalización y el Brexit.

Palabras clave: Identificación; Percepción ciudadana de la UE; Política de Cohesión; Modelo probabilístico; IdentEU.
Clasificación JEL: C38; R58.

1. Introduction

The topic of European identity and citizens' identification with the European Union (EU) and its project gained attention in relation to three recent political and economic developments in the EU. First, the last historical EU enlargement to Eastern European and Western Balkans countries occurred between 2004 and 2013 that brought 13 new Member States (MS) in the EU. Second, the EU institutions' response to the 2008 financial crisis and the management of the Greek crisis that focused on fiscal rigour and the introduction of the Fiscal Compact. Third, the referendum that stated the willingness of the majority of UK-voters to leave the EU, the so-called Brexit.

EU citizens' responses to the way EU institutions managed these challenges were very heterogeneous across countries and showed a diffused dissatisfaction with the EU institutions and the EU project. There is a growing awareness of the fact that EU citizens' dissatisfaction with the EU could have resulted in a lower identification with the EU project and reflected in the outcomes of political elections in several EU MS, such as Italy.

However, the drivers of citizens' identification with the EU project and perception of the EU, the influence of the regional socio-economic characteristics and policy governance at the national level, and what role (if any) the EU Cohesion Policy has played in this process have not been adequately analysed yet. At this regard, three research questions deserve consideration, that is:

i. To what extent do EU citizens identify with Europe and the EU project?

ii. Do European regions have different patterns and levels of identification?

iii. Are the results driven by specific socio-economic variables?

Answering these three research questions is policy timely and relevant. Indeed, it contributes to contextualize and to better understand the current political context of the EU, which is characterized by growing Euro-skepticism and citizens' preference for populistic parties, as well as by citizens' claims for democratization and transparency of the EU financial and economic decision making, at the light of EU citizens' identification with the EU institutions. Answering these research questions is also at the core of the research agenda of the H2020 PERCEIVE project[1].

[1] Horizon 2020 PERCEIVE project, Perception and Evaluation of Regional and Cohesion policies by Europeans and Identification with the values of Europe, Grant Agreement number 693529.

So far, the concepts of identity and identification with the EU have been analysed in the literature in terms of individual and collective European identity mostly at the qualitative level (Bergbauer, 2018). A recent attempt to quantify citizens' identification with the EU is represented by the development of the Composite Index of European Identity by Royuela (2018). Nevertheless, a systematic quantitative framework is still missing. To fill in this methodological and knowledge gap, we introduce an innovative robust methodological solution based on the development of a probabilistic model, IdentEU, based on Latent Class Analysis. IdentEU enables a quantitative measurement of citizens' identification that simultaneously accounts for different dimensions underlining the concept of individual identification with the EU and discloses patterns of identification described by different attitudes. An original feature of our approach is that we can produce identification measurements at different spatial levels. Not only we can produce a classification of citizens with different patterns of identification, but we can also define a classification of the EU regions into groups with common profiles of identification, consistently with the emerging pattern of citizens' classification. The latter innovation is crucial for studying the influence of regional context on identification with the EU and understanding what role (if any) the Cohesion Policy plays in the relationship between EU citizens and the EU project. To the best of our knowledge, it is the first time that our approach has been implemented to study identification with the EU.

The paper is organized as follows. Section 2 briefly summarizes the theoretical and empirical literature related to our analysis and stress the novelty of our approach. Section 3 presents the methodology and the data used for the analysis. Section 4 presents the results of the clustering at the citizens and regional level discussing the regional drivers. Section 5 concludes.

2. European identity: conceptualization and measurement

Interest in European identity has risen considerably after the Maastricht Treaty, which increased the role of the EU in many policy areas, eroding the control of national governments. Since then, research in European public opinion and identity has been interested in how Europe reshapes national identities, the extent to which individuals identify themselves as Europeans, and their attitudes towards the EU and the integration process (Mendez & Bachtler, 2017).

Different conceptual and methodological approaches from social sciences contributed to the research on European identity. Social identity research (Tajfel, 1981, Tajfel & Turner, 1986) in particular has been influential for understanding the key dimensions of identity (cognitive, affective and evaluative, see below) and how identities are derived: from perceived membership qualities of groups and their comparison against other out-groups (Risse, 2010, 2014; Herrmann *et al.*, 2004; Fligstein, 2008; Fligstein *et al.*, 2012) as well as the recognition of the multiplicity of territorial identities and their interactions (Herrmann & Brewer, 2004; Risse 2003; Mendez & Bachtler, 2017). European identity is not necessarily in competition with national identity. Instead, multiple identities can co-exist and even mutually reinforce each other (Citrin & Sides, 2004; Risse, 2010, 2014; Carey, 2002).

However, some problems arise when empirically measuring identity and identification. The empirical literature studies the relationship between support for European integration with three different types of explanations (utilitarian, identity-driven and benchmarking with the domestic context, see Hobolt & de Vries, 2016). Frequently, identity (both national or European) is measured by a single variable. Carey (2002) uses pride and attachment to region/country/Europe (from Eurobarometer data) and shows that exclusive national identity has a significant negative effect on support for European integration. Hooghe and Marks (2005) use the Moreno question[2] and attachment (from Eurobarometer) to measure exclusive national and mixed identities. They find that exclusive national identities influence public support for integration, but the extent depends on how divided national elites are. Verhaegen *et al.* (2014) analyse

[2] "In the near future, do you see yourself as – Nationality only, Nationality and European, European and Nationality, or European Only".

how support for European integration and European identity are influenced by perceived economic benefits. They use Eurobarometer data and measure identity with the question: "Do you feel you are a citizen of the EU?". In another study, the same authors (2017) measure European identity through an index obtained as the sum of two items (feeling European in one's day-to-day life and attachment to the European Union) using data from the 2009 IntUne Mass survey and analyse its relationship with trust towards other European citizens and trust in European institutions.

However, the validity of these kinds of variables for measuring national or European identity is challenged by Bruter (2008). The author pointed out how a more critical and rigorous measurement of European identity is needed and drew attention on the multi-dimensional conceptualisations of European identity.

Drawing from this literature, this work deals with the empirical measurement of identification with the EU introducing a new methodological approach (the IdentEU probabilistic classification model) that accounts for the multi-dimensional conceptualization of European identity. The approach builds on the concept of social identity and the definition of individual identification with Europe as "citizens' self-categorization as Europeans together with their evaluation of their membership in the European collective, and their effective attachment to Europe and other Europeans" (Bergbauer, 2018, p.18). We can recognize in this definition the three components in the conceptualization of identity, i.e. cognitive, affective and evaluative, where:

- the cognitive component refers to self-categorization as a member of a group (Self-categorization);
- the evaluative component refers to the assignment of value connotation (negative or positive) to the social group and his membership, by comparing people from the group with people out of the group (Evaluation);
- the affective component refers to the emotional attachment and feeling of love and concern for the group, i.e. a "we-feeling" dimension (Attachment).

This approach is implemented on an original dataset (see section 3.2). These data simultaneously provide the assessment of attitudes and perceptions on different aspects. Hence, this allows to account for the different dimensions underlining the concept of individual identification and disclose patterns of identification with the EU described by attitudes on different aspects.

We use such information to proxy the three components above in the light of the results on the literature on support for European integration and European identity (see section 3.2).

Moreover, this approach enables to consider identification at different spatial levels and provides a measurement of identification with the EU at both individual and regional level. A specific feature of the approach is the classification of the EU regions into groups with common profiles of identification consistently with the emerging pattern of citizens' classification.

This element is of particular relevance for studying the influence of regional context on identification with the EU and, specifically, for understanding what role (if any) the Cohesion Policy plays in the relationship between EU citizens and the EU project.

3. Methodology

In this section, we describe the methodological approach (the IdentEU probabilistic model) used to obtain patterns of identification with the EU both at the citizens and regional level, and the data and variables used to implement it.

3.1. Measuring identification with Europe and the EU project

We develop a probabilistic model for classification using Latent Class Analysis (LCA) and multilevel modelling (Hagenaars & McCutcheon, 2002; Vermunt, 2003; Skrondal & Rabe-Hesketh, 2004, Vermunt & Magidson, 2016). LCA studies the associations among a set of observed categorical variables and assumes that they are explained by an unobserved latent variable (in our model, the identification with the EU) treated as categorical. LCA is the most adequate statistical tool for our empirical exercise because all the observed variables in our data are categorical. Further, LCA assumes the latent variable is also categorical and its values correspond to population clusters[3]. Despite being possible to consider identification as a latent continuous variable, assuming a discrete form allows us to define patterns of identification according to different profiles of the respondents and distinguish the dimensions that most differentiate across them.

Defining K interrelated categorically observed measures Y_{ijk}, response to item k of person i coming from region j, the model identifies T classes of a latent variable X_{ij} that describes an unobservable construct (identification with the EU) and provides a classification of individuals based on the response patterns to the K indicators. The latent classes t=1,…,T (clusters) represent the unobservable levels of identification; each latent class is described by the pattern of the K individual responses with the highest probability in that class (Standard LC Model).

Furthermore, the model exploits the nested structure of the data considering individuals nested into regions. This hierarchical model accounts for unobserved regional effects specified as a discrete latent variable W_j, where W_j describes latent types (groups) of regions for which the parameters in the model differs and allows to classify the regions into a small number of latent classes, m=1,…,M.

Hence, in this model, identification with the EU project is described by two discrete latent variables, one for the classification of individuals and the other for the classification of the regions, to which they are allocated with certain probabilities. We do not consider a further level of analysis, i.e. at the country level, for several reasons[4]. However, the classification of the regions assumes that all the regions belonging to the same group share the same specific unobservable effect, which might capture country effects as well, at least partially.

The model also accounts for the effect of individual $\boldsymbol{Z}_{ij}$ and regional characteristics $\boldsymbol{Z}_j^g$ on the probabilities of class membership.

The estimation of the model produces the following probabilities that are obtained from a multinomial logit specification using different parameters at each level:

1. The latent class probability at the regional level $P\left(W_j = m \middle| \boldsymbol{Z}_j^g\right)$: is the probability that region *j* belongs to a particular class of the latent variable W_j, given the regional covariates. It delivers information about the distribution of the population among the regional classes.
2. The latent class probability at the individual level $P\left(X_{ij} = t \middle| W_j = m, \boldsymbol{Z}_{ij}\right)$: is the probability that the respondent *i* of the *j*-th region belongs to a particular class of the first level latent variable X_{ij}, given regional latent class membership and the individual covariates. It delivers information about the distribution of the population among the individual classes.

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[3] Principal components and Factor analysis are used with continuous observed variables and involve correlations. Moreover, Factor analysis produces a continuous latent variable. By contrast, LCA is used when the observed variables are categorical and the resulting latent variable is categorical too, defining different clusters in the population.

[4] Country effects could be introduced as the third level of analysis or as fixed effects via country dummies at the regional level. Both solutions, however, would increase exponentially the number of parameters (which already are 190) getting model estimation instable. Further, some of the contextual variables are defined at the regional level and are highly heterogeneous even within the same country. Moreover, the Cohesion Policy is implemented at the regional level and this is the most relevant level of analysis to check whether it affects citizens' identification with the EU in some way.

3. The conditional probability of individual response pattern $\prod_{k=1}^{K} P\left(Y_{ijk} = s_k \middle| X_{ij} = t, W_j = m\right)$: is the joint probability that the *i*-th respondent follows the response pattern s_i (for the K indicators) given individual and regional latent class membership. It delivers information for describing the latent classes.

These three probabilities will be used to classify the citizens' and the regions according to the level and pattern of citizens' identification with the EU project.

3.2. Data and variables

For building the model, we rely on data from a sample survey developed within the PERCEIVE project (Bauhr & Charron, 2018a, 2019) and a dataset that brings together information from several official secondary sources at regional level (NUTS1 and NUTS2) in a panel format (Charron, 2017). The survey collects information from a sample of 17.147 individuals of 18 years of age or older from 15 EU Member States (comprising 153 regions) and was conducted during the summer of 2017.

For the measurement of the level of identification and classification of individuals and regions, we select ten variables from the PERCEIVE survey that we consider proxy of the latent identification with the EU. The ten variables are grouped into three macro-areas, i.e. self-categorisation as European, evaluation of EU membership and strength of affective attachment. These variables strive for describing the three components of the concept of individual identification developed by social psychology (Bergbauer, 2018) and described in Royuela (2018) and Aiello *et al.* (2018), i.e. "Self-categorization as European", "Evaluation of EU membership", "Affective attachment". The definition and the categories for each indicator are reported in Table A1 in the appendix.

A group of three variables are chosen to account for self-categorisation as European. The first variable considers how strong the respondent identifies with Europe and the second is defined comparing the responses to the above question with those to a similar question regarding how strong the respondent identifies with her own country. While the first variable is suggested by Bruter (2008) for a general assessment of the European identity, the second one assesses the coexistence of multiple identities. We also consider to what extent the respondent is familiar with the Cohesion Policy, whatever the name used. We expect this variable to be positively correlated with the awareness and recognition of the European Union self-membership.

Five variables are chosen to account for the evaluation of EU membership. The first asks whether the respondent considers her/his own country's EU membership a bad or a good thing. This question has been often used to proxy support for EU integration (Carey, 2002; Verhaegen *et al.*, 2014). Two other questions ask whether she/he considers the EU institutions effective at dealing with the main problems faced by the region where she/he lives, in comparison to the national government. Finally, two variables deal with the perception of the level of corruption in EU institutions, in comparison to corruption in the national government. We use these variables to assess the individual evaluation of the functioning and the performance of EU and national institutions. Such evaluation contributes to political trust, which in turn may influence identification with the EU (Verhaegen *et al.*, 2017).

Two last variables should account for the strength of affective attachment. Respondents are asked whether they agree with the EU policy of redistributing more financial funding to the poorer EU regions. This indicator measures the citizen support for the Cohesion Policy and, indirectly, the support for the values promoted by the EU. Hence, it may be used to proxy their attachment to Europe and other Europeans. The relationships between support to specific policies (in particular, redistribution and aid within EU) and identity, corruption and institutional quality were also studied empirically by Bauhr and Charron (2018b, 2019). Finally, we consider whether the respondents voted in the last two EU parliamentary elections.

Here we comment on some descriptive statistics on the main variables used in the analysis for the whole sample and separately by country (Tables A2 and A3 in Appendix).

We notice that about 54% of people identify strongly with Europe and only 15% has a weak identification. However, there is a lot of heterogeneity across countries. Slovakia, Poland, Germany, Austria have a higher percentage of people that strongly identify with Europe than average, whereas this is lower in countries like Estonia, France, Italy, and the Netherland (Table A.2). The feeling about the capacity of the EU to solve problems is not so positive: 52% perceive that the EU is not so effective and only 11% appraise the EU very effective. Perception of great efficacy is higher in Romania, Bulgaria, Slovakia and Spain compared to other countries, whereas Italy and Hungary, Sweden and the UK have a rather negative perception. Corruption in EU institutions is a concern for European citizens. Indeed, only 13% perceive a low level of corruption, while 47% think it is widespread, in particular for citizens in Slovakia, Italy, and Spain. By contrast, in Bulgaria and Romania, a largest share of respondents perceive lower corruption at the EU institutions level than the average of the sample.

Nevertheless, the majority of European citizens consider their country's EU membership as a good thing (62%), and 80% agree with the idea of EU Cohesion Policy - wealthier countries contribute more and the poorest regions receive more funding from EU (Table A.3). Countries where citizens consider the EU membership as a good thing are Germany, Poland and Romania. By contrast, citizens in Italy, the Netherlands, Sweden and Latvija are the most adverse. In every country, the percentage of people that support the idea of the Cohesion Policy is high, with a larger share of conflicting citizens in the Netherlands (33%), France (28%), Austria (27%) and the UK (26%). Most European citizens are aware of Regional/Cohesion Policy, but in some countries (the Netherlands, the United Kingdom) the awareness of EU policies is significantly lower.

Then, we also consider other variables to be used in the model as controls, such as age, education, occupational and economic status. At the regional level, we consider GDP per inhabitant in Euro in 2014 as percentage of EU average, the unemployment rate for 20-64 years people in 2014, per capita amount of Structural Fund expenditures in the period 2007-13, the European Index of Institutional Quality (EQI) in 2013 (normalised at 100), and the absorption rate of the Structural Fund financial allocation in 2013[5]. While the EQI assesses the institutional quality based on the experiences and perception of citizens (Charron et al., 2014), the absorption rate could be considered as an objective measure of the regions' efficiency in programming and implementing the Cohesion Policy. Some studies show (Bojimans *et al.*, 2014; Tosun, 2014) a strong correlation between absorption rate and institutional quality at the country level.

4. Results

In this section, we discuss the results on citizens' identification patterns. Before discussing how the EU regions differ in the pattern of citizens' identification and their drivers, we briefly introduce a description of the citizens' clusters: individual and regional classifications, while distinct, are not independent and regional identification patterns are derived from the citizens' cluster structure in the regions belonging to each group (cf. Table 2).

4.1. Profiling citizens' clusters

The final model distinguishes six clusters of citizens and four different groups of regions. Starting from the citizens' clusters, a description can be obtained looking at the conditional response probabilities reported in Table A.4 in the appendix: these represent the chance of choosing a specific response category of each indicator for the individuals belonging to each cluster. More information on the individual clusters can be found in Brasili *et al.* (2019).

[5] The regional aggregation in the survey is at level NUTS2 for the majority of the countries in the sample, except for Germany, the UK and Sweden (aggregation at NUTS1 level), and Latvija and Estonia (aggregation at country level).

We recognize an evident dichotomy between two groups of clusters. Three of them comprise citizens that strongly identify with Europe as well as with their countries or even more, which think the EU membership is a good thing and that strongly agree with the founding principle of solidarity represented by the Cohesion Policy. Yet, there are differences among them that regard the trust in the EU institutions, such as the perception of effectiveness and corruption. *Confident Europeans* (Cluster 3 - 17% of citizens) perceive a low level of corruption in the EU, even in comparison to their national government, whereas they evaluate less positively the effectiveness of the EU in solving problems. By contrast, *Wary pro-Europe* (Cluster 4 - 15%) evaluate the action of the EU in solving problems quite effective, even more effective than the action of their own country, but they do not trust the EU institutions too much because they perceive a high level of corruption in the EU, equal or somewhat higher than in the national government. Awareness of Regional/Cohesion Policy is quite high in both groups. *Disappointed pro-Europe* (Cluster 1 - 27%) evaluate the EU Institutions quite negatively on both aspects. People have a higher chance to be not aware of any European policy than Cluster 4 or 3.

On the opposite side, three clusters include citizens that weakly identify with Europe, identify more strongly with their countries and evaluate EU membership less positively. However, they show differences, the same already detected within the first group, about the evaluation of effectiveness and corruption. *EU Deniers* (Cluster 2 - 20%) have the most negative attitude toward the EU. They also perceive that the EU is not much effective in solving problems of their region and less effective than the national government, and that corruption is widespread in EU institutions, as like as in national institution and even more. *Disaffected Europeans* (Cluster 5 - 11%) and *Wary Cons Europeans* (Cluster 6 – 10%) are less likely to consider the EU membership a bad thing than people in cluster 2 (they are equally divided). However, people in the former cluster evaluate negatively the effectiveness of the EU in solving problems in their region and positively the level of corruption in EU institutions and comparatively with national ones. By contrast, people in the latter cluster perceive higher levels of corruption but appreciate the capacity of EU institutions in solving problems, especially in comparison to national institutions. Nevertheless, the majority of the people in these clusters still agree in sustaining the poorest regions but a greater share of respondent do not agree with the policy compared to clusters in the first group.

4.2. Regional patterns of identification

As for individual clusters, we can obtain a global synthesis of the characteristics of latent classes identifying groups of regions from the profile Table 1. The first row shows the size of the classes at regional level (*prior probabilities*), whereas the other values are the response probabilities to every indicator's categories for the individuals living to each group of regions (see the note below Table 1).

Looking at these probabilities, Group 2 can be labelled "**High EU identification**" because it is the group of regions with a high level of identification with Europe and where people have a higher level of trust and appreciation for EU institutions. In comparison with the other groups, people have the highest probability of strongly identifying with Europe (0.62), and a high chance to consider the EU membership a good thing (probability 0.71). They consider EU institutions effective in solving problems with probability greater than 60%; moreover, there is a larger proportion of people that think the EU is more effective than the national government (probability about 0.3). On the contrary, the probability of perceiving a high level of corruption in the EU is the lowest. Most people agree with supporting the poorest regions (with probability 0.83). In this group, the awareness of EU policies is higher than the other.

The regions in Group 3 - "**Medium-high EU identification – Critics**" - are characterized by a relatively high proportion of people that strongly identify with Europe, as strongly as with their own country, and about 80% chance that approve the EU financial support of poorest regions. Moreover, the chance of responding that the EU membership is a good thing is the highest (probability 0.76). However, the perception of efficacy and corruption of EU institutions is not as good as in the regions of Group 2.

TABLE 1.
Profile table of regional groups: group size and group-specific marginal probabilities

	Group 1 *Lower EU identification*	**Group 2** *High EU identification*	**Group 3** *Medium-high EU identification Critics*	**Group 4** *Low EU Identification Sceptical*
Group Size	0.386	0.322	0.151	0.142
How strongly identify with Europe				
Not much strongly	0.195	0.119	0.130	0.179
Somewhat strongly	0.360	0.261	0.282	0.318
Strongly	0.445	0.620	0.588	0.504
Europe vs Country identification				
Less	0.349	0.221	0.241	0.304
Equal	0.569	0.666	0.658	0.605
More	0.081	0.113	0.101	0.092
Effectiveness in solving problems				
Not so Effective	0.619	0.381	0.577	0.625
Somewhat effective	0.303	0.449	0.335	0.299
Very effective	0.079	0.171	0.088	0.076
EU vs National effectiveness				
Less	0.256	0.168	0.249	0.259
Equal	0.608	0.534	0.598	0.610
More	0.136	0.298	0.152	0.131
Corruption in EU				
Low	0.107	0.161	0.111	0.119
Medium	0.374	0.431	0.381	0.383
High	0.519	0.409	0.508	0.498
EU vs National Corruption				
Less	0.188	0.358	0.170	0.233
Equal	0.636	0.517	0.657	0.597
More	0.175	0.125	0.174	0.170
Vote				
Neither	0.333	0.303	0.316	0.325
Once	0.161	0.167	0.160	0.159
Both times	0.486	0.509	0.504	0.496
(d/k-refused)	0.021	0.022	0.020	0.020
Support for Cohesion policy				
Agree	0.771	0.831	0.800	0.779
Disagree	0.216	0.157	0.187	0.208
d/k	0.013	0.012	0.013	0.013
EU membership				
Bad thing	0.444	0.291	0.238	0.563
Good Thing	0.556	0.710	0.762	0.437
Awareness of Cohesion policy				
None	0.266	0.123	0.224	0.140
Only local project	0.085	0.122	0.090	0.122
Cohesion/regional policies	0.649	0.755	0.686	0.738

People have 57% chance of answering that the EU is not effective in solving region's problems and a 25% probability of responding the EU is less effective than the national government, as well as a 51% chance of answering that corruption in EU institutions is high. Moreover, the probability that people do not know any EU financed policy is higher (0.22) than Group 2.

Group 1 and Group 4 can be both identified as composed by regions where people have a weaker level of identification with Europe, especially in comparison to identification with their country, and are quite critics toward the EU institutions. They have quite similar profile regarding many dimensions: people think that the EU is not very effective in solving problems of the region (with probability 0.62) and that corruption in EU institutions is widespread. Although the probability to agree with the EU policy of supporting the poorest region is high (77%), this value is lower than the one observed in Group 2 and Group 3. Possibly, Group 4 "**Low EU identification – Sceptical**" is characterized by a severer attitude of people toward EU membership of their countries: more than half of the people in regions of Group 4 consider the EU membership a bad thing, more than Group 1 (where the same probability is 0.44). Nevertheless, in Group 4 the chance of not being aware of any EU policy is 14% against 27% in Group 1 – labelled "**Lower EU identification**", - and a greater proportion of people know Cohesion/Regional policies financed by EU.

However, these profiles do not account for the composition of each group of regions by individual clusters, although regional classification reflects individual typologies to some extent, even if in this case differences are less marked. Looking at the relative size of individual clusters within a group of regions can reveal different regional structures of citizens' identification (Table 2).

Consistent with the previous analysis, Group 2 - **High EU identification** is composed for about 50% by *Confident Europeans* (Clusters 3) and *Wary pro-Europe* (Cluster 4), hence citizens with a high level of identification and a quite positive evaluation of EU institution on both dimensions. Group 3 - **Medium-high EU identification – Critics** is composed by 40% of individuals classified in Cluster 1 – *Disappointed pro-Europe* and with a smaller proportion by *EU Deniers* (Clusters 2) and *Wary pro-Europe* (Cluster 4). Group 1 - **Lower EU identification** and Group 4 - **Low EU Identification Sceptical** have quite similar profile since they are composed for the majority by cluster 1 - *Disappointed pro-Europe* and cluster 2 - *EU Deniers*, with a slightly higher proportion of *Disappointed pro-Europe* in Group 4. The main difference is the presence of a certain proportion of *Disaffected Europeans* (Cluster 5) in Group 1 and *Confident Europeans* (Cluster 3) in Group 4; we note the not trivial presence of *Disappointed pro-Europe* (Cluster 1) in each group, which is a cluster composed by people that strongly identify with Europe but that do not trust much the European institutions.

TABLE 2.
Cross-tabulation of cluster membership probabilities within regional groups

	Group 1 *Lower EU identification*	**Group 2** *High EU identification*	**Group 3** *Medium-high EU identification Critics*	**Group 4** *Low EU Identification Sceptical*	**Overall**
Group Size	0.386	0.322	0.151	0.142	
Clusters					
Disappointed pro- Europe (1)	**0.284**	**0.184**	**0.409**	**0.319**	0.273
EU Deniers (2)	**0.285**	0.106	**0.165**	**0.267**	0.197
Confident Europeans (3)	0.087	**0.290**	0.091	**0.165**	0.175
Wary pro-Europe (4)	0.108	**0.216**	**0.141**	0.088	0.150
Disaffected Europeans (5)	**0.154**	0.060	0.116	0.111	0.106
Wary Cons- Europe (6)	0.082	0.145	0.078	0.052	0.100

4.3. Mapping the level of identification with the EU across European regions

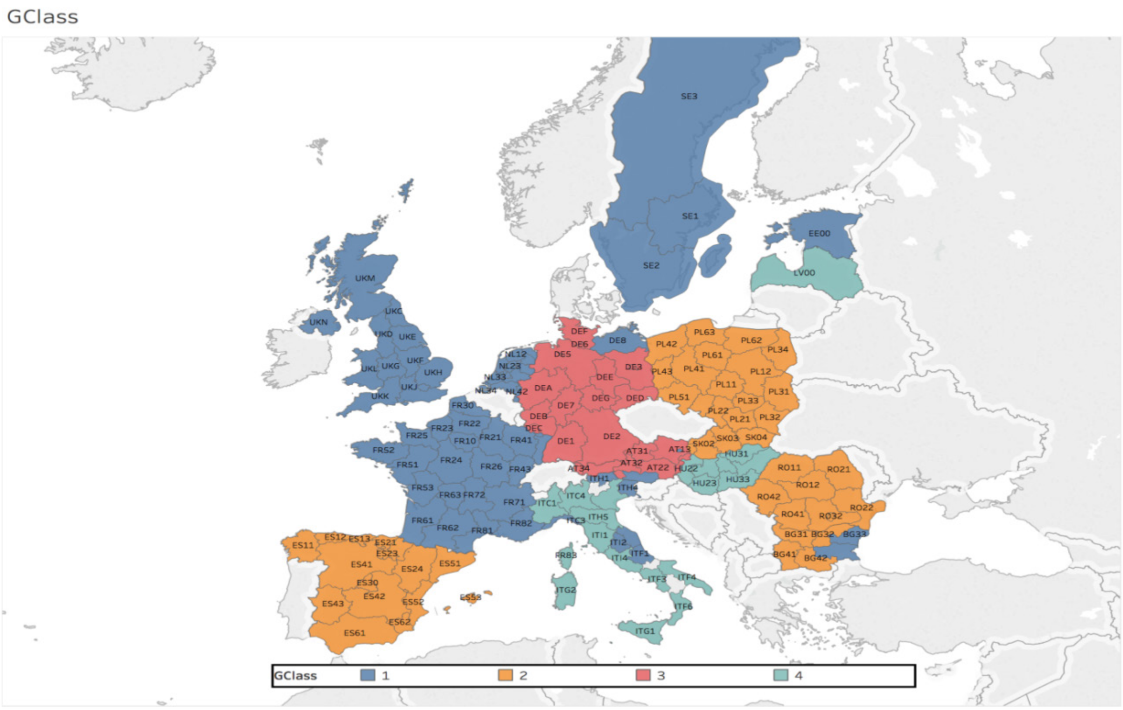
Classification of the regions across the four latent groups can be accomplished assigning each region to the group for which it has the highest posterior probability (Figure 1).

The largest group is Group 1 - **Lower EU identification** that comprises the regions in the northern countries of Europe: all the UK regions and the North Ireland, all the French regions, Netherland, Sweden and Estonia, as well as some regions from Italy. Regions in this group have a lower level of identification with Europe and to some extent consider not a good thing the EU membership, in particular, do not trust too much the EU for corruption. Group 4 - **Low EU identification – Sceptical**, includes most of the regions from Italy, Hungary and Slovakia, which have lower levels of identification as well but are most critics against the EU membership.

On the contrary, most of the regions in countries of Eastern Europe, except the regions from Hungary, are classified in Group 2 - **High EU identification**: people identify strongly with Europe, believe the membership of their country to the EU is a good thing, and trust EU institutions. It includes regions from Poland, from Romania, and most all regions from Bulgaria. All the Spanish regions belong to this group too.

Most of the regions from Germany and Austria are classified in Group 3 - **Medium-high EU identification – Critics**, which are characterized by a high level of identification with Europe, nevertheless they are critics about some aspects such as the effectiveness and corruption of European institutions.

FIGURE 1.
Regions classification in latent groups



Group 1 – Lower EU identification
Group 2 – High EU identification
Group 3 – Medium-high EU identification – Critics
Group 4 – Low EU identification – Sceptical

4.4. The effects of the context characteristics on regional patterns of identification

Group membership probabilities have been modelled to depend on regional characteristics (see section 3.1). Table 3 shows the group membership probabilities by specific values of the context covariates at the regional level. These are the conditional probabilities that a region with a specific range of a covariate belongs to each group at the regional level, which can be compared to the overall distribution reported in the first row (unconditional probabilities) to discover specific identification pattern by some characteristic.

The influence of the level of GDP on group-level membership probabilities is quite evident: regions with a higher level of GDP than the European average are overrepresented in Group 1 - *Lower EU identification* and Group 3 - *Medium-high EU identification – Critics*; by contrast, regions with a lower value of GDP than EU average are more likely to be classified in Group 2 - *High EU identification*. The regions with a level of GDP below 50-60% of the EU average are more likely classified in Group 4 - *Low EU identification – Sceptical*.

Regions with low levels of unemployment are over-represented in Group 3 - *Medium-high EU identification*, with a strong identification with Europe and EU but critics, and under-represented in Group 2 - *High EU identification*, with strong identification and trust in EU, and also in Group 4 - *Low EU identification – Sceptical*, with a weaker identification and sceptical about EU institution; in particular, regions with very high unemployment rate are more likely classified within Group 2. Group 1 - *Lower EU identification* (weaker identification) have instead a mixed composition with either low or medium-high unemployment regions, but regions with very high unemployment rate are under-represented in this group (on the contrary of Group 4).

Those regions receiving more financial funding from EU are most likely classified in Group 2 - *High EU identification* and Group 4 - *Low EU identification – Sceptical*, while regions that receive a lower amount of funding from the EU are over-represented in Group 1 - *Lower EU identification* and Group 3 - *Medium-high EU identification*. This situation reflects what happens in the case of GDP: richest regions are receiving less financial funding from EU hence the groups are characterized by an opposite effect of the two covariates.

The influence of absorption rate is not so clear cut: less efficient region in the implementation of Cohesion Policy are over-represented both in Group 2 - *High EU identification* and Group 4 - *Low EU identification – Sceptical*, with different identification and trust level, while most of the regions with medium-high values of the absorption rate are more likely classified in Group 1 - *Lower EU identification* and Group 3 - *Medium-high EU identification* (both critics toward EU about corruption and effectiveness but with different level of identification). However, in Group 2 - *High EU identification* are over-represented regions with a very high absorption rate as well.

Finally, regarding the level of institutional quality (EQI indicator) the emerging picture characterizes Group 1 - *Lower EU identification* and Group 3 - *Medium-high EU identification* as composed more likely by regions with a high level of institutional quality, while the regions with lower levels of the EQI index are more likely included in Group 2 - *High EU identification* and Group 4 - *Low EU identification – Sceptical*.

TABLE 3.
Regional group membership probabilities for specific ranges of contextual covariates

	Group 1 *Lower EU identification*	Group 2 *High EU identification*	Group 3 *Medium-high EU identification Critics*	Group 4 *Low EU Identification Sceptical*
Overall	0.386	0.322	0.151	0.142
GDP per capita (ratio to EU average)				
0-37	0.051	0.739	0.016	0.194
37-59	0.008	0.615	0.061	0.317
59-97	0.361	0.403	0.086	0.151
97-118	0.687	0.069	0.137	0.107
More than 118	0.515	0.003	0.418	0.064
Unemployment rate				
0-5.5	0.387	0.091	0.457	0.065
5.5-8	0.540	0.120	0.233	0.107
8-9.5	0.383	0.428	0.028	0.161
9.5-14	0.404	0.411	0.010	0.174
More than 14	0.103	0.677	0.000	0.220
Absorption rate				
0-0.5	0.198	0.451	0.033	0.318
0.5-0.6	0.421	0.259	0.104	0.216
0.6-0.65	0.448	0.309	0.183	0.060
0.65-0.78	0.433	0.225	0.267	0.076
More than 78	0.390	0.417	0.161	0.032
SF per capita				
0-108	0.461	0.171	0.316	0.052
108-215	0.679	0.116	0.130	0.075
215-935	0.371	0.350	0.131	0.148
935-2059	0.051	0.687	0.080	0.182
More than 2059	0.001	0.443	0.055	0.501
Quality of institutions (norm. index)				
0-36	0.226	0.537	0.020	0.216
36-42	0.147	0.474	0.039	0.340
42-56	0.164	0.664	0.034	0.138
56-66	0.549	0.175	0.188	0.088
More than 66	0.606	0.009	0.360	0.026

Note: The figures are the conditional probabilities $P(W = m | \boldsymbol{Z}_p^g = z)$ computed from the estimated model probabilities $P(W = m|\boldsymbol{Z}^g)$ (section 3.1) aggregating over the values of the other covariates (hence, independently from all the other covariates). The marginal probabilities $P(W = m)$ in the first row are computed from the estimated model probabilities aggregating over all the covariates.

5. Conclusions

In this paper, we have developed a novel probabilistic model (IdentEU) to analyse citizens' identification with the EU project focusing on those characteristics that allow us to profile different identification patterns across the European regions. Our analysis contributes to the state of the art by addressing three research questions:

i) To what extent do EU citizens identify with Europe and the EU project?

ii) Do European regions show different patterns and level of citizens'identification?

iii) Are the results driven by specific socio-economic variables?

Answering these research questions is policy timely and relevant, and we find some preliminary answers to support a more inclusive and resilient EU design. Citizens' patterns of identification (first question) evidence a clear dichotomy between two groups of clusters. Three clusters comprise citizens who strongly identify with Europe, as well or even more strongly than they identify with their country, positively evaluate the EU membership and support to the poorest regions. By contrast, citizens included in clusters in the second group identify less strongly with Europe (especially *EU Deniers*) and evaluate EU membership less positively. Yet, within both groups, we can recognize a different degree of trust in the EU institutions, and criticism and dissatisfaction toward the functioning and performance of the EU institutions, such as effectiveness and corruption dimensions.

At regional level (second question) our results mirror the identification patterns at the individual level and the same dimensions, i.e. national vs EU identification, evaluation of the EU membership and its effectiveness, level of citizens' awareness of the existence of the Cohesion Policy and agreement on its solidarity values, trust in EU institutions and the perceived level of corruption, characterize the identification of groups at regional level too. About half of the regions (47%) belongs to the two groups with a stronger identification with Europe, while the other half (53%) belongs to the groups with weaker identification with Europe. The geographical distribution of the regional clusters shows that the UK regions and North Ireland, all the French regions, the Netherlands, Sweden and Estonia as well as most of the Italian and Hungarian regions are characterized by lower levels of identification and critical views of EU institutions. On the other hand, the majority of the German and Austrian regions strongly identify with the EU, while several Eastern European regions (with the addition of all Spanish regions) show the highest level of identification with Europe, trust the EU and consider the EU more effective and less corrupt than their national governments.

Last, our study points to the existence of results that are driven to some extent by socio-economic characteristics of the regions (third question). The wealthiest regions, which also receive less funding from the EU, are mostly classified in groups with a lower level of identification and trust and are the most critical toward the EU regarding efficacy and corruption. Moreover, these regions also show a higher level of institutional quality and citizens evaluate their institutions better than EU institutions and they do not perceive any benefits deriving from EU membership. In this sense, our results are consistent with the theory of "compensation", which states that trust in the national institutions sets a sort of "national threshold" that citizens compare to the EU institutions (Muñoz *et al.*, 2011). The authors claim that living in a country with highly trusted and well-performing institutions is negatively associated with trust in European institutions: living in a country with high average trust in the national parliament decreases trust in the European Parliament despite the positive relationship between individual trust in national and in EU Parliaments. By contrast, they find that living in a corrupted country fosters trust in the European Parliament. Peter (2007) showed that even if most of the citizens do not perform an explicit comparison with the "national threshold", this might influence their level of trust in EU institutions, also through a negative categorization of the European Union in the public discourse.

Our findings are also in line with results by Bauhr and Charron (2019). They found that perception of domestic corruption increases support to redistribution within-EU but only in contexts where institutional quality is low and public services are inefficient, while it has no such effect in contexts where institutional quality is high[6]. Similarly, we find that more impoverished European regions show a higher level of identification and trust as well as a positive perception of EU institutions. These are also the regions that reveal a lower level of institutional quality and, at the same time, those receiving more funding from the EU. Thus, the Cohesion Policy might have had some role in fostering citizens' identification and appreciation toward EU in this latter group of regions, which received more funding and where the interventions funded by Cohesion Policy were more visible, even if its implementation was less efficient (as measured by a lower absorption rate). However, this issue needs further investigation: a first attempt to study the role played by Cohesion Policy on support and identification for the EU can be found in Aiello *et al.* (2019).

Although the regional context is important, it is not the exclusive determinant of the intensity of identification. Indeed, regions with similar characteristics along some dimensions may have different levels and patterns of identification, while regions with different characteristics may have similar patterns of identification. Northern Italian regions are quite a peculiar case because regardless of the variety of the social and economic contexts they live in, their citizens share with the Southern regions in Italy a common mistrust towards institutions, both national and European, and they consider Italy's adhesion to the EU a bad thing for their country. These results are consistent with the latest tendencies that emerged in the EU, such as the growing Euro-skepticism that boomed with the Brexit referendum in the UK and was remarked by the results of the recent elections in France, Hungary, and Italy.

In conclusion, the influencing variables that mostly affect citizens and regions' identification with the European project are those currently driving the discussion on the challenges for reforming the EU, such as trust in the EU institutions, the effectiveness of the EU Cohesion Policy and spending, and the level of corruption in EU institutions. In the ongoing debate on the need to reform EU institutions to increase their transparency and accountability to the EU citizens, our results provide a precious snapshot of EU citizens and regions' perception of the European project, and their primary sources of discontent.

Thus, the results obtained through our model confirm the need to partially redirect the Cohesion Policy from the placed-based approach to the improvement of citizens' wellbeing, and the need to foster the integration of political interventions. Also, the role of the regional socio-economic context on the pattern of identification is not preeminent. In other words, the influence of other factors on the formation of identification with the EU project and the perceptions of the Cohesion Policy, such as the national political discourse, the media representation of European issues, and the communication strategy of the Cohesion Policy, should be considered as well.

It is also clear that the identification of Europeans towards their institutions will be better understood if we jointly consider the different institutional levels (regional, national and European), which interact with each other because citizens' identification with EU is strongly influenced by trust at the different institutional levels.

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[6] They use data from the PERCEIVE survey

Data Availability Statement

The research data underlying this manuscript are available in AMS Acta Institutional Research Repository (doi.org/10. 6092/unibo/amsacta/6226) (Calia, 2019).

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APPENDIX

TABLE A1.
Question wording and variables

Variable	Description (question from Perceive Survey)	Values
Awareness of EU policies	Q1: Have you ever heard about the following EU policies? EU Cohesion Policy; EU Regional Policy; EU Structural Funds; any EU funded project in your region or area	Recoded: 0 None of these 1 Only local project 2 At least one among EU CP, EU RP, EU SF
Identification with Europe (Q9_3)	Q9: On a 0-10 scale, with '0' being 'I don't identify at all' and '10' being "I identify very strongly", how strongly you identify yourself with the following: Q9_1: Your region; Q9_2: Your country; Q9_3: Europe	Recoded: 1 Not much (0-3) 2 Somewhat strongly (4-6) 3 Strongly (7-10)
Identification with Europe vs Country	Comparing Q9_3 to Q9_1 after recoding	1 Less 2 Equal 3 More
Effectiveness of EU (Q5_1)	Q5: How effective do you think the following institutions will be at dealing with the biggest problem in your region? Q5_1:The EU; Q5_2: National governing institutions; Q5_3: Regional/local Institutions	1 Not very effective 2 Somewhat effective 3 Very effective
Effectiveness of EU vs National governing institutions	Comparing Q5_1 to Q5_2	1 Less 2 Equal 3 More
Evaluation of EU membership	Q8. In general, do you think that (YOUR COUNTRY'S) EU membership is a good thing, a bad thing, neither good nor bad?	Recoded: 1 Good 0 Bad / Neither good or bad/ Not sure

TABLE A1. (*continued*)
Question wording and variables

Variable	Description	Values
Corruption in EU (Q16_1)	Q16. On a 0-10 scale, with '0' being that 'there is no corruption' and '10' being that corruption is widespread, how would you rate: Q16_1: The European Union; Q16_2: The national government; Q16_3: The region/local government?	Recoded: 1 Low (0-3) 2 Medium (4-6) 3 High (7-10)
Corruption in EU vs National government	Comparing Q16_1 to Q16_2	1 Less 2 Equal 3 More
Corruption in EU vs regional/local government	Comparing Q16_1 to Q16_3	1 Less 2 Equal 3 More
Vote in the EU elections	Q7. Have you voted in either of the last two EU parliamentary elections?	0 Neither 1 Once 2 Both 3 Don't know/RF
Support for Cohesion Policy	Q20: In your opinion, the EU should continue this policy, where wealthier countries contribute more, and poorer EU regions receive more funding? (Strongly agree; agree; disagree; strongly disagree; Don't know/ Refuse)	Recoded: 1 Agree; 2 Disagree; 3 D/K
GDP per capita	GDP per inhabitant in 2014 as percentage of EU average	Numerical value
Unemployment rate	Unemployment rate for population 20-64 years old in 2014	Numerical value
Absorption rate	Absorption rate of SF expenditures: ratio of SF expenditures up to 2013 to the SF allocation in the 2007-2013 period	Numerical value (0-1)
Structural Fund Expenditures, per-capita	Total expenditures over the years 2007-13 divided by the average population in a region in the years 2007-13	Numerical value (euros)
Quality of institution	European Index of Institutional Quality in 2013 (Normalized)	Numerical value (0-100)

TABLE A2.
Response percentage by country: Identification with Europe, Effectiveness of EU, Corruption in EU

Country	Identification with Europe			Effectiveness of EU			Corruption in EU		
	Not strongly	*Somewhat Strongly*	*Strongly*	*Not so effective*	*Somewhat effective*	*Very Effective*	*Low*	*Medium*	*High*
France	19.3	37.6	43.1	66.7	31.4	1.9	8.6	41.3	50.1
Bulgaria	18.1	27.6	54.3	31.7	42.1	26.2	23.3	41.4	35.3
Slovakia	7.1	19.1	73.8	31.9	48.3	19.8	4.9	34.8	60.3
Hungary	12.5	29.6	58.0	71.8	26.4	1.8	11.6	34.5	53.9
Romania	21.3	32.8	45.9	9.7	43.5	46.8	29.0	28.2	42.8
Italy	19.7	37.8	42.6	76.0	19.3	4.7	5.6	36.0	58.4
Netherland	19.9	37.8	42.3	45.6	44.5	9.9	10.3	43.7	46.0
Sweden	15.1	36.2	48.7	64.9	32.9	2.2	15.6	39.4	44.9
UK	22.7	26.1	51.1	61.6	26.1	12.2	18.1	40.6	41.3
Latvija	20.6	28.6	50.8	57.2	38.0	4.9	6.4	43.4	50.2
Poland	7.9	23.8	68.4	48.8	44.2	7.0	16.3	45.6	38.1
Spain	12.3	35.0	52.7	28.6	54.2	17.2	8.5	33.6	58.0
Germany	11.9	28.5	59.7	59.9	30.9	9.2	17.6	46.2	36.2
Estonia	17.5	42.2	40.3	50.7	43.2	6.2	16.9	47.0	36.1
Austria	15.6	22.4	62.0	65.1	25.9	9.0	17.6	42.4	40.1
Total	**15.4**	**30.7**	**53.9**	**52.3**	**36.2**	**11.6**	**13.3**	**39.4**	**47.3**

TABLE A3.
Response percentages by country: Awareness of Cohesion Policy, Evaluation of EU membership, Support to Cohesion Policy

Country	Awareness			EU membership		Support CP		
	None	*Only local project*	*CP-RP-SF*	*Bad thing*	*Good Thing*	*Agree*	*Not agree*	*D/K*
France	28.6	8.2	63.2	42.8	57.2	72.0	27.7	0.3
Bulgaria	7.8	30.9	61.3	43.8	56.2	78.2	18.5	3.3
Slovakia	1.3	13.7	85.0	34.2	65.8	91.1	8.8	0.1
Hungary	7.3	23.6	69.1	45.5	54.5	84.6	15.4	0.0
Romania	14.7	23.2	62.1	27.6	72.4	88.8	11.2	0.0
Italy	14.0	13.3	72.7	66.1	33.9	75.0	24.8	0.3
Netherland	53.9	4.5	41.6	53.2	46.9	66.6	32.7	0.8
Sweden	23.1	8.9	68.1	49.6	50.4	77.8	20.2	2.0
UK	47.0	7.0	46.0	38.0	62.0	73.3	26.0	0.8
Latvija	10.0	11.8	78.2	49.0	51.0	75.1	22.0	3.0
Poland	8.9	9.1	82.0	25.5	74.5	85.4	9.8	4.9
Spain	17.8	6.7	75.5	31.1	68.9	88.6	11.3	0.1
Germany	22.8	6.2	71.0	20.9	79.1	78.9	19.3	1.9
Estonia	13.3	13.6	73.1	38.8	61.2	73.2	20.1	6.8
Austria	18.6	4.6	76.8	31.3	68.7	72.6	27.2	0.2
Total	**19.0**	**11.3**	**69.7**	**38.4**	**61.7**	**79.9**	**18.8**	**1.4**

TABLE A4.
Profile table of citizens' clusters: cluster size and cluster-specific marginal probabilities

	Cluster 1 *Disappointed pro- Europe*	Cluster 2 *EU Deniers*	Cluster 3 *Confident Europeans*	Cluster 4 *Wary pro-Europe*	Cluster 5 *Disaffected Europeans*	Cluster 6 *Wary Cons- Europe*
Cluster Size	0.2727	0.1972	0.1752	0.1495	0.1056	0.0999
Indicators						
How strongly identify with Europe						
Not much strongly	0	0.4612	0.0362	0	0.2704	0.2857
Somewhat	0.0995	0.5387	0.0681	0.0726	0.7293	0.7142
Strongly	0.9005	0	0.8957	0.9273	0.0003	0.0001
Europe vs Country identification						
Less	0	0.6849	0	0	0.6716	0.7187
Equal	0.8595	0.2942	0.8271	0.8557	0.3193	0.2573
More	0.1405	0.0209	0.1729	0.1443	0.0091	0.0241
Effectiveness in solving problems						
Not so Effective	0.7413	0.9007	0.3498	0.0001	0.7966	0.0001
Somewhat effective	0.2587	0.0957	0.4656	0.6501	0.2033	0.7156
Very effective	0	0.0036	0.1845	0.3498	0	0.2843
EU vs National effectiveness						
Less	0.3386	0.3069	0.1694	0.0071	0.3654	0.0085
Equal	0.6614	0.6931	0.5138	0.4274	0.6346	0.4143
More	0	0	0.3168	0.5655	0	0.5772
Corruption in EU						
Low	0.082	0.0006	0.3341	0.0846	0.2302	0.1165
Medium	0.3462	0.1368	0.6659	0.2663	0.7697	0.3861
High	0.5718	0.8625	0	0.6491	0.0001	0.4974
EU vs National Corruption						
Less	0.0001	0	0.9998	0	0.5253	0.255
Equal	0.7792	0.729	0.0002	0.8458	0.4226	0.6135
More	0.2207	0.2709	0	0.1542	0.0522	0.1315
						Vote
Neither	0.2869	0.3916	0.2533	0.2642	0.3904	0.3718
Once	0.1481	0.1433	0.168	0.1755	0.1924	0.1797
Both times	0.5468	0.4456	0.5561	0.5423	0.3945	0.4181
(d/k-refused)	0.0182	0.0195	0.0227	0.018	0.0226	0.0304
Support for Cohesion policy						
Agree	0.8291	0.6238	0.9022	0.8845	0.7556	0.8007
Disagree	0.1576	0.3642	0.087	0.1061	0.2271	0.1832
d/k	0.0133	0.012	0.0108	0.0094	0.0173	0.0162
EU membership						
Bad thing	0.2751	0.7464	0.1743	0.1727	0.4786	0.4718
Good Thing	0.7249	0.2536	0.8257	0.8273	0.5214	0.5282
Awareness of Cohesion policy						
None	0.1819	0.2664	0.1019	0.1141	0.2578	0.2082
only local project	0.0863	0.1053	0.1291	0.1023	0.1078	0.1236
Cohesion/regional policies	0.7318	0.6283	0.769	0.7836	0.6344	0.6683

Articles

When Country Matters More than Europe: What Implications for the Future of the EU?

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Abstract:

This paper studies the determinants of the imbalance between country and European identity. While the two sentiments are positively correlated, recent empirical evidence showed the emergence, in the last years, of an increasing imbalance in favour of the identification with individuals' country of residence. In the political arena, this phenomenon is accompanied by the increasing support to nationalisms and Eurosceptic parties almost everywhere in the EU. It is therefore interesting to understand what are the individual and contextual factors associated to this identity imbalance. The assumption tested in this paper is that the unequal distribution (among individuals and regions) of the benefits from EU integration is the main determinant of the emerging antagonism between European and national identity. Empirical results support this hypothesis. Individuals with lower education and income, and those living in the lagging-behind regions of the EU are more likely than the others to identify more with their own country than with Europe.

Keywords: European identity; national identity; European regions.
JEL classification: R10; E61; O10.

Cuando el país importa más que Europa: ¿qué implicaciones para el futuro de la UE?

Resumen:

Este artículo estudia los determinantes del desequilibrio entre la identidad de país y la europea. Si bien los dos sentimientos están positivamente correlacionados, la evidencia empírica reciente mostró la aparición, en los últimos años, un desequilibrio creciente a favor de la identificación con el país de residencia de las personas. En el ámbito político, este fenómeno se acompaña del creciente apoyo a los nacionalismos y los partidos euroescépticos en casi toda la UE. Por lo tanto, es interesante entender cuáles son los factores individuales y contextuales asociados a este desequilibrio de identidad. El supuesto que se contrasta en este documento es que la distribución desigual (entre individuos y regiones) de los beneficios de la integración de la UE es el principal determinante del antagonismo emergente entre la identidad europea y nacional. Los resultados empíricos respaldan esta hipótesis. Las personas con educación e ingresos más bajos, y aquellos que viven en las regiones rezagadas de la UE tienen más probabilidades que los demás de identificarse más con su propio país que con Europa.

Palabras clave: identidad europea; identidad nacional; Regiones europeas.
Clasificación JEL: R10; E61; O10.

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1. Introduction

The attention towards the determinants of European identity largely increased in the last years. The electoral success of Eurosceptic parties in many countries, culminated with the (mostly unpredicted) outcome of the Brexit referendum, revealed that little is known on the mechanisms leading to the citizens' identification with Europe. Moreover, in the political arena Eurosceptic positions are usually matched with nationalist ideologies, reinforcing the antagonism between national and European identity (Halikiopoulou et al., 2012).

Previous studies, in fact, claimed that individuals typically do not identify with one single community but, rather, multiple social identities coexist (Risse, 2004). This implies, for instance, that the same individual can identify (or not) with her country of origin and, at the same time, with Europe. While there is empirical evidence of a positive correlation between national and European identity (Bruter, 2003), the study of the determinants of imbalances in favour of the individuals' country of origin is much more scarce, even if it is important for the understanding of the increasing support to Eurosceptic parties (Kneuer, 2019).

The literature mostly focused on the factors promoting European identity, which is however a conceptually different issue from the analysis of the divergence between identification with Europe and one's own country. The former line of research does not provide any information on the way in which the elements reinforcing European identity may impact on the citizens' identification with their country. Studying the factors favouring a divergence between national and European identity, instead, sheds light on the conditions under which the simultaneous reinforcement of the two forms of identification is not achieved, creating a fertile soil for the success of nationalist and Eurosceptic movements. Stemming from these considerations, the present paper studies the extent to which a stronger identification with one's own country rather than Europe is associated with some individual characteristics and attributes of the region of residence. In general, the definition of these characteristics is based on the assumption that the unequal distribution (among individuals and regions) of the benefits from EU integration is the main determinant of the emerging antagonism between European and national identity.

The paper is structured as follows. The next section provides the conceptual framework and a review of the relevant literature, highlighting the innovative aspects of the study. The third section discusses the data and the methods employed in the empirical analysis. The fourth section presents the findings of the paper, while conclusions and policy implications follow in the last section.

2. Multiple identities and the implications for European integration

Identity is defined in the economic literature as the one's own sense of self, derived from perceived membership in social groups (Chen and Li, 2009). Many works proved the crucial role of identity in affecting individuals' behaviour (Akerlof and Kranton, 2000; Shayo, 2009). More precisely, these studies showed how group identity is likely to promote both cooperation with other group members and unselfish conduct (Tsouri, 2017), which are not traditionally explained by mainstream economic theory. Identity, as a consequence, is beneficial whenever it fosters efficient behaviours instead of opportunism and free riding (Goette et al., 2006).

Social groups are typically determined on the basis of similarities of different kind, from shared cultural behaviours to relational linkages to cognitive factors, as for instance economic specialization.[1] Whenever these similarities generate an identification with the community, then cooperative behaviour is

[1] These similarities can be defined also by individuals' perceptions of imagined communities (Anderson, 1991).

fostered, so that private and public interests coincide. Put differently, under these conditions individuals' actions, aimed at maximizing one's own welfare, do not just increase personal utility but, simultaneously, they generate a benefit for the whole community (Capello, 2019).

Applying the same reasoning to Europe makes clear that the building of a European identity is an important step towards the achievement of economic and social integration. By identifying with Europe, citizens perceive supranational interests and goals as consistent with their own objectives and, as a consequence, they are more likely to support cooperation and collaboration among countries. It is not by chance that the evolution of the European Union has been accompanied by the creation of symbols, like the EU flag and anthem, able to reinforce the citizens' sense of belonging and identification with Europe.

There is, however, a further element of complexity in the study of identity. Individuals, in fact, hold multiple identities, which means that they generally identify with different communities (Herrmann and Brewer, 2004). For instance, they can identify with their country of origin but, at the same time, with Europe.[2]

Several works focused on the relationship between national and European identity. These studies can be classified in two categories. The first stream of literature claimed that the two identities are in contrast with each other, being based on very different mechanisms of formation (Smith, 1992). In particular, they suggest that national identity depends on deeply rooted country-specific values, history and culture, elements that are not cohesive (and even potentially divisive) at the supranational level. The second perspective on this issue, instead, assumed that the identification with Europe, even if based on different elements of cohesiveness compared with national identity, and mostly related to the civic and social sphere, can fully coexist with the latter (Habermas, 2004).

It is important to note that for both perspectives, the study of the relationship between European and national identity is conceptually very different from the analysis of the identification with Europe. This because the factors promoting European identity may have a contrasting effect, either positive or negative, on the identification with one's own country, and the occurrence of identity imbalances is extremely relevant for the development of socioeconomic, institutional and political supranational constructs, such as the EU.

Empirical evidence, mostly based on survey data, tends to confirm the "coexistence" approach, since it generally did not document any trade-off between national and European identity (Risse, 2005).[3] Rather, broad evidence showed that national and European identities are positively correlated (Bruter, 2003). The evolution over time of citizens' identification, however, suggests that this relationship weakened in the last years, and in particular after the economic recession. Polyakova and Fligstein (2016) documented the raise, from 2005 on, of the share of EU citizens holding exclusive national identity, together with a decrease of those holding both national and European identity.

While the identification with Europe followed a highly diversified (and generally decreasing) trend across countries from the Nineties on (Anderson and Hecht, 2018), what is new in the current scenario is the emergence of a strong antagonism between European and national identities. It seems that, after a period of coexistence of European and national identity, some divisive elements emerged, reinforcing nationalism in almost all EU countries. An interesting interpretation of this phenomenon is provided by Cinpoes (2008) who claims that, while national identity is not a barrier for the development of European identity, nationalism is. In other words, the symbols of national identity can either promote supranational identification, when prominence is given to elements of cohesion with other countries, or impede it, when

[2] Citizens may also identify with other territorial or administrative constructs, like the region or the city of residence. Without denying the occurrence of these other forms of identification, the present paper focuses just on the national and European identity.
[3] For a taxonomy of the possible relationships between multiple identities see Risse (2002).

the divisive aspects are emphasized. Such mechanism is mirrored by the political propaganda of Eurosceptic parties, where symbols of national identity (Arzheimer, 2015) and history (Petrović, 2019) are broadly used in opposition to European values.[4] This antagonism was amplified by the increasing support to Eurosceptic movements, with evident implications for the future of EU integration: in the same period studied by Polyakova and Fligstein (2016), the share of seats in the EU Parliament occupied by Eurosceptic and nationalist parties raised from 2.8 per cent in 2007 to 23.3 per cent in 2019.[5]

Since the values and symbols generating a common identity, both at the national and supranational level, change only in the long period, through processes of creation of a collective imaginary, why do we observe situations where divisive elements arise, overcoming the cohesive ones? What are those conditions under which national identity evolves into nationalism, leading to an imbalance between the identification with country and Europe?

Very few studies focused on these research questions. The goal of the present paper is to shed light on this issue, identifying the determinants of the imbalance between individuals' identification with their country and Europe. More precisely, the gap between national and European identity will be studied as a function of several characteristics, associated to both the individuals and the context conditions of their regions of residence. The next section presents with more details the empirical approach.

3. The imbalance between European and national identity: assumptions and empirical measurements

3.1. The determinants of the identity imbalance

The empirical analysis presented in this paper will associate episodes of divergence between individuals' national and European identity with some elements that are expected to play a role in promoting this imbalance. In general, previous literature suggests that the emergence of nationalisms occurred with higher intensity in those places and within those social groups that benefited less from EU integration. The goal of the present analysis is therefore to test this hypothesis, recognizing that disparities and lack of opportunities may manifest themselves in different forms. As a consequence, the potential determinants of the identity imbalance are classified in four categories.

The first set of elements refers to some individual characteristics. People of different kind, in terms of age, education, occupation, are differently exposed to European symbols and to the advantages from EU integration. For instance, EU students' exchange programmes exposed the younger generation to cultural experiences abroad, emphasising similarity between different parts of Europe, rather than difference (Cinpoes, 2008). Education and income are other examples of individual characteristics assumed to be strongly associated to the identity imbalance, since less educated and poorer individuals tend to be more sensitive to the rhetoric of nationalist movements (Becker et al., 2017).

The second group of factors concern the level of economic development achieved by the local community compared with the EU average. Many works claimed that the resurgence of nationalism is mainly due to the asymmetries in the level of economic development within the EU. Individuals living in regions characterized by the lowest levels of GDP, highest unemployment rates and, in general, lack of opportunities, perceive EU integration as a process that did not produce any benefit for their own community. From this perspective, embracing nationalist ideologies is a form of "revenge of places that

[4] At the same time, the rejection of symbols of European identity is part of the rhetoric of Eurosceptic movements. The choice of some British members of the EU Parliament to turn backs on Europe anthem at the 2019 opening session is an example of this practice.

[5] As Eurosceptic and nationalist political groups at the EU Parliament we consider IND/DEM (Independence/Democracy) in 2007 and ECR (European Conservatives and Reformists), EFDD (Europe of Freedom and Direct Democracy) and ENF (Europe of Nations and Freedom) in 2019.

don't matter" (Rodríguez-Pose, 2018), i.e. the way in which individuals from lagging-behind regions manifest their discontent with the EU.

The third element is related to the response of the different communities to the economic recession of 2008. The decision of the EU to enforce policies of austerity after 2008 has been interpreted by several studies (Polyakova and Fligstein, 2016; Börzel and Risse, 2018) as one of the most important factors associated to the resurgence of nationalism. According to this perspective, citizens in the countries most affected by the crisis perceived these policies as the proof that EU institutions preferred to secure financial stability at the expenses of people's wellbeing. This undermined the identification with Europe, in favour of a stronger attachment to the country.

Finally, the last factor expected to have played a role in the divergence between European and national identity is represented by the direct intervention of the EU in the social and economic life of local communities. Recently, this issue received great attention, witnessed by the funding of two Horizon 2020 projects[6] (Capello and Perucca, 2018; Aiello et al., 2019), aimed at understanding the relationship between Cohesion Policy implementation and citizens' identification with Europe. This stream of research generally pointed out a positive association between EU funding and European identity, subject however to the mediation of several factors, namely the level of awareness and satisfaction with the actions undertaken (Capello and Perucca, 2019), the implementation of effective strategies of information, communication and the involvement of the local population (López-Bazo & Royuela, 2019; Smętkowski & Dąbrowski, 2019). Coherently with this evidence, in the context of this paper Cohesion Policy is expected to decrease the identity gap in favour of national over European identity.

The next section presents the empirical analysis, discussing the data and methods used to measure the gap between the identification with one's own country and Europe, and the abovementioned elements expected to influence this imbalance.

3.2. National vs European identity: measurements and empirical approach

Measuring identity is a complex task, being an abstract and subjective construct. Most of the empirical studies on this topic make use of survey data where a sample of respondents is asked to express, over a predetermined scale, her level of identification with the region, country or other supranational constructs (Kohli, 2000). Among the available sources of data, Eurobarometer studies play a prominent role in supplying evidence on citizens' identification with both their country and Europe. Eurobarometer studies are survey analyses conducted periodically on behalf of the EU Commission since 1973. Among the several recurrent topics covered by the surveys, a question concerns the level of identification of the respondents with their country and with Europe.

More specifically, the question wording used in Eurobarometer studies is the following one "Please tell me how attached you feel to Europe/ your country". Respondents have to choose their answer among four options: "very attached", "fairly attached", "not very attached", "not at all attached".

Table 1 reports some descriptive evidence on the share of people associated to the different degrees of identification. Data in Table 1 come from different Eurobarometer waves conducted in the whole EU28 between 2014 and 2017.[7]

[6] The two projects are COHESIFY (www.cohesify.eu) and PERCEIVE (https://www.perceiveproject.eu/).

[7] Details on the Eurobarometer waves used here can be found in the references (European Commission 2018, 2017a, 2017b, 2017c, 2016, 2014).

TABLE 1.
European and national identity: percentage of respondents for different levels of identification (EU28, 2014-17)

Attachment to:		Europe: Not at all attached	Europe: Not very attached	Europe: Fairly attached	Europe: Very attached	Europe: Total
Country	Not at all attached	0.58 %	0.18 %	0.20 %	0.10 %	**1.06 %**
	Not very attached	0.84 %	2.37 %	1.49 %	0.32 %	**5.01 %**
	Fairly attached	3.08 %	10.76 %	16.82 %	1.50 %	**32.15 %**
	Very attached	5.94 %	13.88 %	26.99 %	14.97 %	**61.78 %**
	Total	**10.43 %**	**27.19 %**	**45.49 %**	**16.89 %**	**100.00 %**

Note: total number of respondents = 124,803.
Source: Eurobarometer (survey issues are reported in the reference list).

The table shows that, in general, attachment to the country of origin is higher than the identification with Europe. Only the 6.07 per cent of the respondents claimed to be either "not at all attached" or "not very attached" to the country of origin, whilst the same share reaches the 37.62 per cent when considering people either "not at all" or "not very" attached to Europe. Nevertheless, the two sentiments are positively associated: 60.28 respondents out of 100 are simultaneously very or fairly attached to the country of residence and to Europe.

This positive association, however, is matched by an imbalance of identification in favour of the country over Europe. In fact, as shown in the grey section of Table 1, the 33.66 per cent of respondents stated to be either very or fairly attached to their country and, at the same time, either not very attached or not at all attached to Europe. Notice that the opposite situation, i.e. high attachment to Europe and low for the nation, concerns a minority of respondents (2.11 per cent).

The classification of statements provided by Eurobarometer surveys poses a concern about what can be defined as an imbalance between national and European identity. Clearly, the focus of the present analysis is on those cases where individuals' identification with their own country is higher than their identification with Europe. This definition covers, however, several different combinations of the levels of national and European identity. For instance, it could be restricted to those very attached to the country and not at all attached to Europe or, alternatively, it may include also those who reported to be not very attached to Europe. The focus on just one of these alternative measurements would represent a subjective and *ad hoc* choice. In order to avoid this risk, the imbalance between national and European identity is defined by three distinct dummy variables, corresponding to different intensities of the individuals' preference for their country:

- weak preference for country: dummy variable equal to one if the individual is "very"/ "fairly" attached to country and "not very"/ "not at all" attached to Europe (33.66 per cent of the respondents);
- intermediate preference for country: dummy variable equal to one if the individual is "very" attached to country and "not very"/ "not at all" attached to Europe (19.82 per cent of the respondents);
- strong preference for country: dummy variable equal to one if the individual is "very" attached to country and "not at all" attached to Europe (5.94 per cent of the respondents).

The goal of the empirical analysis is to study the occurrence of identity imbalances in favour of one's own country over Europe as a function of the different characteristics discussed in the previous section:

$$Preference\ for\ country_{i,r,t} = \alpha\,(individual\ characteristics)_i + \beta(per\ capita\ GDP)_r + \gamma(after\ crisis\ change\ in\ regional\ GDP)_r + \tau(per\ capita\ Cohesion\ Policy\ funds)_r + \lambda(other\ macro\ controls)_{r,c} + \kappa_t + \mu_c + \delta_r + \varepsilon_{i,r,t} \quad (1)$$

where i stands for the individual, r and c respectively for the NUTS2 and country of residence and t for the year in which the survey study was conducted. Equation (1) will be estimated separately for each of the measures of the imbalance between national and European identity, i.e. weak, intermediate and strong preference for one's own country. The comparison of the results will allow understanding what are the factors influencing different intensities of the identity gap.

Data come from five Eurobarometer survey studies conducted between 2014 and 2017, those used for the descriptive analysis provided in Table 1. The set of independent variables assumed to be potential determinants of the identity imbalance have been conceptually discussed in section 3.1, and their empirical measurement is reported in Table 2.

The first category of factors expected to play a role on the gap between national and European identity is represented by the individual characteristics of the respondents. Eurobarometer studies disclose information on several of these aspects, like gender, age and occupation. As discussed by previous literature, those with higher education and income are likely to benefit more than the others from the advantages of European integration and, as a consequence, they are expected to have a strong preference for their country over Europe. In order to capture all these potential effects, the individual-level regressors in equation (1) comprehend all the variables made available by Eurobarometer studies (Table 2). It is worth noting that information on individual income is not collected in the survey studies. In order to alleviate the effect of the omission of this variable, equation (1) includes a dummy variable equal to one if the respondent owns the apartment where she is living, and equal to zero otherwise.

The second element assumed to influence the identity gap is represented by the economic performance of the region, which.is empirically measured by the per capita GDP in the NUST2 region of residence of the respondent.

The third factor expected to be associated to the imbalance between country and European identification is the reaction of the regional economies to the economic recession that hit EU countries from 2008 on. Equation (1) includes the change in regional GDP between 2008 and the year in which the survey was conducted. As a further control, the change in regional GDP in the last three years before the interview was also added to the list of independent variables, in order to test whether the preference for one's own country is more sensitive either to long-term economic changes or to short-term, recent economic fluctuations.

The fourth element included in the analysis is represented by the implementation of Cohesion Policy. More in details, two aspects of EU regional policy are expected to influence citizens' identification with their country and Europe: the intensity of funding and the outcome of policy implementation. As far as the former aspect is concerned, equation (1) includes the per capita funds invested by Cohesion Policy in the region of residence of the respondent in the year before the one covered by the survey studies. Apart from the amount of funds received, however, EU regions significantly differ in their capability to absorb and effectively invest these resources. Unfortunately, empirical evidence on the outcome of Cohesion Policy is extremely scarce and poorly comparable across regions and countries. Nevertheless, research focused on the impact of Cohesion Policy documented how the effectiveness of these actions is strongly associated of the institutional quality of the regional policy implementation settings (Rodríguez-Pose and Garcilazo, 2015). Based on this finding, the index of European Quality of Government Index (Charron et al., 2015) is included among the regressors, jointly with its interaction with the amount of funding. The rationale for this choice is that the effect of EU funding on the identity imbalance is expected to be mediated by the quality of local institutions, which is in turn associated to the effectiveness of Cohesion Policy.

TABLE 2.
List of variables included in equation (1)

Variable name	Description	Source
	Dependent variable	
Preference for country	*Weak preference*: dummy equal to 1 if the respondent is "very"/ "fairly" attached to country and "not very"/ "not at all" attached to Europe. *Intermediate preference*: dummy equal to 1 if the respondent is "very" attached to country and "not very"/ "not at all" attached to Europe. *Strong preference*: dummy equal to 1 if the respondent is "very" attached to country and "not at all" attached to Europe.	Eurobarometer
	Independent variables: individual characteristics	
Age	Age (in number of years) of the respondent.	Eurobarometer
Gender	Dummy equal to 1 if the respondent is a female and equal to 0 otherwise.	Eurobarometer
Occupation	Set of dummy variables for the occupation of the respondent: self-employed, manager, other white collar, manual worker, housekeeper, retired, student, unemployed.	Eurobarometer
Marital status	Set of dummy variables for the marital status of the respondent: single, separated/divorced, widower.	Eurobarometer
Apartment ownership	Dummy equal to 1 if the respondent is the owner of the apartment she/he is living in and equal to 0 otherwise.	Eurobarometer
Number of kids in household	Number of kids below 18 years old in the household.	Eurobarometer
	Independent variables: regional GDP	
Per capita GDP	Per capita GDP in the NUTS2 region of residence of the respondent.	Eurostat
	Independent variables: recovery after the crisis	
Change in GDP (2008 to t)	Change of regional GDP from 2008 to the year of the interview.	Eurostat
Change in GDP (t-3 to t)	Change of regional GDP in the last three years before the interview.	Eurostat
	Independent variables: Cohesion Policy funding	
Per capita funds	Amount of per capita funds invested within Cohesion Policy programmes in the year before the interview.	EU Commission
	Independent variables: regional characteristics	
Institutional quality	European Quality of Government Index (EQI).	Charron et al. (2015)
Living in the country capital	Dummy equal to 1 if the region of residence of the respondent is the country capital and equal to 0 otherwise.	Eurostat
Living in a rural setting	Dummy equal to 1 if the respondent reported to live in a rural setting and equal to 0 otherwise.	Eurobarometer
Support to Eurosceptic parties	Share of preferences for Eurosceptic parties in the 2014 EU Parliament elections. Eurosceptic parties are those defined by Treib (2014).	EU Commission
	Other controls	
Year	Set of time dummies for the year (2014-17) in which the survey study was conducted.	Eurobarometer

Finally, the last category of independent variables comprehends some characteristics of the region where the respondent is living. These include the degree of urbanization of the region of residence and the support to Eurosceptic parties in the country of residence. The degree of urbanization is measured by two proxies. The first one is a dummy equal to one if the region of the respondent is the capital of the country and equal to zero elsewhere. Living in the capital region is expected to reduce the imbalance between national and European identity, because these large urban areas provide high accessibility to foreign countries, they generally host country-representatives of EU institutions and they are characterized by a higher degree of multiculturalism. The second variable for urbanization is instead defined at the individual level, and it is a dummy equal to one if the respondent stated to live in a rural setting and equal to zero otherwise. Living in rural settings (embedded in an urbanized region or not) is assumed to be associated with a stronger preference for one's own country over Europe, given the lower access to the benefits of EU integration. The overall support to Eurosceptic parties in the country of residence of the respondents is captured by the share of votes that anti-EU movements received at the 2014 EU Parliament elections.[8] The inclusion of this variable is based on the assumption that in countries where Eurosceptic parties are more prominent, individuals are more likely to be exposed to the nationalist rhetoric and, as a consequence, to perceive national and European identity as conflicting constructs. Finally, a set of year-dummy variables (κ_t in equation (1)) is included in order to account for any variation of the relationship between country and European identity changing over time.

Equation (1) is estimated by the means of a linear multilevel probability model, consistently with the literature dealing with survey data of this kind (Lenzi and Perucca, 2019).[9] This technique allows treating the hierarchical structure of the data and to correct standard errors from the potential correlation given by unobserved characteristics related to the area in which respondents are living. This hierarchical structure is assumed to be defined at two levels, the country (μ_c in equation (1)) and the region of residence (δ_r in equation (1)). The next section presents and discusses the empirical findings of the study.[10]

4. The determinants of the imbalance between country and European identity: empirical results

Table 3 shows the results of the empirical estimation of equation (1). The same model has been estimated using as dependent variable each of the three different levels of identity imbalance (weak, intermediate and strong, see the rows on top of Table 3), according to the definition provided in section 3.2 (Table 2). In order to test for potential multicollinearity issues, the regressors are introduced separately in the specification of equation (1). First, individual characteristics are included (model [a], Table 3). Model [b] controls also for the characteristics of the regions of residence of the respondents. Model [c] tests for the statistical significance of the interaction between institutional quality and the amount of EU regional funding allocated to the region. Finally, model [d] includes the change in GDP in the three years before the interview.

The analysis of individual characteristics points out some results that are strongly significant and stable over different levels of the identity imbalance (weak, intermediate and strong). Age is positively associated to the probability of preferring the country of residence over Europe, so as the number of kids in the household. The most interesting result, however, concerns those variables expected to mirror, in a more or less direct way, the individual opportunities provided by EU integration. In the case of education,

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[8] The classification is the one provided by Treib (2014), and it includes both soft and hard Eurosceptic parties.

[9] Alternatively, a multilevel model for categorical dependent variable such as logit or probit could have been applied. The results from such are an approach are fully consistent with those presented here, and available from the author upon request.

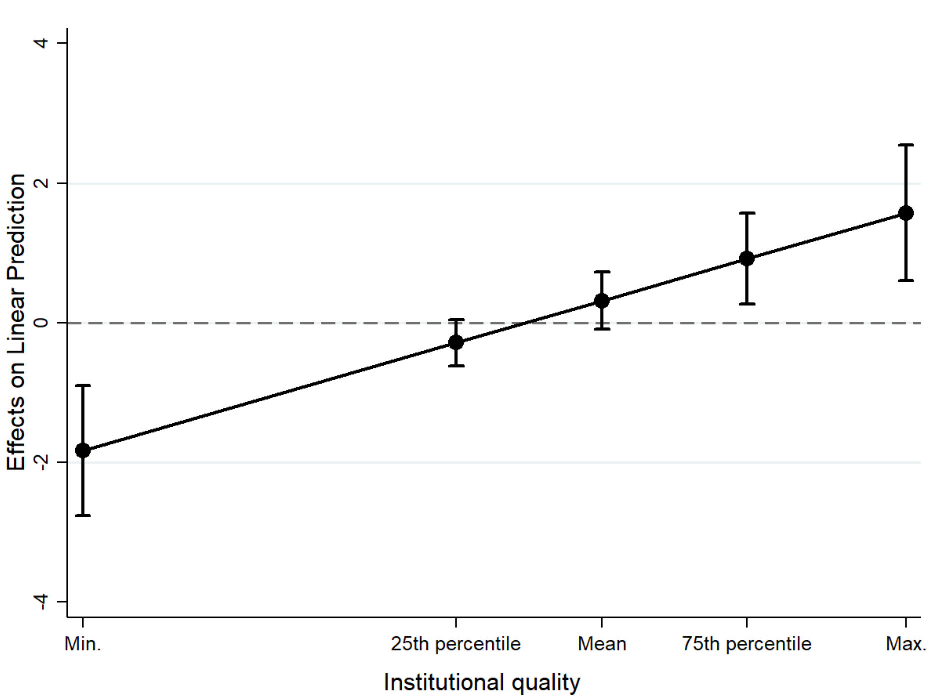
[10] Given the structure of the data set, other statistical techniques could have been applied. For instance, being attachment defined on a four-step scale, multinomial logit models could have been used. Results from alternative approaches to the research question posed in this study provide results consistent with those discussed in the next section. Evidence on this is available from the author upon request.

for instance, graduated interviewees are less likely to prefer their own country over Europe than the others. Similar evidence concerns the occupation. Taking students as the reference category, all the other occupations are associated with a significantly higher attachment to the country than to Europe, and this result is consistent for all the three specifications of the dependent variable. The openness to multiculturalism of the younger generations, but also the mobility programmes provided by the EU to students (King and Ruiz-Gelices, 2003) justifies this finding. However, it is worth noting that the identity imbalance is particularly high for those occupations associated to the lower wages, i.e. unemployed people, manual workers and housekeepers. Finally, being the owner of the apartment of residence also decreases the probability of preferring one's own country over Europe. Taken together, these results suggest that lower individual income and education are strongly linked to the preference for one's own country over Europe.

A similar result is found when we move from the individual characteristic to the regional ones. The higher the level of per capita GDP, the lower the identity gap in favour of the country of residence. This finding is particularly significant for the weak and intermediate levels of the identity imbalance, while it becomes more nuanced in the case of the strong preference for one's own country.

While the association between the identity gap and the current level of per capita GDP is statistically significant, the same does not apply when considering the change in GDP from 2008 to the time of the interview. Living in those regions that suffered more from the effects of the economic recession is not significantly related to the occurrence of the identity imbalance. This result contradicts the assumption that the effects of the crisis, and the EU policies adopted to face it, had a direct effect on the citizens' identification with their own country and Europe. Interestingly, however, the same does not apply if we consider, instead on the long-term change in regional GDP, its short run evolution in the three years before the interview. Results of model [d] in Table 3 show that the recent performance of the regional economy is negatively associated to the identity gap. In other words, the higher the GDP growth in the last three years, the lower the preference for one's own country over Europe. This finding suggest that individuals' identification is mostly related to the overall economic situation (i.e. per capita GDP) and its recent, short-term change, while it is less sensitive to the long-period fluctuations.

FIGURE 1.
Slope of per capita EU regional funds as a function of the institutional quality of the region



The amount of Cohesion Policy funding is included in the model specification [b]. Its association with the identity imbalance is generally non-significant. This implies that the intensity of funds received does not influence the preference for one's own country over Europe. Nevertheless, the interaction with the quality of the regional institutions shows (model [c]) that this average effect is differentiated for local settings of different kind. This is graphically represented in Figure 1.[11]

The figure reports on the horizontal axis the standardized value of the institutional quality of the region of residence, while the vertical one shows the coefficient associated to the per capita Cohesion Policy funds. For regions with a mean value of institutional quality, the coefficient for the funding intensity is not statistically significant, as shown in the figure by the confidence interval of the coefficient, including both positive and negative values. In correspondence of lower levels of institutional quality, however, the coefficient associated to the amount of funds becomes negative and statistically significant. This implies that in regions with poor institutions, increasing the EU support is associated to a decrease of the identity imbalance. The opposite holds in correspondence of high quality institutions. In this case (Figure 1) the coefficient associated to the funding becomes positive and statistically significant, implying that an increase in funding is linked to a stronger preference for the country of residence.

This finding is not consistent with the *ex-ante* assumptions discussed in section 3.1. The main conjecture of the paper is that the impossibility of fully benefitting from the advantages of EU integration leads to a stronger identity imbalance in favour of one's own country. Therefore, based on this reasoning, it is straightforward to expect the effective implementation of Cohesion Policy to be associated with a weaker identity imbalance. Empirical evidence reported in Figure 1, however, suggests that this is not true. This may be explained by the fact that, considering regions receiving Cohesion Policy funding, citizens living in contexts with low quality institutions perceive European integration as a remedy for the inefficiency of local administrations. On the other hand, in regions characterized by a good governance the opposite mechanism holds, and European integration may be perceived as a potential threaten for the good functioning of local institutions.

Finally, considering the other controls, living in the region hosting the country capital is decreasing the imbalance between country and European identity. This is consistent with the expectations, related to the higher multiculturalism characterizing these large urban centres. A similar message is conveyed by the dummy variable, defined at the individual level, equal to one for those living in a rural setting. A rural location, whatever the degree of the urbanization of the region, is associated with a higher imbalance in favour of the national identity over the European one. As expected, the support to Eurosceptic parties in the country of residence is also associated to a stronger preference for the country.

When comparing the results across the different levels of preference for the country over Europe, Table 3 shows that, in general, both individual and regional characteristics maintain the same sign. Statistical significance, however, tends to decrease, in particular for the variables associated to the regional context of residence. This suggests that disparities in GDP and in the recent regional performance explain mostly the occurrence of weak and intermediate preferences for the country. The most intense one, on the other hand, probably are due to cultural and social factors that are not fully captured by the variables included in equation (1).[12]

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[11] More in details, Figure 1 shows the interaction effect of model [c] when the dependent variable is the intermediate preference for country. Notice that this result is consistent when using alternative statistical approaches, like multilevel probit or logit analysis. Results are available from the author upon request.

[12] The output in Table 3 reports also the value of the ICC for the two-level (country and NUTS2) nested models. Taken together, NUTS2 and country random effects account for a share of the total residual variance of about 1.5 per cent. This amount is relatively low, but its statistical significance justifies the use of multilevel models.

TABLE 3.
The determinants of the imbalance between country and European identity

	Dependent variable: preference for country over Europe (different levels)											
	Weak preference				Intermediate preference				Strong preference			
	[a]	[b]	[c]	[d]	[a]	[b]	[c]	[d]	[a]	[b]	[c]	[d]
Gender (female)	0.014***	0.014***	0.014***	0.014***	0.013***	0.014***	0.014***	0.013***	0.002	0.002	0.002	0.002
	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Age	0.001***	0.001***	0.001***	0.001***	0.002***	0.002***	0.002***	0.002***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education: graduated	-0.106***	-0.105***	-0.105***	-0.105***	-0.072***	-0.072***	-0.072***	-0.072***	-0.034***	-0.034***	-0.034***	-0.034***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
Occupation categories												
Self-employed	0.061***	0.061***	0.061***	0.060***	0.030***	0.030***	0.030***	0.030***	0.016***	0.016***	0.016***	0.016***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.007)	(0.007)	(0.007)	(0.007)	(0.004)	(0.004)	(0.004)	(0.004)
Manager	0.041***	0.041***	0.041***	0.041***	0.022***	0.022***	0.022***	0.022***	0.016***	0.016***	0.016***	0.016***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)	(0.007)	(0.004)	(0.004)	(0.004)	(0.004)
Other white collar	0.078***	0.078***	0.078***	0.078***	0.040***	0.040***	0.040***	0.040***	0.012***	0.012***	0.012***	0.012***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)	(0.007)	(0.004)	(0.004)	(0.004)	(0.004)
Manual worker	0.117***	0.116***	0.116***	0.116***	0.062***	0.062***	0.062***	0.062***	0.023***	0.023***	0.023***	0.023***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.004)	(0.004)	(0.004)	(0.004)
Unemployed	0.147***	0.146***	0.146***	0.146***	0.073***	0.072***	0.072***	0.072***	0.037***	0.037***	0.037***	0.037***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)	(0.007)	(0.004)	(0.004)	(0.004)	(0.004)
Housekeeper	0.138***	0.137***	0.137***	0.137***	0.082***	0.082***	0.082***	0.082***	0.042***	0.042***	0.042***	0.042***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)	(0.005)	(0.005)	(0.005)	(0.005)
Retired	0.106***	0.105***	0.105***	0.105***	0.067***	0.067***	0.067***	0.067***	0.029***	0.029***	0.029***	0.029***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.007)	(0.007)	(0.007)	(0.007)	(0.004)	(0.004)	(0.004)	(0.004)
Apartment ownership	-0.012***	-0.011***	-0.011***	-0.011***	-0.006**	-0.005**	-0.005**	-0.005**	-0.005***	-0.005***	-0.005***	-0.005***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Marital status												
Single	-0.004	-0.004	-0.004	-0.004	-0.005	-0.005	-0.005	-0.005	0.003	0.003	0.003	0.003
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)
Separated/divorced	0.021***	0.021***	0.021***	0.021***	0.005	0.005	0.005	0.005	0.005**	0.005*	0.005*	0.005*
	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)
Widower	0.055***	0.055***	0.055***	0.055***	0.054***	0.053***	0.053***	0.053***	0.033***	0.033***	0.033***	0.033***

	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)
Number of kids in the household	0.004*	0.004*	0.004*	0.004*	0.004**	0.004**	0.004**	0.004**	0.003**	0.003**	0.003**	0.003**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Residence in a rural setting	0.033***	0.031***	0.031***	0.032***	0.021***	0.021***	0.021***	0.021***	0.012***	0.012***	0.012***	0.012***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
Residence in the country capital		-0.036***	-0.036***	-0.037***		-0.011*	-0.011*	-0.012**		-0.006*	-0.006*	-0.006*
		(0.007)	(0.007)	(0.007)		(0.006)	(0.006)	(0.006)		(0.003)	(0.003)	(0.003)
Per capita GDP		-0.028***	-0.028***	-0.019*		-0.021**	-0.020**	-0.013		-0.008*	-0.008*	-0.005
		(0.011)	(0.011)	(0.010)		(0.008)	(0.008)	(0.008)		(0.005)	(0.005)	(0.004)
Change in GDP (2008 to t)		-0.029	-0.024			-0.040	-0.033			0.002	0.004	
		(0.033)	(0.034)			(0.028)	(0.028)			(0.016)	(0.016)	
Institutional quality		-0.022*	-0.026**	-0.029**		-0.019*	-0.025**	-0.026***		-0.010*	-0.012**	-0.012**
		(0.013)	(0.013)	(0.013)		(0.010)	(0.010)	(0.010)		(0.005)	(0.005)	(0.005)
Per capita EU regional funds		-0.657***	-0.318	-0.262		-0.214	0.260	0.316		-0.062	0.078	0.093
		(0.196)	(0.249)	(0.250)		(0.165)	(0.209)	(0.210)		(0.099)	(0.126)	(0.126)
Instit. Quality*per capita EU funds			0.512**	0.518**			0.716***	0.726***			0.213*	0.210*
			(0.233)	(0.232)			(0.195)	(0.195)			(0.117)	(0.117)
Support to Eurosceptic parties		0.004***	0.004***	0.004***		0.003**	0.003**	0.003**		0.001**	0.001**	0.001**
		(0.001)	(0.001)	(0.001)		(0.001)	(0.001)	(0.001)		(0.001)	(0.001)	(0.001)
Change in GDP (t-3 to t)				-0.104***				-0.105***				-0.027*
				(0.033)				(0.028)				(0.016)
Year 2015	-0.022***	-0.026***	-0.025***	-0.025***	0.005	0.004	0.006	0.005	-0.000	-0.001	-0.000	-0.000
	(0.006)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.003)	(0.003)	(0.003)	(0.003)
Year 2016	-0.030***	-0.036***	-0.035***	-0.034***	-0.013**	-0.012**	-0.010	-0.010*	-0.010***	-0.011***	-0.011***	-0.009***
	(0.006)	(0.007)	(0.007)	(0.007)	(0.005)	(0.006)	(0.006)	(0.006)	(0.003)	(0.004)	(0.004)	(0.003)
Year 2017	-0.056***	-0.064***	-0.063***	-0.061***	-0.025***	-0.024***	-0.021***	-0.021***	-0.016***	-0.017***	-0.016***	-0.015***
	(0.006)	(0.008)	(0.008)	(0.007)	(0.005)	(0.007)	(0.007)	(0.006)	(0.003)	(0.004)	(0.004)	(0.004)
Constant	0.234***	0.218***	0.208***	0.294***	0.073***	0.070	0.056	0.133***	0.004	-0.022	-0.025	0.009
	(0.023)	(0.052)	(0.052)	(0.048)	(0.021)	(0.046)	(0.046)	(0.043)	(0.010)	(0.025)	(0.025)	(0.023)
ICC (Country)	0.010	0.006	0.006	0.006	0.009	0.007	0.007	0.007	0.002	0.001	0.001	0.001
	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)	(0.000)	(0.000)	(0.000)
ICC (NUTS2)	0.005	0.005	0.005	0.005	0.003	0.003	0.003	0.003	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	109,176	109,177	109,178	109,179	109,176	109,176	109,176	109,176	109,176	109,176	109,176	109,176

Standard errors in parentheses (*** p<0.01, ** p<0.05, * p<0.1). Reference categories: student (occupation), married (marital status), 2014 (year).

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5. Conclusions

This paper discussed the determinants of the imbalance between citizens' identification with their own country and Europe. The issue is relevant, given the increasing support to nationalist and Eurosceptic parties occurred in the last decade and the poor evidence documenting it.

The empirical results presented in the previous section convey relevant policy implications.

First of all, the preference for one's own country is strongly associated to measures of wealth disparity, both at the individual and regional level. People with lower education and income are more likely to consider national and European identities as contrasting. The same holds for those living in regions with low per capita GDP. This suggests that citizens perceive the EU objective of territorial cohesion and redistribution of the benefits from economic integration as still not achieved. The asymmetries, within and across regions, in the opportunities provided by being part of a supranational community foster the identity imbalance.

This consideration is strictly linked to the EU regional policy, which is the main instrument of the EU aimed at promoting cohesion and reducing disparities. The results presented above showed that, consistently with other studies (Capello and Perucca, 2019), European identity and its association with the national one is not directly influenced just by the amount of resources invested. Rather, the use of the funds and the characteristics of the local contexts are likely to mediate this effect. The quality of the local institutions is one of these characteristics. Nevertheless, institutional quality does not weaken the association between funding and the preference for one's own country, as it could have been expected but, instead, it reinforces it. This result, in contradiction with the ex-ante assumptions formulated in section 3.1, poses an issue on the relationship between policy effectiveness and identity. While a broad literature demonstrated that regions with high institutional quality are those most effective in implementing Cohesion Policy, the findings presented in the previous section suggest that in these regions the identity imbalance in favour of the country over Europe is stronger than elsewhere. This result requires further research in order to understand whether the simultaneous achievement of policy effectiveness and the reduction of the identity gap may be achieved.

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Articles

The use of social media in EU policy communication and implications for the emergence of a European public sphere

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Abstract:

Cohesion policy is the European Union's (EU) main investment policy and seeks to strengthen economic, social and territorial cohesion. While accomplishments in this regard are constantly measured, European citizens are not always aware of the policy's impact and the role the EU plays therein. This is especially relevant as the communication of EU policies is central to the emergence of a European public sphere, an acknowledged condition for European integration. In this paper, we aim at advancing research in this regard through the analysis of cohesion policy communication on the social media channels of ten Local Managing Authorities (LMAs) responsible for managing and communicating structural funds at the local level. By building on a bottom-up construction of shared meaning structures through semi-automatic analysis techniques, we make the following three observations: first, social media communication is indicative of 'horizontal Europeanization'; second, Europeanization occurs both in the form of the spontaneous amalgamation of shared discontent expressed by citizens and the institutionalization of top-down EU communication measures adopted by LMAs; and third, a cluster of topics articulated internationally and showcasing a negative attitude towards the EU funding scheme suggests that, counter-intuitively, Euroscepticism seems to facilitate the emergence of a European public sphere.

Keywords: Cohesion policy; European Public Sphere; Topic Modeling; Social Media; Euroscepticism.
JEL classification: R58; O19; Z18.

El uso de las redes sociales en la comunicación política de la UE y las implicaciones para el surgimiento de una esfera pública europea

Resumen:

La política de cohesión es la principal política de inversión de la Unión Europea (UE) y busca fortalecer la cohesión económica, social y territorial entre las regiones europeas. Aunque los logros en este sentido se miden constantemente, los ciudadanos europeos no siempre son conscientes del impacto de la política y del papel que desempeña en ella la UE. Esto es especialmente relevante ya que la comunicación de las políticas de la UE es fundamental para el surgimiento de una esfera de comunicación pública europea, una

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condición reconocida para la integración europea. En este artículo, nuestro objetivo es avanzar en la investigación en este respecto a través del análisis de la comunicación de la política de cohesión en los canales de redes sociales de diez Autoridades Administrativas Locales (LMA en inglés) responsables de administrar y comunicar los proyectos financiados a través de estos fondos estructurales a nivel local. En este artículo utilizamos técnicas de análisis semiautomáticos del texto para reconstruir la estructura de significados que constituye las comunicaciones de las LMA en las redes sociales, y llegamos a los siguientes tres resultados: primero, la comunicación en las redes sociales es indicativa de "europeización horizontal"; segundo, la europeización ocurre tanto en la forma de la combinación espontánea del descontento compartido expresado por los ciudadanos, como en la institucionalización de las formas de comunicación originadas centralmente en la UE y adoptada localmente por las LMA; y tercero, encontramos varios temas articulados internacionalmente y que muestran una actitud negativa hacia el esquema de financiación de la UE. Este resultado sugiere que, al contrario de lo que podría parecer, el euroescepticismo parece facilitar el surgimiento de una esfera pública europea.

Palabras clave: Política de cohesión; esfera pública europea; Topic Modeling; Medios de comunicación social; Euroescepticismo.
Clasificación JEL: R58; O19; Z18.

1. Introduction

Cohesion policy is the European Union (EU)'s main investment policy – setting aside EUR 347 billion in the 2007-2013 programming period (European Commission, 2010) – and seeks to strengthen economic, social and territorial cohesion. Tailored to reduce inequalities between regions through funding projects, it is major tool for local business and economic development (Bauhr & Charron, 2019). While accomplishments in this regard are constantly measured and documented, European citizens are not always aware of the impact that the policy has on their territories or the role the EU plays therein. With a view to the low levels of identification of EU citizens with the EU (European Commission, Standard Eurobarometer 90.4, 2018), effort has been made by the latter to improve communicative actions and set in place communication strategies conveying cohesion policy at the local level. This is largely done by Local Managing Authorities (LMAs), the institutions responsible for the efficient management, implementation and communication of the operational programs and operating – depending on the respective national legislative framework – at the national or regional level and either as private or public body. Despite the empirical relevance of cohesion policy and increased efforts dedicated to the communication of the policy, little research is devoted to and little is known about how its meaning is socially and linguistically constructed. This is particularly relevant as institutional organizations are increasingly confronted with the challenge of using new social media to target several groups of European citizens.

Conceptually, this issue pairs well with the recent rise in attention paid to communication matters in both European studies (e.g. Gaušis, 2017; Lev-On & Steinfeld, 2015) and institutional organization theory (e.g. Cornelissen et al., 2015). Previous research has focused on the strategic importance of new communication channels (e.g. Hofmann et al., 2013), or the effect that certain frames in public debates might exert on citizens' political behavior such as voting (e.g. DiGrazia et al., 2013; Usherwood & Wright, 2017). Still, little is known about the role of broadcast and social media in "not only transmitting or carrying but also shaping institutional logics and frames" (Cornelissen et al., 2015: 11; see also Triga & Vadratsikas, 2018). This gap is especially relevant in the case of European studies because the shaping of social knowledge – i.e. the social construction of policy – is to be understood as central to the emergence and content of the so-called European public sphere, an acknowledged condition to foster European integration. The European public sphere as a concept refers to the same issues being debated in different European national contexts with reference to similar meaning structures (Risse, 2009). While its importance has been recognized, research so far has mostly criticized its lack or fragmentation (Risse, 2003), rather than measured a European public sphere (and more so, the framing of issues within).

Therefore, in this work, we aim at advancing research on the European public sphere through a social media analysis which specifically builds on a bottom-up construction of shared meaning structures. Our approach builds on the idea of vocabulary structure (Loewenstein et al., 2012) which allows a coherent implementation of topic modeling (Blei et al., 2003; DiMaggio et al., 2013; Mohr & Bogdanov, 2013) as tool for modeling meaning. Due to the formalism of the implemented method, the proposed approach allows for the aggregation and comparative analysis of distinct (i.e. international inter-organizational) evidences, a fundamental element in further advancing studies on the European public sphere.

Empirically, we focus on the communication of EU cohesion policy and analyze the content of the Facebook pages of ten LMAs communicating the policy locally. In particular, these ten LMAs comprise our six national cases, in which we collected and analyzed posts and comments in six languages, and further compared the national cases in order to inquire the possible existence of common topics, which highlight common themes in the different local cases.

Our results show that formal semi-automatic ways of modeling social media conversations are informative regarding the content and structure of social meanings (i.e. which sort of topics there are and how semantically similar they are to each other). Also, we show that by using this approach we can map international similarities and areas of meanings (i.e. clusters of topics). In particular, we conclude by highlighting three findings: first, 'horizontal Europeanization' of discourse emerges on social media. Second, we find two different kinds of Europeanization: on the one hand, the emergence of a public sphere is the spontaneous result of shared discontent, which occurs when citizens comment on LMAs' posts; on the other hand, horizontal links may be the outcome of institutionalized communication procedures that result from the top-down dissemination of communication guidelines and the like. Third, and finally, the emergence of a cluster of topics articulated internationally and conveying a negative attitude towards the EU funding scheme suggests that, counter-intuitively, Euroscepticism seems to facilitate the building of a European public sphere. This finding brings about a connection between research on the emergence of a European public sphere and neo-institutional literature that addresses fields as arenas of power dependencies and strategic interactions where actors' politics shape institutional settings (Fiss & Zajac, 2004; Henisz & Zelner, 2005; Ingram & Clay, 2000; Schneiberg & Bartley, 2001). In particular, the emergence of a European issue field (Hoffman, 1999; Meyer & Höllerer, 2010) may enact struggles in which actors pursue 'politics of signification' over the framing of reality (Benford & Snow, 2000) and the meaning to be assigned to the contested issues (Meyer & Höllerer, 2010; Seo & Creed, 2002). The idea of 'politics of signification', more specifically, refers to the fact that struggles over the media produce representations of reality that give events particular meaning, more than simply reflecting a reality 'out there' (Hall, 1982). From this perspective, while the creation of a European public sphere may contribute to the building of a European identity, it may also contribute to the coalescence of dispersed discontent. On the other hand, the fragmentation of the European public sphere may avoid the coalescence of the malcontent disseminated in European regions. Additionally, we discuss the implication of our methodology for further research on European public spheres and institutional communication. In particular, we focus on the interpretive possibilities offered by some features of the analytical approach such as: a) the degree of internationality of the elicited topics, b) the active/passive (i.e. comment/post) proportions of communication and c) the sentiment connected to posts and comments.

The paper is structured as follows: first we review our theoretical background regarding the European public sphere and media frames. Then, we present the data collected and the methods used for analysis. We then move to findings, before we conclude with a discussion and conclusion.

2. Theoretical background: European public sphere and media frames

Practice-oriented literature generally recommends that European public institutions 'get out of the ivory tower of the EU' and use new, and in particular, social media by emphasizing the benefits thereof, namely: moving to where the citizens are and accelerating the process of interaction and engagement by means of receiving valuable feedback. Academic literature has predominantly explored social media from a political communication-perspective, focusing on the use of social media by European institutions (e.g. Gaušis, 2017), national representatives of EU institutions or national and sub-national political figures and institutions. This use of social media has been studied from different viewpoints, broadly distinguishable between content (studied mostly through properties and topics of a post) and citizen participation (through the means of sentiment analysis along with the frequency or amount of citizens' reactions) (for a similar, yet more defined categorisation, see Bryer, 2013).

While the practical importance of social media as a strategic communication channel is largely acknowledged (witnessed also in the academic interest in content and citizen participation), less is known about how communication through social media contributes to the social construction of European policy, integration and identity. We understand this construction to somewhat coincide with the Europeanization of national discourse or, in other words, with the emergence of a European public sphere. As Risse (2009: 150) emphasizes, "the emergence of a transnational public sphere is a social construction par excellence" and "the ability to communicate meaningfully across borders depends crucially on the extent to which the same issues are debated at the same time with similar frames of reference or meaning structures".

This public sphere can then be understood along three dimensions, as described by Koopmans and Erbe (2004; see also Koopmans & Stratham, 2010): first, and following an understanding of the EU as supranational institution, a Europeanized public debate would imply a supranational European public sphere in which European-level institutions and European-wide mass media interact with one another. Second, a Europeanized public debate might follow 'vertical Europeanization', in which communication interlinks the European and national level. Third, Europeanization might follow 'horizontal Europeanization' with communication linkages between different member states. Europeanization in this latter regard might, then, not entail direct reference to European actors or European themes, but the increased attention towards public debates in other member states.

Another important issue in this regard concerns the way in which European issues penetrate national public opinions. In this regard, Peter and De Vreese (2004) have performed a cross-national comparative content analysis looking at the coverage of EU politics in five member states' television news. In the majority of countries, EU politics and EU officials were only marginally represented. However, in the cases in which the EU was covered, EU politics were more prominently presented when compared to other political news. This could essentially be traced back to three factors, namely the prominence in countries with higher levels of public satisfaction with democracy, in public broadcasting news programs, and during periods around EU summits. The findings suggest that Europeanization of television news coverage is rather 'illusion than reality'. In a similar manner, Adam (2007) concludes that empirical research emphasizes three points: first, Europe and with it European actors enter national media in those issue fields in which competencies are at the European level. Second, and in line with Peter and De Vreese (2004), European issues gain visibility during summit meetings or political crises. And third, European issues and actors are more visible in quality newspapers and public broadcasting news than in tabloid press and private channels. Adam (2007) further showcases considerable differences in issue salience and actor prominence between and within countries. Hence, besides mere definition problems of a Europeanized public sphere, public spheres tend to be fragmented at the national level as well.

More recent studies on the European public sphere have highlighted the temporal dimension of the debates: for a European public sphere to exist it is not only important to have the same issues debated in different contexts, but also "at the same time and under similar aspects of relevance" (Kanter, 2015: 87). This issue is particularly relevant when dealing with social media, as they are not limited by geographical boundaries, thus permitting frames to spread transnationally (Ruzza & Pejovic, 2019). One particularly relevant example is the rise of right-wing populist parties in Europe and the US, who adopted similar discursive shifts in different countries and massively used social media to spread populist messages (Wodak and Krzyżanowski, 2017).

De Vreese (2007) further summarizes the current research on public spheres in the following: a) a first 'utopian' strand of research that focuses on the necessity and prerequisite for a 'truly' European public sphere, b) a second 'elitist' research stream that focuses on specific cases in which a European public sphere has come to exist, and c) a third 'realist' stream that centers on the indicators and extent to which Europeanization in the national public spheres can be identified. While we point the reader to that contribution for a more detailed description of the three strands of research, we want to follow up on one of the avenues that the author points out to further advance research. That is the issue of measuring the European public sphere: "one inhibiting factor stemming from previous research is the incompatibility and lack of comparability across studies. Key features of a communicative European space involve a classification of topics, actors, degree of cross-references, and the framing of issues [...] the notion of framing should be central in future assessments of Europeanization of media content and the public sphere. The underlying question is not only whether issues are addressed simultaneously, but also how these are discussed" (De Vreese 2007: 13).

We identify three main limitations to the current feasibility of this proposal: first, while a series of studies has indeed implemented the analytical concept of media frames (i.e. De Vreese, 2002; De Vreese & Kandyla, 2009), it has also pointed out that such frames tend to be given (Triga & Vadratsikas, 2017). Second, linguistic barriers seem to be effective, as empirical literature with an orientation to measurement has focused more on the Europeanization of national spheres than on actual international comparisons (i.e. De Vreese, 2007). Third and finally, existing research has only scarcely linked social media to public spheres specifically (for an exception, see Karantzeni & Gouskos, 2013: 408).

In order to overcome these limitations, we propose a different analytical angle which is rooted in institutional organization theory and cultural sociology in order to develop an alternative understanding of what is being said about EU matters – cohesion policy in the specific case – over social media.

We start from the concept of *vocabularies* which we consider as systems of words and their meanings in given social collectives. Burke (1937: 2-4) explains how vocabularies persuade and motivate action by creating frames or cues for relations among actors. Building on this and other seminal contributions (i.e. Mills, 1939; 1940) the importance of vocabularies is established through the fact that "by learning the vocabularies of social collectives, individuals learn the values, beliefs, and practices of the collective, shaping how they think and communicate" (Loewenstein et al., 2012: 47). The authors further propose the concept of vocabulary structure, that is: "the structure of conventional word use captured by the combination of word frequencies, word-to-word-relationships, and word-to example relationship that together demarcate a system of cultural categories" (ibid: 3).

We argue that the idea of assessing the structure of meaning as the embedding of words in networks of semantic relations (with other words) is of pivotal importance in order to build descriptions of textual data. This is because such co-occurrences can be counted and formal methods of analysis can be applied in a way that still preserves part of the interpretive depth of more qualitative methods (i.e. frame and discourse analysis).

3. Data & methods

We focus, here, on the role of social media as an institutional communication tool of EU cohesion policy in connection with the (possible) emergence of a European public sphere. We hence analyzed the language used by LMAs and their audiences on social media put in place to communicate cohesion policy, make audiences understand funding schemes and evoke reactions and participation. As part of a wider project funded under the Horizon 2020 program, the PERCEIVE project, we conducted a comparative analysis of the Facebook pages in six national cases, which are constituted by ten LMAs and provide PERCEIVES's sample. For each case, local partners of the PERCEIVE project were involved in selecting relevant institutions to focus on, and, hence, one or two regions were selected. Moreover, in the case of

Romania for instance, communication responsibilities were shared between several institutions, amounting to a larger amount of pages to consider. More specifically, we analyzed the following ten Facebook pages[1]:

- Italy: Regione Emilia-Romagna
- Italy: Regione Calabria POR
- Austria: Regionalmanagement Burgenland GmbH
- Poland: Warmińsko-Mazurskie region
- Poland: Dolnośląskie region
- Romania: Agentia pentru Dezvoltare Regionala Sud-Est (Sud Est Regional Development Agency)
- Romania: Ministerul Dezvoltarii Regionale, Administratiei Publice si Fondurilor Europene (Ministry of Regional Development, Public Administration and European Funds)
- Romania: Ministerul Fondurilor Europene (Ministry of European Funds).
- Sweden: Tillväxtverket
- Spain: Junta de Extremadura.

In total, this amounted to 29.173 posts, and 20.372 comments. We consider language as a tool able to shape thought and actions (Phillips et al., 2008). Therefore, to grasp the power of words and dictionaries (Ocasio & Joseph, 2005; Loewenstein et al., 2012), we combined Topic Modeling (Blei et al., 2003), sentiment analysis, and finally qualitatively clustered topics in our approach. We detail the procedure in the following sections.

3.1. Topic Modeling

Topic Modeling (Blei et al, 2003) is a semi-automated technique used to analyze a corpus of texts and induce the meanings contained therein. More specifically, Topic Modeling semi-automatically codes words into a set of 'topics' that are containers of words co-occurring frequently. Then, researchers have to qualitatively induce the meaning of each topic. This technique is particularly suitable to our case in view of the following reasons: First, Topic Modeling allows for analyzing corpora too big to deal with for a human being. Second, it does not analyze words based on their meaning, but only based on their co-occurrences. Induction and the interpretation of topics are thus an important part of the research. The third useful feature is that Topic Modeling recognizes that the meaning of a word depends on the surrounding words and that, hence, a word can have different meanings in different contexts. The fourth useful feature, here, is that topics are explicit and other researchers may reproduce the analysis, which improves reliability (DiMaggio et al., 2013). Moreover, being independent from vocabularies, Topic Modeling is able to analyze texts in different languages. Hence, we were able to analyze six cases, composed by texts in different languages, and obtain comparable results.

Following established literature, we used Topic Modeling based on an algorithm called Latent Dirichlet Allocation (Blei et al., 2003) which, through Bayesian statistics, places together terms that appear in the same texts more frequently than one would expect by chance. The idea is that these terms constitute topics, and, in particular, each word within the corpus is coded to a topic. Conversely, topics constitute textual sources in different percentages. Before analysing sources, for each language we developed a so-called stop-word list, which is a list of words that the software will ignore, and which were composed of words with scarce substantive meaning, such as articles and pronouns. For each case study, we downloaded all the posts and comments and cleaned data. To perform Topic Modeling, we used Mallet – an open-

[1] See Table 1 for more details.

source software developed by the University of Amherst Massachusetts (McCallum, 2002)". For each national case we developed a 20 topic model[2]. Topic Modeling results include:

- a list of the most important words constituting each topic;
- a list describing how each word was coded in each text analyzed;
- a composition file, which describes the percentage of the composition of the original sources, topic by topic;
- a diagnostic file.

Based on these results, we then induced the meanings of topics together with PERCEIVE's partners, who are academics trained in cohesion policy-related issues, as they are able to navigate the local knowledge needed to interpret each topic in its national context.

3.2. Sentiment analysis

Topic models are meant to enhance our understanding of the public debate on cohesion policy in different national contexts. Such a representation can be enriched by assessing the characteristics of the words constituting topics. In particular, we examined whether contents produced by the LMAs somehow differed from contents produced by their external audiences in terms of positive, neutral and negative words used in the content production. This task was performed through sentiment analysis, which is based on *lexicons* – collections of words coded according to the sentiment they potentially express. We tried several lexicons in order to strengthen the reliability of our interpretation of results, and finally present results based on the VADER lexicon, as it is especially tailored for social media communications (Hutto & Gilbert, 2014). In particular, for each topic, we analyzed the 100 most important words and present results computing the ratios of negative/positive words. This ratio is particularly interesting, as we will show in the next section, as topics mostly used in posts (i.e. as a proxy for the voice of the LMA) and topics mostly used in comments (i.e. as a proxy for the voice of the external audiences) clearly differ in terms of sentiment.

3.3. Clustering

We finally clustered topics in seven main clusters in order to inquire the different discourses characterizing LMAs at the national level. Our aim was twofold: first of all, we wanted to inquire the (possible) existence of a European public sphere, which we understood as the extent to which the same issues are debated with similar topics, at the same time, in different local cases (Risse, 2009). Second, we wanted to characterize this emerging European public sphere, by analyzing which kind of themes and topics populate it. We qualitatively clustered topics based on i) the meaning of each topic, as qualitatively induced together with project partners; ii) the sentiment associated with each topic; iii) the prevalent usage of each topic in posts or comments. In the following paragraph we detail the findings made.

4. Findings

The first step of our research consisted of the development of a 20-topic model for each case and the interpretation of the meanings thereof. While certainly important, this is not the focus of our paper. Therefore, the list of the 20 most important words and the description of each topic for the six national cases can be found in Appendix 1. Here, as we focus on the European public sphere, we deal with a comparison of the different cases. Therefore, in the remainder of the paper, we tackle the clustering that we performed and the insights that we derived from it.

[2] We tried different models, and finally selected 20 topic models in order to balance in-depth analysis and parsimony. Also, we decided to develop models with 20 topics for each case in order to ensure comparability.

In the following seven tables we present the clusters of topics that we induced. The first column is a cluster identifier, while the second column acts as topic identifier. For example, the first topic in the first table is 09AT, meaning that it is topic number nine within the Austrian case. The third column presents the name of each topic that was labeled together with the project partners. The fourth column presents the sentiment of the topic which is calculated as a proportion of negative vocabulary over positive vocabulary used in the topic. The fifth and sixth columns describe the usage of a certain topic in posts and comments respectively. For example, the first topic, which is the above-mentioned 09AT, constitutes 4,7% of the posts and 3,7% of the comments for the Austrian case. The topic 09AT, thus, is used more in posts than in topics, and exhibits rather negative sentiment. At the end of each table, averages regarding the sentiments and the average usage in posts and comments summarize the characteristics of topics within each cluster.

4.1. Cluster 1: Euroscepticism and negative interaction with audiences

The first cluster, that we named *Euroscepticism and negative interaction with audiences*[3], comprises topics from five national cases: only the Polish case is not included. On average, topics in this cluster have the most negative sentiment in our sample. Also, the cluster comprises topics which on average are much more used in comments than in posts. The average usage for comments of topics pertaining to this cluster is 6,2%, while the average usage for posts of topics is 3,6%.

The topic with the most negative sentiment is 02IT, 'Europe and the earthquake', which is centered on the region Emilia-Romagna having used European funds for reconstruction work after the 2012 earthquake. This topic displays negative sentiment because of the presence of earthquake-related words, but it is also used in comments complaining about the reconstruction phase. Another very negatively loaded topic, which is especially used in comments, is topic 09IT, 'Vaccines', which describes a very heated debate in Italy following the approval of a law to increase the number of mandatory vaccines for children and in which an anti-vaccination movement took place on Facebook to support their stance against the local and EU government. Negative sentiment also emerges in topic 16IT, which deals with the protection of the territory and coast of the region Emilia-Romagna. Words such as "emergency", "bad weather", "security" and "territory" highlight this emphasis. Another heated topic, which signals a very specific complaint by citizens and is used a lot more in comments than in posts is topic 00SE, 'Misuse of structural funds', which is mainly centered on a Swedish politician that had to resign over misuse allegations in connection with her role as Director General of Tillväxtverket when it was discovered that she approved the expenditure of almost 7.5 million Swedish krona (about 700.000€) for seminars and representation activities. Within this cluster, we also find several topics that are used in complaints in a number of countries. This is the case for 16ES, 'general complaints (Spanish case)' against the LMA, 01IT, 'general complaints (Italian case)' against the LMA, 08IT, 'specific complaints' regarding cohesion policy-related issues. Other topics which are loaded negatively specifically deal with European funds and the usage thereof: this is the case for 12IT in the region Calabria, 14IT, concerning youth unemployment and the European Social Fund, or 17SE, regarding EU-funded programs in Sweden. A number of topics from the Romanian case, too, are characterized by negative sentiment and by being used in comments rather than in posts. This is the case for 03RO, which deals with bureaucratic issues with funding, 6RO, which is centered on disputes concerning a new law regarding LMAs' remuneration, and 11RO, covering a political scandal. Other topics group complaints around social services and healthcare: this is the case in Spain (health system and social services) and Italy (health care administration, disinfestation). Social aspects, in general, are also discussed here.

Overall this cluster is very interesting: first of all, we trace similar topics in several national cases, with the only exception of Poland. Secondly, most of these topics are very negatively loaded in terms of

[3] From now on, we will call this 'Euroscepticism' only for sake of space and understandability.

sentiment, and are used more in comments than in posts. Interestingly, the topics making critical remarks are the mostly internationally distributed.

CLUSTER ID	TOPIC ID	TOPIC NAME	Sentiment (negative words/pos. words)	Average use in posts	Average use in comments
1	09AT	COOPERATION	0,5	4,7%	3,7%
1	06ES	CULTURAL ACTIVITIES: PEOPLE	0,5	4,7%	5,1%
1	11ES	HEALTH SYSTEM AND SOCIAL SERVICES	0	5,0%	4,1%
1	14ES	DATA IN THE REGION OF EXTREMADURA	0,8	4,8%	4,8%
1	16ES	GENERAL COMPLAINTS (SPANISH CASE)	1	2,4%	17,3%
1	17ES	SOCIAL SERVICES	0,4	4,6%	4,2%
1	18ES	LETTERS TO THE JUNTA	0,1	3,5%	6,9%
1	01IT	GENERAL COMPLAINTS (ITALIAN CASE)	1,1	1,8%	8,0%
1	02IT	EUROPE AND THE EARTHQUAKE	2,3	5,6%	4,2%
1	04IT	INFRASTRUCTURE	0,5	3,7%	4,7%
1	07IT	DISINFESTATION	0,7	2,1%	6,2%
1	08IT	SPECIFIC COMPLAINTS	0,5	1,8%	8,9%
1	09IT	VACCINES	1,8	1,9%	6,4%
1	12IT	(DISCONTENTMENT WITH) FUNDING APPLICATION PROCESS IN CALABRIA	0,6	5,6%	5,4%
1	14IT	YOUTH UNEMPLOYMENT	0,5	5,3%	4,6%
1	16IT	PROTECTION OF EMILIA-ROMAGNA	1,6	5,7%	3,9%
1	01RO	EU FUNDING: ACCELERATING INFRASTRUCTURE TO OBTAIN FUNDING	0,1	3,3%	18,7%
1	03RO	EU FUNDING: ISSUES WITH FUNDING	0,2	1,7%	4,6%
1	06RO	LEGISLATION: DISPUTE ON REGIONAL DEVELOPMENT AGENCIES' REMUNERATION	0,4	1,4%	3,7%
1	11RO	POLITICS: POLITICAL SCANDAL INVOLVING THE FORMER PRIME MINISTER	0,3	1,0%	4,5%
1	12RO	EU FUNDS (ROMANIAN CASE)	0,4	2,4%	3,1%
1	14RO	INTEGRATED DEVELOPMENT	0,8	3,5%	4,2%
1	00SE	MISUSE OF STRUCTURAL FUNDS	1,6	2,3%	9,6%
1	02SE	SOCIAL ENTERPRISES	0,4	5,9%	4,6%
1	15SE	CONFERENCE OF THE BALTIC SEA REGION	0,4	3,9%	4,7%
1	17SE	EU-FUNDED PROGRAMS	1,3	5,8%	4,6%
		Average	**0,72**	**3,6%**	**6,2%**

4.2. Cluster 2: Positive interaction with audiences

The second cluster, that we labeled *Positive interaction with audiences,* centers on topics from only three national cases: Austria, Poland and Sweden. Cluster 2 shares with cluster 1 the fact that it groups topics which are used more for comments (6,5%) than for topics (4,2%). Yet, this cluster is very different from the previous one as it collects topics which are on average quite positively charged. Given the fact that cluster 1 contains negative topics used in comments, and cluster 2 contains positive topics especially used in comments, the difference in the number of topics is striking; here, only seven topics can be found. Topic 06AT, for example, is used for interaction regarding events for communicators and cohesion policy implementers. Topic 17AT, instead, is used for interaction regarding dissemination events related to cohesion policy. The Polish case is interesting, as the four topics from the Polish case center on reactions to commercials or to mundane events. What is interesting is that topics from the Polish case do not nurture Cluster 1, and instead are mostly characterized by positive words. As for topic 16SE, what is interesting to note is that a topic dealing with infrastructure funded under cohesion policy generates positive interactions with audiences.

CLUSTER ID	TOPIC ID	TOPIC NAME	Sentiment (negative words/pos. words)	Average use in posts	Average use in comments
2	00AT	COVERAGE OF PRESS ANNOUNCEMENTS	0,3	5,2%	6,4%
2	06AT	COMMUNICATING EUROPE	0	4,3%	8,5%
2	17AT	IMPRESSIONS FROM A RECENT EVENT	0,1	4,8%	6,5%
2	02PL	HOTEL AND CONFERENCE CENTER	0	4,2%	5,0%
2	03PL	CONGRATULATIONS	0,1	3,2%	6,0%
2	09PL	ELBLĄG CHANNEL	0,2	3,2%	5,9%
2	16PL	HOTEL	0,1	5,8%	5,1%
2	16SE	INFRASTRUCTURE AND SAFETY	0,1	2,8%	8,7%
		Average	**0,11**	**4,2%**	**6,5%**

4.3. Cluster 3: Tourism, events, prizes

Clusters 3 comprises topics that are mostly used in posts made by LMAs to communicate and disseminate cohesion policy. In particular, it collects topics dealing with events, festivals, tourism, competitions, photos, postcards and, in general, 'light-hearted' ways of positive communication related to cohesion policy. This cluster, labeled *Tourism, events, prizes,* collects topics from five countries and has, on average, the most positive sentiment in our sample. All the topics in this cluster have a similar focus: 02AT, 'Events', 04AT, 'Specialist events', 12AT, ' LMA will be at xyz this year', 05ES, ' Cultural activities: dates and places', 01PL, 'Open days EU-funded projects', and 02RO, 'Celebration of Romania's national day', for example, all deal with specific events. 18AT, 'Lotteries and prize draws', and 19RO, 'European blogging competition', instead, focus on competitions and raffles. 04PL, 'Region of Masuria', 07PL, 'Regional specialties', and 13PL, 'Regions Warmia and Masuria' are used to describe the beauty of Masuria, its dishes and specialties. Similar topics advertise the beauty of the regions under analysis: this is the case, for example, for 07AT, 'Bath tour during summers', 01ES, 'Cultural activities in Extremadura', and 06IT, 'Local cultural policy'. Overall, topics within this cluster seem to be a shortcut to talk about cohesion policy: although they speak of cohesion policy-related or funded events, the topics do not emphasize the core of cohesion policy, such as operational programs, open calls and further initiatives.

CLUSTER ID	TOPIC ID	TOPIC NAME	Sentiment (negative words/pos. words)	Average use in posts	Average use in comments
3	02AT	EVENTS	0,1	6,6%	4,4%
3	04AT	SPECIALIST EVENTS (RESEARCH CLIMATE PROTECTION)	0,1	5,2%	4,7%
3	05AT	MUSIC EVENTS	0,2	4,6%	5,1%
3	07AT	BATH TOUR DURING SUMMER	0,2	5,2%	4,6%
3	08AT	ANNOUNCEMENTS	0,2	4,4%	5,0%
3	12AT	LMA WILL BE AT XYZ THIS YEAR	0	5,2%	5,1%
3	18AT	LOTTERIES AND PRIZE DRAWS	0	4,2%	4,3%
3	19AT	TODAY, AGAIN, WE ARE DOING XYZ	0,2	6,4%	4,2%
3	01ES	CULTURAL ACTIVITIES IN EXTREMADURA	0	5,0%	3,5%
3	05ES	CULTURAL ACTIVITIES: DATES AND PLACES	0,3	5,6%	3,4%
3	07ES	TOURISM AND EMERGENCY ALERTS	0,3	5,2%	3,4%
3	06IT	LOCAL CULTURAL POLICY	0	8,2%	3,5%
3	10IT	EMILIA-ROMAGNA AND THE EXPO	0	6,0%	3,7%
3	01PL	OPEN DAYS EU-FUNDED PROJECTS	0	6,6%	3,9%
3	04PL	REGION OF MASURIA	0,1	3,0%	6,2%
3	07PL	REGIONAL SPECIALTIES	0,1	3,0%	6,3%
3	08PL	REGIONAL TOURIST ATTRACTIONS	0	3,1%	5,7%
3	13PL	REGIONS WARMIA AND MASURIA	0	3,5%	7,0%
3	14PL	PHOTO CONTEST	0,1	8,6%	4,2%
3	18PL	EVENTS	0	3,3%	4,9%
3	19PL	PHOTOS	0,1	3,9%	6,1%
3	02RO	CELEBRATION OF ROMANIA’S NATIONAL DAY	0,1	1,9%	4,3%
3	16RO	EU-FUNDED PROJECTS	0	17,5%	6,4%
3	19RO	EUROPEAN BLOGGING COMPETITION	0,1	2,0%	6,7%
		Average	**0,09**	**5,3%**	**4,9%**

4.4. Cluster 4: Positive effects of cohesion policy

This cluster, which we named *Positive effects of cohesion policy*, contains all topics in which LMAs deal with cohesion policy, its technicalities and results. Topic comprised in this cluster come from all national cases. Also, topics in this cluster are used in posts by LMAs (6,2%) more than they are used for comments by audiences (4,4%). The average sentiment is positive (0,11).

In this cluster we find topics that provide details on funds and on how to take part in open calls. This is the case for several topics such as, for example, 10RO, that relates to examples of EU-funded projects regarding education, culture and leisure. Other examples are topics 10PL, ‘EU grants’, and 11PL, ‘Programs’. Also, this cluster features entrepreneurship-related topics, which is apparent in topics such as 09ES, ‘Business sector and entrepreneurship’, 07SE, ‘Digital start-ups’, 12SE, ‘Cultural and creative companies and export’, and 18SE, ‘Conditions for companies’. Other topics deal specifically with the communication of Europe, its funds and programs. This is the case for topics 10ES, ‘Development programs’, 13IT, ‘Using structural funds in Calabria’, 15 IT, ‘Using structural funds in Emilia-Romagna’, 05PL, ‘EU funds (Polish case)’, and 19SE, ‘Seminars on growth and society’. Other topics deal with specific sectors of activities and with job opportunities created through cohesion policy. This is the case, for example, for topics 12PL, 'EU info point and job offers', and 13SE, 'Job ads for structural funds related employment'. 09RO, 'EU funds (Romanian case)', instead, clarifies instructions for technical applications for funding. It is not surprising that the topics in this cluster, which generally aim at prospective

CLUSTER ID	TOPIC ID	TOPIC NAME	Sentiment (negative words/pos. words)	Average use in posts	Average use in comments
4	10AT	BEING PROUD, CONGRATULATIONS	0	5,7%	4,2%
4	13AT	SOCIAL FUND AND COOPERATION	0,1	4,7%	5,1%
4	14AT	INITIATIVES WITH SCHOOLS	0	5,2%	5,5%
4	15AT	CROSS-BORDER PROJECTS	0	4,6%	4,7%
4	00ES	EUROPEAN YOUTH POLICIY IN EXTREMADURA	0	5,5%	3,3%
4	09ES	BUSINESS SECTOR AND ENTREPRENEURSHIP	0	6,8%	3,2%
4	10ES	DEVELOPMENT PROGRAMS	0	5,6%	3,4%
4	12ES	AGRICULTURE AND ENVIRONMENTAL ISSUES	0,4	5,4%	3,7%
4	13ES	ECONOMICS AND SOCIETY	0,1	5,4%	4,7%
4	05IT	REGION OF EMILIA-ROMAGNA	0	5,2%	4,7%
4	13IT	USING STRUCTURAL FUNDS IN CALABRIA	0,2	8,3%	3,6%
4	15IT	USING STRUCTURAL FUNDS IN EMILIA-ROMAGNA	0,3	9,1%	4,0%
4	00PL	BRIDGE	0,1	4,2%	4,8%
4	05PL	EU FUNDS (POLISH CASE)	0,2	4,4%	4,2%
4	06PL	AMPHITHEATER	0,1	3,0%	6,2%
4	10PL	EU GRANTS	0,1	8,1%	3,6%
4	11PL	PROGRAMS	0,3	8,6%	3,6%
4	12PL	EU INFO POINT AND JOB OFFERS	0	7,6%	3,6%
4	15PL	EU-FUNDED INVESTMENTS	0	5,6%	4,2%
4	17PL	EU-FUNDED RESCUE SERVICES	0,3	7,3%	3,7%
4	04RO	EU FUNDING: PROCEDURES FOR SMES	0	2,9%	3,0%
4	07RO	INSTRUCTING CAMPAIGN	0,3	4,0%	4,0%
4	9RO	EU FUNDS (ROMANIAN CASE)	0	4,8%	6,0%
4	10RO	EU FUNDING	0	11,0%	5,0%
4	15RO	EU FUNDING PROCEDURES	0	26,8%	4,6%
4	18RO	CULTURAL HERITAGE	0,1	2,0%	4,2%
4	03SE	INNOVATION AND ENTREPRENEURSHIP	0	4,5%	4,7%
4	04SE	MINING PROJECTS	0,2	5,4%	5,4%
4	05SE	INVESTMENT IN GLASSWORKS	0,4	2,9%	7,0%
4	06SE	TOURISM AND GROWTH	0	5,8%	4,0%
4	07SE	DIGITAL START-UPS	0,1	5,2%	4,3%
4	09SE	START-UPS	0,1	5,2%	4,7%
4	10SE	INTERNATIONALIZATION AND GROWTH	0	5,7%	4,2%
4	11SE	COMPETITION FOR STUDENTS	0	5,2%	4,2%
4	12SE	CULTURAL AND CREATIVE COMPANIES AND EXPORTS	0,2	5,2%	3,8%
4	13SE	JOB ADS FOR STRUCTURAL FUNDS RELATED EMPLOYMENT	0	6,0%	3,9%
4	14SE	ENVIRONMENT AND POVERTY REDUCTION PROGRAMS	0	6,6%	3,9%
4	18SE	CONDITIONS FOR COMPANIES	0,5	5,3%	4,6%
4	19SE	SEMINARS ON GROWTH AND DIGITIZATION	0,2	4,4%	4,9%
		Average	**0,11**	**6,1%**	**4,4%**

beneficiaries and explain EU funds and programs, are rather used in posts than comments. Unexpectedly, these topics are not used much in comments, which is indicative of little interaction and the audience not asking questions concerning funding. It seems as if topics disseminating programs and their results and characterized by positive sentiment are not as conducive to citizen engagement.

4.5. Cluster 5: Politics

We named cluster number 5 *Politics,* as it collects seven topics from four national cases that specifically deal with the agenda of the president of the region (as in 11AT and 15ES), regional voting (as in the case of 19IT), regional politics and legislative processes (as in the cases of 08ES, 00IT, and 13RO) or political meetings (05RO). These topics are slightly more used in posts (4,7%), than in comments (4,0%) and, on average, have quite a positive sentiment. Nonetheless, the two topics within this cluster which have a more negative sentiment are the ones used more in comments. This cluster tell us that a minor debate on cohesion policy regards its relation with politics.

CLUSTER ID	TOPIC ID	TOPIC NAME	Sentiment (negative words/pos. words)	Average use in posts	Average use in comments
5	11AT	PRESIDENT OF THE REGION	0,3	4,4%	5,2%
5	08ES	GOVERNMENT AGREEMENTS	0	5,7%	3,4%
5	15ES	AGENDA OF THE PRESIDENT OF EXTREMADURA	0	5,4%	3,6%
5	00IT	REGIONAL POLITICS IN EMILIA-ROMAGNA	0	8,0%	3,6%
5	19IT	REGIONAL VOTING	0,3	2,7%	5,5%
5	05RO	POLITICS: MEETING WITH CHINA	0	2,9%	2,4%
5	13RO	LEGISLATIVE PROCESS	0,1	3,9%	4,4%
		Average	**0,10**	**4,7%**	**4,0%**

4.6. Cluster 6: Other

CLUSTER ID	TOPIC ID	TOPIC NAME	Sentiment (negative words/pos. words)	Average use in posts	Average use in comments
6	01AT	EMPLOYEES OF THE LMA	0	5,0%	4,4%
6	03AT	INFORMAL SETTING AT WORK	0,1	5,4%	4,7%
6	03ES	CONSTRUCTION SECTOR	0	5,7%	3,5%
6	04ES	EDUCATION	0,3	5,5%	3,7%
6	19ES	SECURITY AND CIVIL PROTECTION	0,1	5,5%	3,5%
6	03IT	HEALTH CARE ADMINISTRATION	0,3	4,0%	5,5%
6	11IT	LOCAL EDUCATION POLICY	0,2	6,0%	3,9%
6	17IT	GENDER EQUALITY INITIATIVES	0,3	7,5%	3,8%
6	00RO	EMERGENCY WARNING	2	2,9%	2,7%
6	08RO	LOCAL PUBLIC INVESTMENTS	0	2,1%	3,7%
6	01SE	SUSTAINABLE URBAN DEVELOPMENT	0	6,2%	4,2%
6	08SE	ENTREPRENEURSHIP AND TEACHERS	0,1	5,7%	3,9%
		Average	**0,28**	**5,1%**	**4,0%**

We named Cluster 6 *Other,* as it contains topics from five national case which are not related to previous clusters and not enough to create more clusters. 01AT and 03AT, for example, are used by the Austrian LMA to inform about its daily activities and internal workspace. Topics 04ES, 11IT and 08SE deal with education. Topic 17IT centers on gender equality. Although all these topics are related to cohesion policy, the fact that they are not enough to entice new clusters signals that they are not shared amongst all regions. The topics are of quite negative nature, with 17IT, 'Gender equality' and 03IT, 'Education' being the more negatively loaded. Topic 00RO is very negatively loaded, which does not come as a surprise as it comprises hydrogeological warnings for rivers in Romania.

4.7. Cluster 7: Noise

CLUSTER ID	TOPIC ID	TOPIC NAME	Sentiment (negative words/pos. words)	Average use in posts	Average use in comments
7	16AT	NOISE (AUSTRIAN CASE)	0,1	4,2%	3,9%
7	02ES	NOISE (SPANISH CASE)	0,1	2,6%	11,3%
7	18IT	NOISE (ITALIAN CASE)	0,1	1,6%	6,0%
7	17RO	NOISE (ROMANIAN CASE)	0	1,9%	3,8%
		Average	**0,08**	**2,6%**	**6,3%**

The last cluster incorporates topics labeled 'noise' and comprising 'ill-fitting' words. The presence of these topics is well expected (DiMaggio et al., 2013), as with Topic Modeling noisy topics serve to improve the internal coherence and strength of other topics.

5. Discussion & conclusion

The first finding of our work contains the description of topics characterizing the debate on LMAs' Facebook pages. We performed a qualitative comparison between countries asking trained academics with the respective background to analyze the elicited topics which are constituted by words in their respective local language, and to provide a label and a description in English, functioning as the *lingua franca* adopted for the comparison. A first result, thus, entails the substantive content of the elicited topics.

Topic modeling analysis highlighted a different usage of topics by LMAs and commenters. Topics mostly used by LMAs are generally connected to events, constitute information on funding opportunities or deal with politics. Comments, on the other part, are mostly complaints with few exceptions of positive interaction. In Italy and in Spain, comments coalesce into two topics targeting specific actions or decisions taken (or not taken) by LMAs, and comprising complaints blaming the dishonesty or incompetence of politicians. Along these lines, topics mostly used in comments refer to complaints such as the misuse of structural funds (Sweden), or political scandals (Romania). Ultimately, on Facebook, it seems as if LMAs inform and advertise while citizens complain.

Our second finding is built on sentiment analysis through which we analyzed all elicited topics. Sentiment analysis, here, confirms the qualitative results obtained by analyzing topics and highlights a difference in the tone of communication between LMAs and their external audiences. The language of LMAs seems to be not as negatively connoted than those of external audiences. While not entirely surprising, this result indicates a relevant fact for policy communicators. That is: there seems to be misalignment between the 'tone' that LMAs and their audiences use on social media, being that the tone of external audiences tends to be more 'emotional' or 'sentiment-loaded' than the tone of LMAs. Also, and referring more specifically to negative sentiments, our results suggest that comments are more likely where to expect negatively loaded vocabulary: LMAs' external audiences are more likely to use vocabulary that potentially expresses negative opinions about topics concerning cohesion policy.

The central aim of our analysis, however, is to understand if a European public sphere emerges. As to what regards this aim, we suggest that our work makes two main contributions: both in terms of methodology and findings.

From a methodological point of view, we propose a three-step procedure to analyze the European public sphere. In a first step, we induced topics from discourse that takes place in different countries. In this vein, while in previous studies on cohesion policy, researchers analyzed discourses with the aim of recognizing frames that tend to be given (Triga & Vadratsikas, 2018), we reconstructed the meaning inductively. Second, we characterized topics through sentiment analysis. In this step, also, we qualitatively inquired topics' characteristics, so as to better understand them. Third, we qualitatively clustered topics according to the way they are used in communication on LMAs' Facebook pages. This step was meant to assess the international distribution of topics in clusters. In other words, we examined the extent to which topics in the same cluster were elicited in different countries. In this way, we could speculate about the different international articulations of specific discourses. For example, clusters 1 and 2 are mostly used in comments. Cluster 1, moreover, which comprises more topics and from more countries (five in total), is the most negatively charged. On the other hand, clusters 3 and 4 are mainly used by LMAs. Cluster 3, in particular, aggregates topics from all the national cases. We suggest that, in particular, clusters 1 and 3 capture discourses that span over different countries and, therefore, elicit segments of a European public sphere. Finally, thanks to our methodology, we are able to directly take into account the tensions between fragmentation and aggregation of discourses at the level of civil society: the social impact of such a methodology is relevant, as it is able to take into account not only what the elite is thinking or writing (which is the case with newspaper analysis) but also comprises citizens' voices. Of course, this is a first step, and future research might better disentangle the relationship between institutional communication and citizens' responses[4].

Building on this methodology, we suggest that our work makes the following contribution to the emergence of a European public sphere. Following the analysis of Koopmans and Erbe (2004; see also Koopmans & Stratham, 2010), the European public sphere is articulate over three dimensions: i) a supra-national dimension in which European-level institutions and European-wide mass media interact with one another; ii) a 'vertical Europeanization', in which communication interlinks the European and national European level, and iii) a 'horizontal Europeanization' with communication linkages between different member states. The evidence collected in our study confirms a 'horizontal Europeanization' in social media discourse: we find evidence of the same topics being discussed at the same time in different countries. In particular, cluster 1, *Euroscepticism and negative interaction with audiences,* groups topics from five of our national case studies that, using similar words and dealing with similar issues, portray similarly negative stances regarding cohesion policy specifically and Europe, more generally. Our results confirm and correspond to other recent studies that highlight the Europeanization of media discourses through shared Euroscepticism in newspapers from six European countries (Dutceac Segesten & Bossetta, 2019).

However, we suggest that our study highlights two further issues in the analysis of horizontal Europeanization. First, our analysis reveals a new dimension in analyzing horizontal Europeanization. The emergence of communication linkages between member states may occur at different, not necessarily connected, levels. For example, Euroscepticism and negative attitudes towards the EU denote cluster 1 and the most negatively loaded topics are found in comments, thereby indicating the emergence of horizontal links among citizens in different countries. On the other hand, in cluster 3, which shows a positive attitude towards the benefits derived from EU funds, the most positively loaded topics occur as posts, thereby capturing the horizontal formation of links among LMAs that may share a common communication policy. This consideration points at the different nature that the emergence of a public sphere may be characterized by. In this first instance, the emergence of the public sphere is the spontaneous result of

[4] We thank an anonymous reviewer for this comment.

shared discontent, which occurs when citizens post comments to LMAs' posts. On the other hand, in the case of cluster 3, horizontal links may be the outcome of the institutionalization of communication procedures that results from the top-down dissemination of EU communication guidelines and the like.

The spontaneous versus institutionalized dimension of horizontal Europeanization of the public sphere points at a second issue. The emergence of the internationally articulated cluster 1, which conveys a negative attitude towards the EU funding scheme, suggests that, counter-intuitively, Euroscepticism seems to facilitate the building of a European public sphere. This finding brings about a connection between research on the emergence of a European public sphere and neo-institutional literature that addresses fields as arenas of power dependencies and strategic interactions where actors' politics shape institutional settings (Fiss & Zajac, 2004; Henisz & Zelner, 2005; Ingram & Clay, 2000; Schneiberg & Bartley, 2001).

This perspective highlights that a field's fragmentation generates opportunities for political maneuvering and a field's actors may pursue these opportunities by widening fractures in logics (Friedland and Alford, 1991; Thornton et al., 2012: 2) and divergence in interests (Hoffman, 1999; Morrill et al., 2003). In light of this, the emergence of a European issue field (Hoffman, 1999; Meyer & Höllerer, 2010) may enact struggles in which actors pursue 'politics of signification' over the framing of reality (Benford & Snow, 2000) and the meaning to be assigned to the contested issues (Meyer & Höllerer, 2010; Seo & Creed, 2002). From this perspective, the creation of a European public sphere may contribute to the building of a European identity, but also to the coalescence of dispersed discontent. Conversely, a fragmented public sphere may hinder the building of a shared shared identity, but at the same time a fragmented public sphere could avoid the amalgamation of malcontent scattered in the European regions. This tension between fragmentation and aggregation of discourse through the theoretical lenses of 'politics of signification' provides promising future avenues for the analysis of EU communication policies.

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Articles

European Cohesion Policy performance and citizens' awareness: A holistic System Dynamics framework

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Abstract:

As Cohesion Policy constitutes the major funding scheme of the European Union, not only does literature explore if the policy's performance is satisfactory but also investigates the extent to which the policy is effectively communicated to citizens. To integrate analysis of implementation and communication, we develop a novel qualitative framework that elicits a holistic analysis of the causal mechanisms behind: (i) the distribution of the Cohesion Policy funds, their management at a local managing authority level and the related impact on projects' quality, and (ii) the communication processes that underpin citizens' awareness about the Union's role in funded projects. The multilevel nature and the dynamic behaviour of the system, as well as its multiple feedback loops, render System Dynamics appropriate as an approach to model its complexity. The proposed framework aims at stimulating a focused discussion on Cohesion Policy by providing policy-making insights for designing efficient schemes to improve the actual and the perceived performances. Finally, it is anticipated to support research in the field from a new organisational perspective through considering the impact of local actors' structures, procedures and actions on Cohesion Policy outcomes.

Keywords: European Cohesion Policy; funds' absorption; projects' quality; citizens' awareness; modelling framework; System Dynamics.

JEL classification: C63; H72; H83; O52; P43; R58.

Desempeño de la Política Europea de Cohesión y concienciación de los ciudadanos: un marco holístico de Dinámica de Sistemas

Resumen:

Dado que la Política de Cohesión constituye el principal programa de financiación de la Unión Europea, la literatura no solo explora si el desempeño de la política es satisfactorio, sino que también investiga hasta qué punto la política se comunica de manera efectiva a los ciudadanos. Para integrar el análisis de implementación y comunicación, desarrollamos un marco cualitativo novedoso que genera un análisis holístico de los mecanismos causales basdos en: (i) la distribución de los fondos de la Política de Cohesión, su gestión a nivel de la autoridad de gestión local y el impacto relacionado en los proyectos calidad y (ii) los procesos de comunicación que apoyan la concienciación de los ciudadanos sobre el papel de la Unión en los proyectos financiados. La naturaleza multi-nivel y el comportamiento dinámico del sistema, así como sus múltiples bucles de retroalimentación, hacen que la Dinámica de Sistemas sea un enfoque

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apropiado para modelar su complejidad. El marco propuesto tiene como objetivo estimular una discusión centrada en la Política de Cohesión, proporcionando ideas para la formulación de políticas que permitan diseñar esquemas eficientes para así mejorar los resultados reales y percibidos. Finalmente, se anticipa apoyar la investigación en el campo desde una nueva perspectiva organizacional a través de considerar el impacto de las estructuras, procedimientos y acciones de los actores locales en los resultados de la Política de Cohesión.

Palabras clave: Política de Cohesión Europea; absorción de fondos; calidad de proyectos; concienciación ciudadana; marco de modelización; Dinámica de Sistemas.
Clasificación JEL: C63; H72; H83; O52; P43; R58.

1. Introduction

European Cohesion Policy (CP) aims at fostering a more sustainable territorial development in terms of economic growth and citizens' quality of life (Caldas et al., 2018). Following a partnership principle, its planning, decision-making, and implementation are performed by the European Union (EU) in close consultation with member states, subnational/local authorities and interest organization (Yesilkagit and Blom-Hansen, 2007), according to complex a multilevel governance scheme (Coppola et al., 2018).

As CP constitutes the main, and probably the largest, EU project funding scheme (Percoco et al., 2017), it is crucial to ensure that all CP funds are judiciously spent, by addressing institutional, governance and behavioural issues. Therefore, CP and related challenges have been broadly scrutinised; the scientific literature argues if and to what extent CP's performance (from funds' absorption to the broader concepts of efficiency and effectiveness) is satisfactory (McCann, 2015), given that its impact on regional development is far from uniform (Fratesi and Wishlade, 2017). For reducing the local heterogeneity of the policy's impacts, evidence suggests, important executive and distributional issues need to be overcome, which relate to the multilevel governance challenges (McCann, 2015). Indicatively, allocating additional funds to poorer regions might not lead to an improvement of their economic and social conditions, leading to a counterintuitive effect (Rodriguez-Pose and Garcilazo, 2015).

Recently, research on CP focused on how citizens perceive the efficiency and effectiveness of CP (Capello and Perucca, 2017). Notably, recent research efforts are exploring CP's potential to create satisfaction among citizens, which might eventually, in turn, play an important role in building a robust European identity (López-Bazo and Royela, 2017; Capello, 2018).

Although much research effort has been put in the CP field, to the best of our knowledge, there is an evident absence of a comprehensive framework for: (i) mapping all major variables that affect CP performance in terms of both funds' absorption and citizens' awareness about EU contribution on regional development, and (ii) combining the two subsystem structures (i.e. absorption and awareness) into an unique integrated one. This dearth of a holistic analysis is particularly worrying when considering that CP presents all the features of a complex system, the dynamics of which is often difficult to be understood and elicited (Moxnes, 2004; Moxnes and Jensen, 2009). In fact, complex systems are populated by information and material delays, feedbacks, non-linear relationships between variables, numerous actors with multiple objectives, diverse risks and significant uncertainty (Vennix, 1996; Sterman, 2000; Sterman, 2002). By failing to acknowledge this complexity, researchers and practitioners can be prone to misunderstandings, while policy-makers could opt for decisions that might face resistance or failure (Sterman, 2006).

To this end, this paper contributes towards the CP research by developing a modelling framework as a novel system 'map' that elicits that deep causal structure of: (i) the mechanisms through which the European CP funds are distributed and managed at a LMA level ('funds' absorption subsystem'), the (ii) the communication processes that underpin the building of citizens' awareness about the EU role in the projects implemented in the regions ('public awareness subsystem'), and (iii) the interconnection among them. Notably, the two subsystems are strongly interrelated, as the outputs of the one constitute the inputs of the other and vice versa. More specifically, given that the variables of the one system affect the variables of the other through cause-effect links, the two systems reinforce each other based on the positive nature of the relationships. The importance of the interrelation between the two subsystems is even more evident considering that the amount of available funding, the number of refunded projects and their quality, as well as the LMA capacity, could affect the volume of information (and thus citizens' awareness), while the level of citizens' awareness could influence potential beneficiaries' consideration on EU funding opportunities (and thus funds' absorption) through the word of mouth.

The proposed framework constitutes a first-effort qualitative model for providing a conceptual representation of the entire system under study. This contribution is expected to be the first step in the direction of enhancing our understanding of CP systemic nature for providing a new tool for researchers, practitioners and policy-makers. To build this conceptual structure, we utilized the System Dynamics (SD) methodology (Forrester, 1961). The theory of system structure and behaviour that underpin SD, along with its focus on closed loops of cause and effect and on the distinction between levels and rates (Randers, 1980), is particularly appropriate to conceptualise the complex nature of the CP system which is characterised by multilevel governance (i.e. including the EU, the LMAs and the beneficiaries).

The proposed qualitative model provides a conceptual map to integrate different streams of research in the area of CP. This vast and diverse research territory combines studies developed in very different disciplinary contexts. The disciplinary richness of this field, however, may be at odds as policymakers' need an available inclusive map of key actors, scarce resources and interconnectedness of processes. The proposed model builds on the sparse and distributed mental models of researchers and policy-makers. Our aim is to deliver a conceptual tool that facilitates the dialogue between policy-makers and scientists, as well as among researchers from different disciplines. In addition, digging into the causal structure of CP, forced to clarify and articulate concepts previously let in their aggregate form. Indicatively, we develop a dualistic concept of project quality (absolute versus relative). Increasingly, projects quality is a concept that is powerfully permeating public debate (Cottone, 2018) in parallel with the absorption issue. However, practitioners and experts still have not provided a clear definition, thus project quality is a vague and undefined concept generating incommunicability and misunderstandings.

The remainder of the paper is structured as follows. In section 2, the SD methodological approach is presented as a solid background for our modelling approach. In section 3, we develop the holistic framework for modelling the CP's absorption and communication system. Finally, in section 4, major insights regarding the proposed model structure are discussed and recommendations for future research directions are provided.

2. Methodology

2.1. System Dynamics approach

To analyse the system under study, we employed the SD methodology. SD is a simulation-based method that provides meaningful insights for real-world problems exhibiting dynamic complexity. SD was originally introduced by Forrester (1961) as a modelling technique for assisting corporations in understanding the long-term impact of management policies. Since then, it has been extensively applied to several strategic and operational problems within the business sector (Mollona, 2017; Aivazidou et al., 2018a). Since its early beginning, SD has been further applied in social systems. For instance, Forrester (1969) utilised the SD approach to capture the life cycle dynamics of urban growth and decay, considering the city environment as a complex system that undergoes drastic changes over time.

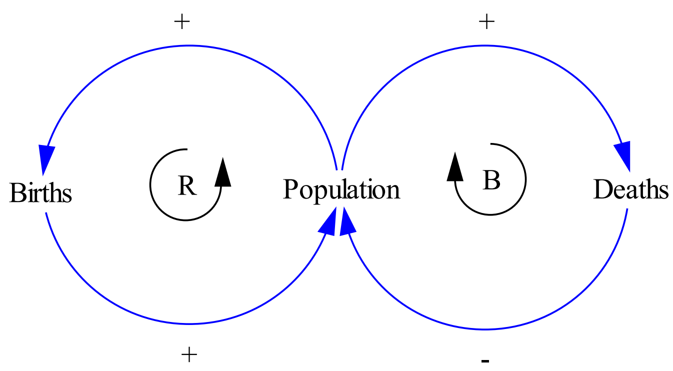
Notably, the SD methodology moves off from the elicitation of a qualitative model. Based on this latter, a formal mathematical model can be developed to be simulated for exploring the consequences of modelled assumptions. Yet, the preliminary phase of qualitative modelling has, per se, a theoretical value since it crystallizes the knowledge and mental models extracted from fields' experts, both practitioners and researchers. The mental models are defined as 'networks of facts and concepts that mimic reality', from which policy-makers *'derive theory opinion of strategic issues, options, courses of action, and likely outcomes'* (Morecroft, 1994: 8). Notably, the quality of decisions and actions depends on the quality of mental models (Morecroft, 1994). Therefore, our aim is to integrate different available mental models and to return a richer an integrated portrait that foster informed dialogue and policy-making.

To this end, a major objective of this effort is to establish the use of the SD methodology for capturing the complex dynamics of socio-economic systems related to CP. In fact, although the European funding to the LMAs follows a linear pattern, the effects of the LMAs' administrative capacity and the knowledge about the funds, as well as that of the projects' application quality on the projects' acceptance rate, generate non-linear interrelations within the system. Furthermore, taking into consideration the time-dependent behaviour of the funding flows, the complexity and the dynamics of the problem under study render SD the appropriate modelling method for the analysis.

The SD approach provides several additional benefits; firstly, it enables the conceptualising process to go beyond the state of the art, through proposing a holistic view of the CP system, unlike its partial view in existing research, which might miss interconnections between the variables (Meadows, 2009; Repenning, 2003). Moreover, it can overcome the traditional correlation studies, which offer static evidence for similar statistical behaviour between two variables, through providing a cause-effect mechanism that might explain this behaviour dynamically by offering operational thinking grounded in shared common reality (Olaya, 2012; Sedlacko et al., 2014). Finally, the development of a graphical map based on simple symbols and concepts as a solid boundary object[1] could facilitate and enhance comprehension and discussion in the field (Black, 2013).

In this paper, we present a qualitative model, namely the causal loop diagram (CLD) or system map. The CLD captures the conceptual structure of a system through representing its major cause-effect links, accumulations and feedback mechanisms. Arrows indicate causal links that connect a cause to its effect (Forrester, 1969). The causal impact of each relationship is presented with either a positive (both cause and effect increase or decrease) or a negative (when cause increases (decreases), effect decreases (increases)) polarity. A CLD further includes stock variables (symbolised by rectangles), which represent the state of a system in a given point in time and capture accumulation processes at work within the system, as well as flow variables (symbolised by valves) which are rates filling or emptying the stock variables (Sterman, 2000).

FIGURE 1.
Examples of balancing and reinforcing loops



[1] 'A boundary object is a representation, perhaps a diagram, sketch, sparse text, or prototype, that helps individuals collaborate effectively across some boundary, often a difference in knowledge, training, or objective' (Black, 2013: 76).

In addition, a feedback is a sequence of causes and effects such as that a change in a given variable circulates through the loop and finally ends up further influencing the same variable (Georgiadis and Vlachos, 2004). These mechanisms are either balancing (negative) or reinforcing (positive) feedback loops (Forrester, 1969; Sterman, 2000). If an initial increase in a variable leads to an eventual decrease (or increase) in the same variable, then the feedback loop is considered as balancing (or reinforcing). Specifically, a balancing feedback loop demonstrates goal-seeking behaviour overtime; after an initial disturbance, the system seeks to return to an equilibrium situation. In a reinforcing feedback loop, an initial disturbance causes further change leading to exponential growth or decay, indicating the presence of an unstable equilibrium. Figure 1 represents two indicative examples of a balancing and a reinforcing loop using the case of population. An increase in population raises deaths, which in turn decrease the population (balancing loop), while a growth of population increases births, which in turn augment population (reinforcing loop).

2.2. Modelling approach and system boundaries

Due to the complexity of the system under study, we describe our model in two subsystems, namely: (i) the funds' absorption subsystem, and (ii) the public awareness subsystem. The funds' absorption subsystem focuses on the expenditure of EU structural funds in a LMA context, while the general public awareness subsystem concentrates on the number of citizens aware of the EU role in the CP within the LMA (Aivazidou et al., 2018b). Notably, the two subsystems are tightly interrelated given that the outputs of the one are inputs of the other and vice versa.

As typical in SD modelling (Vennix et al., 1994), we built upon multiple sources of information. To structure the CLD of the CP system, we used four sources: (i) EU, national and LMA official documents, (ii) and scientific literature, (iii) interviews with experts, and (iv) a workshop performed in the context of the PERCEIVE project (www.perceiveproject.eu). We employed official documents to accurately describing the main funding flow, while the heterogeneity of the rest of the inputs provided a broad set of information on the CP system. Specifically, given the rather qualitative nature of many variables within the system, scientific literature was utilised to support to the best possible extent the explanation of the connections among the variables. In case of an absence of related literature, especially in the communication part, empirical evidence was used to validate the reliability of the relationships; interviews with experts about EU funding were performed to find any missing factors or links in the causal loops. Finally, a workshop with different stakeholder validated the qualitative model. Table 1 provides detailed information about the interviews and the workshop.

Interviews and workshops with stakeholders and practitioners were particularly useful in the absence of relevant literature for qualitative variables to validate the causal relationships among variables. Participants' feedback was, in general, positive and they appeared active and interested when debating the model relations and implications. We structured the meetings following typical techniques of knowledge elicitation as described by Vennix et al. (1994; 1996). During the interviews, two or three researchers collected notes in parallel. The notes were then compared to obtain a consistent interpretation of elicited mental models. In the workshop, we adopted more structured knowledge elicitation techniques such as questionnaires, brainstorming, shared diagrams and maps to compile, individually or in a team, new structural insights. Overall, the presentation of different model versions and their discussion during interviews and workshops has acted as a continuous validation process of the conceptual structure of our work.

As regards the system boundaries, we adopted the perspective of a LMA to define the level of the analysis. Therefore, we only consider and describe in detail the aspects directly affecting, or affected by, the LMAs' performance, actions, scope and objectives. EU and nation-state actions are clearly important for LMA activities; however, we considered as inputs exogenous to the system and, thus, they are out of the scope of this analysis.

TABLE 1.
Interviews and workshop information

Type	Number of participants	Participants' job titles	Organisation type	Date and length
Interview	1	CEO	Private company (both beneficiary and intermediary company)	17th April 2018 105 minutes
	2	Researchers	University	11th June 2018 100 minutes
	1	Journalist	Newspaper	25th June 2018 140 minutes
	1	Officer	LMA	10th July 2018 150 minutes
	1	Employee	European Structural Fund (ESF) funded project participant	17th September 2018 50 minutes
	1	Officer	Europe Direct	20th September 2018 110 minutes
	1	Researcher	University	25th September 2018 110 minutes
	1	Officer	LMA	25th September 2018 80 minutes
	1	CEO	Private company delivering ESF funded courses	5th October 2018 60 minutes
	2	Researchers	University	5th October 2018 70 minutes
Workshop	approx. 20	LMA officers, EU officers, researchers		26th October 2018 300 minutes

3. System Dynamics framework

3.1. Funds' absorption subsystem

The first subsystem under study is the main flow of CP funds from the EU through the LMAs to the beneficiaries, including all factors that affect these procedures. Notably, the analysis is multi-level, including three key players: the EU, the LMAs and the final beneficiaries (and only marginally the nation-state). In fact, the CLD illustrates how the initial EU funding is distributed dynamically, beginning from the allocation of the funds to the LMAs up until the final refund to the beneficiaries for the projects completed under the scheme. Furthermore, four major feedback loops exist in the system (Figure 2), namely: the "LMA learning" loop (in green), the "potential applications" loop (in purple), the "beneficiaries information enhancement" loop (in brown) and the "strategies to increase absorption rate" loop (in orange), all of which both affecting and get affected by the main funding flow. Remarkably, some of the loops are intertwined, further highlighting the complexity of the system. In addition, the light blue box indicates that the variable "Citizens aware of EU role in cohesion policy" acts as an input from the public awareness subsystem, while the light green boxes highlight the two types of projects' quality, absolute and relative, as defined by the authors in subsection 3.1.6.

FIGURE 2.
CLD of the funds' absorption subsystem

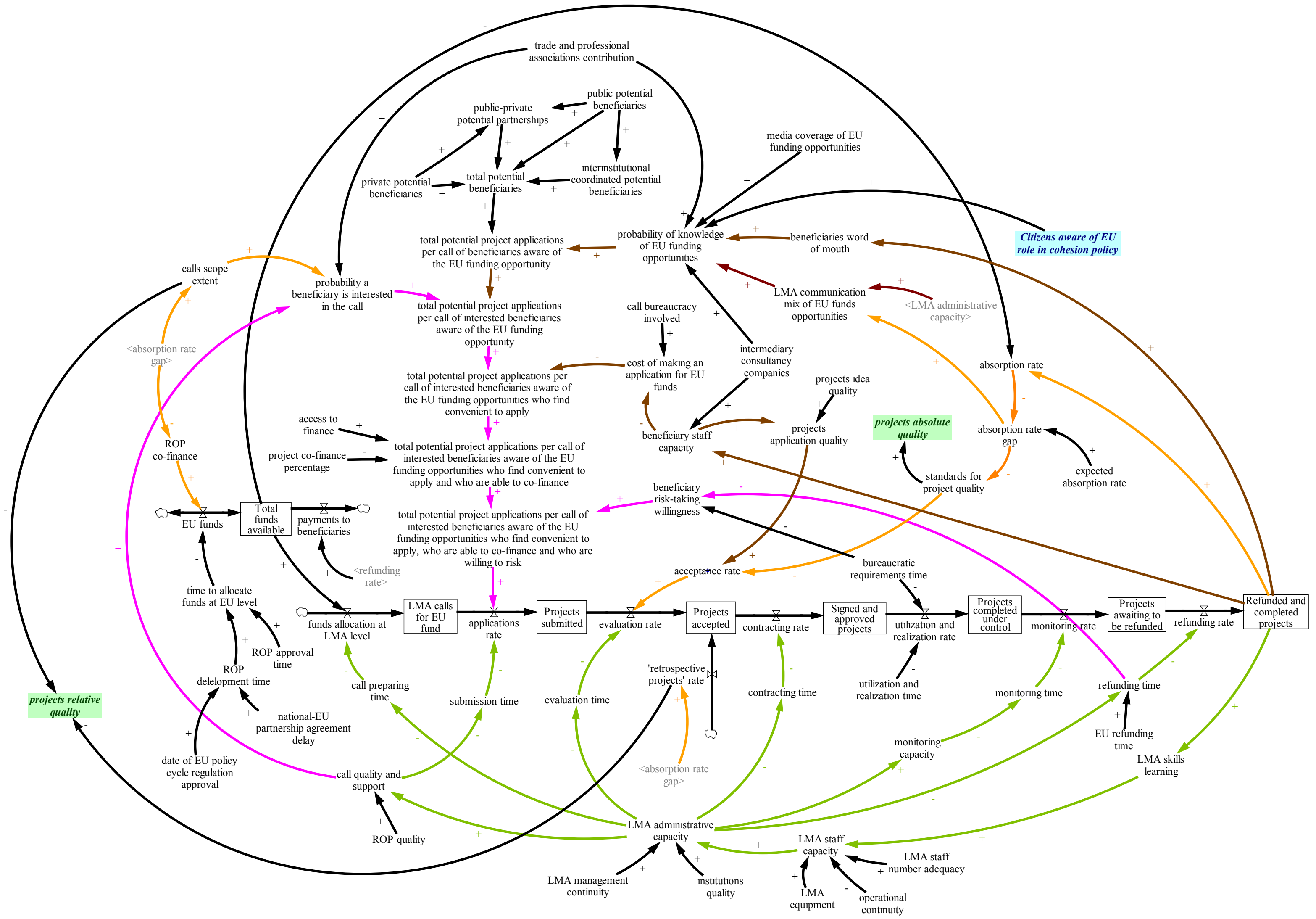


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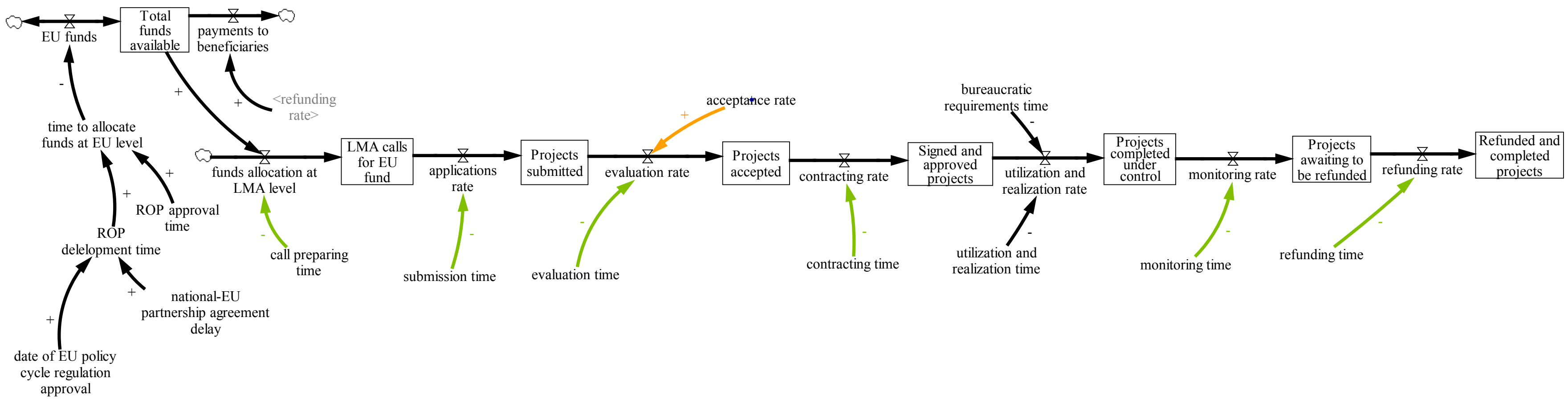
FIGURE 3.
Pipeline and resource stocks



3.1.1. Pipeline and resource stocks

Figure 3 depicts the diagram of the European funding flows through the LMAs to the beneficiaries. Initially, after all the necessary procedures for allocating funds are carried out ("time to allocate funds at EU level"), the "EU funds" flow in the "Total funds available" stock, which in turn can be reduced when EU pays its commitments ("payments to beneficiaries" valve is open). In addition, this stock is increased by the "ROP co-finance" which refers to the LMA's economic contribution to the CP (ROP stands for Regional Operational Programme[2]). The amount of "Total funds available" directly affects LMA's "funds allocation at LMA level" rate, which determines the amount of "LMA calls for EU funds", after some time that is needed to prepare the call ("call preparing time"). The more funds are allocated, the more calls are prepared by the LMAs. Potential beneficiaries who apply to these calls are accounted in the "applications rate" mechanism: depending on the number of calls, potential beneficiaries submit their application, accumulating into the stock of "Projects submitted". This process is not instantaneous, but it takes time to prepare and submit a project proposal ("submission time"), and the longer is this time, the lower will be the 'applications rate' flow. The submitted applications are evaluated ("evaluation rate") at a speed depending on an "evaluation time" and at a successful degree depending on an 'acceptance rate', and all evaluated projects accumulate into the stock of "Projects accepted". These projects are signed after a while ("contracting time") and then "contracting rate" moves the projects approved to the "Signed and approved projects" stock. Subsequently, the projects are put into action ("utilization and realization time") and after they are concluded, and the bureaucratic requirements performed ("bureaucratic requirements time"), through the "utilization and realization rate", projects are completed and accumulates in "Projects completed under control". In this stage, they are assessed for a period of time ("monitoring time") and those passing the assessment process ("monitoring rate") move to the state of "Projects awaiting to be refunded". After technicalities are solved and processed ("refunding time" which is determined by both LMA and EU technical times), beneficiaries are finally refunded ("refunding rate") and all projects accumulate in the "Refunded and completed projects" stock. Note that, "refunding rate"[3], at the end of the pipeline, also determines directly the initial "payments to beneficiaries" outflow.

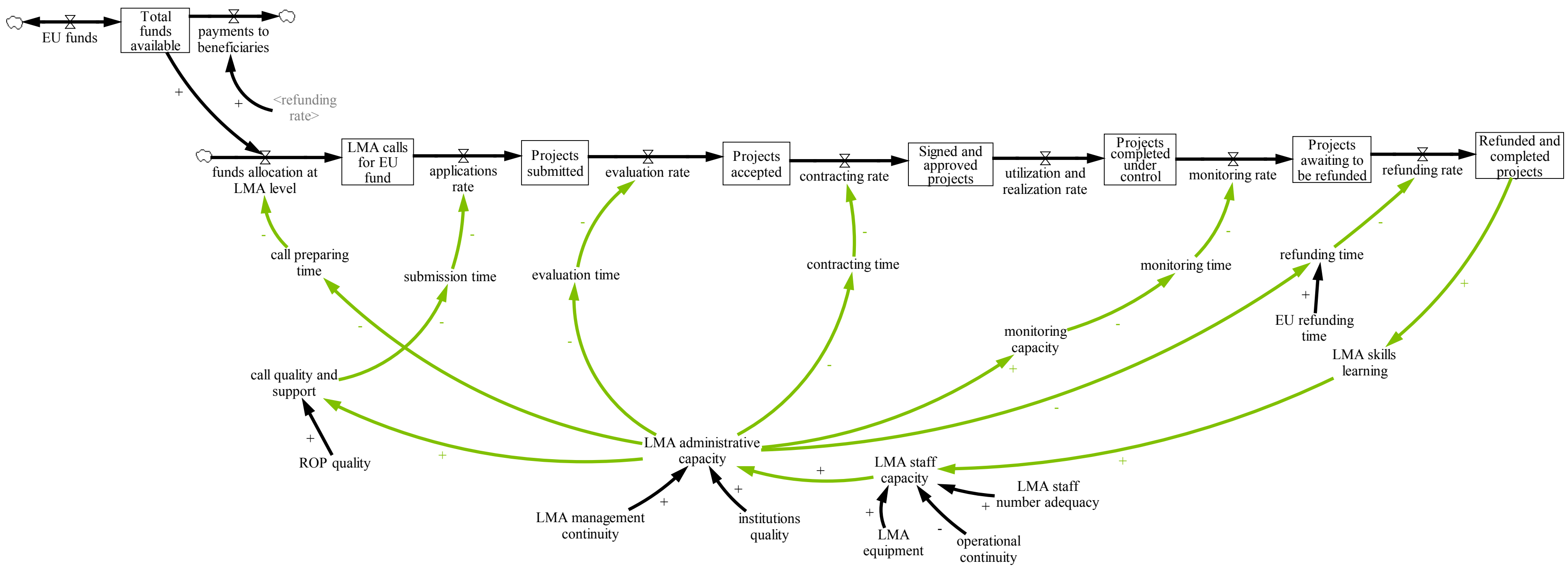
With respect to the "time to allocate funds at EU level" at the beginning of the stocks' pipeline, it is comprised of two different components: "ROP approval time" and "ROP development time". In fact, the EU proceeds to fund the LMA only if the ROP has been approved and, obviously, the ROP can be approved only if it has been developed. The higher these times are, the higher the "time to allocate funds at EU level" is (George, 2008; Milio, 2007) and this might result in delayed start of the LMA managing the CP funds. More specifically, the "ROP development time" is further influenced by the "date of EU policy cycle regulation approval" and the "national-EU partnership agreement delay" (George, 2008; Milio, 2007). In fact, when there is a delay in the date that the EU approves the related framework regulation or a delay between EU and the nation that receives the funding in signing the partnership agreement, the LMA cannot proceed to finalise the ROP.

3.1.2. LMA learning loops

The LMA learning part is not a sole loop, but it constitutes a structure of five different feedbacks, given that the "LMA administrative capacity" affects most of the delays involved in the EU funding process (Figure 4). More specifically, an accumulation of successful "Refunded and completed projects" generates an enhancement in experience and ability in the organization and managing of the funds ("LMA skills learning"). This leads to an increase in the "LMA staff capacity" (Berică, 2010; Hapenciuc et al., 2013; Jaliu and Rădulescu, 2012; Lucian, 2014; Sumpíková et al., 2004; Tatar, 2010), which is further

[2] Each EU funded program under the CP scheme is also co-financed by the national and/or LMA (usually regional) governments. The co-finance relations regarding EU funds are expressed in the respective operational plans (OPs).
[3] To limit overlapping arrows in both subsystems, the variables written in grey between brackets (<*example*>) are a copy of variables already present in the model.

FIGURE 4.
LMA learning loops



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influenced by changes in the "LMA staff number adequacy", the "LMA equipment" and its "operational continuity" (intended as the stability of local, national and European regulation of CP over time, because all the times regulations change the staff need to relearn how to operate). A rise in "LMA staff capacity" fosters the "LMA administrative capacity" (Berică, 2010; Hapenciuc et al., 2013; Jaliu and Rădulescu, 2012; Lucian, 2014; Sumpíková et al., 2004; Tatar, 2010), together with "institution quality", understood as the quality of public institution governance (Charron et al., 2015), and "LMA management continuity" (meant as the overall political stability, continuity and correspondence with EU ideals). However, this latter can be seen as a qualitative broad concept comprising the political factors affecting CP such as: regional organisation, structure and size suitability to manage EU funds (Milio, 2007), the degree of regional autonomy in administering structural funds (George, 2008; Smętkowski et al., 2018; Tatar, 2010; Kyriacou and Roca-Sagalés, 2012), the number of departments involved in the process and the degree of cooperation among them (Milio, 2007; George, 2008; Lucian, 2014) and. Notably, an increase in the "LMA administrative capacity" reduces the time needed by LMA to process calls, applications and projects (i.e. "call preparing time", "submission time" through increasing "call quality and support", "evaluation time", "contracting time", "monitoring time" and "refunding time" which also depends on the "EU refunding time"), given its increasing effectiveness. Finally, a decrease of each different time increases the related rates, making the flow through the pipeline quicker, leading to more efficient processes and, subsequently, more projects completed, closing the loop from the same point from which started.

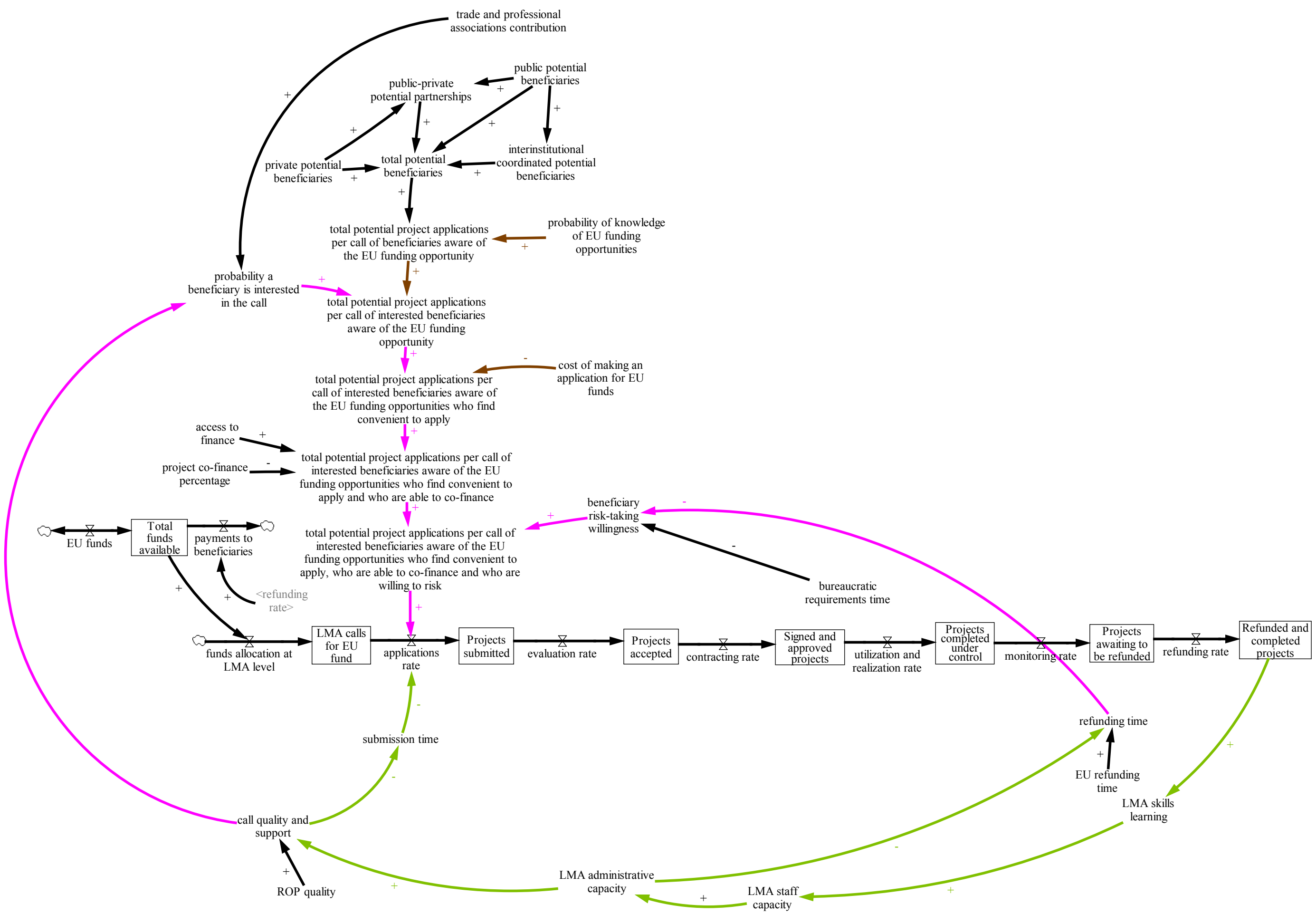
Indicatively, in the broader loop, a reduction in the "call preparing time" increases the "funds allocation at LMA level" rate, which in turn increases the "LMA calls for EU fund" stock. Then, a growth in this stock further increases the "application rate" (the more the calls are, the more project applications are submitted). The same positive effect is transmitted to the "Refunded and completed projects" stock. Finally, an augment in the aforementioned stock raises the knowledge of the local managing authorities and hence the "LMA skills learning" (Hapenciuc et al., 2013; Jaliu and Rădulescu, 2012; Lucian, 2014). Given that the loop has begun with an increase in the "LMA skills learning" and closed with an increase in the same variable, it can be considered as a reinforcing, or positive, loop. The rest four loops follow the same behaviour.

3.1.3. Project applications loops

Figure 5 illustrates the closed system of the projects applications. Before describing the loops, it is noteworthy that the "total potential beneficiaries" number consists the sum of the "public potential beneficiaries", the "interinstitutional coordinated potential beneficiaries", the "private potential beneficiaries" and the "public-private potential beneficiaries", providing the whole pool of beneficiaries who can apply for funds. An increase of each component increases the total sum (George, 2008; Squinzi, 2013; Jaliu and Rădulescu, 2012). From the initial "total potential beneficiaries" number, the system operates a series of 'cuts', which give a final number of potential beneficiaries that actually apply for a call.

Getting back to the structure, a rise in the "total potential beneficiaries" causes an augmentation in the "total potential project applications per call of beneficiaries aware of the EU funding opportunity" (T1) (Barberio et al., 2017). This variable takes into account the beneficiaries who are actually informed about the existence of a funding opportunity ("probability of knowledge of EU funding opportunities"). Then, if an increase in T1 occurs, the "total potential project applications per call of interested beneficiaries aware of the EU funding opportunities who find convenient to apply" (T2) grows (Zaman and Cristea, 2011). T1 hinges on the number of potential beneficiaries aware, as well as the "probability a beneficiary is interested in the call", which in turn depends on "trade and professional associations contribution", on "call quality and support" and on the "calls scope extent". As for "trade and professional associations contribution", different stakeholders such as industrial, commercial and public organizations can be involved to make a call more suitable for local needs and thus more desirable for potential beneficiaries. As for "call quality and support", if a call is written in an easily accessible format, taking into account the necessities of the potential beneficiaries, while high-quality support is offered during the procedure, the

FIGURE 5.
Project applications loops



probability a beneficiary is interested rises. A change in T2 positively affects the "total potential project applications per call of interested beneficiaries aware of the EU funding opportunities who find convenient to apply" (T3) (Barberio et al., 2017). On the other hand, T3 is negatively influenced by an increase in the "cost of making an application for EU funds" that the beneficiaries should pay (Tatar, 2010), as it constitutes a discouraging factor further increased if "call bureaucracy involved" is high and 'beneficiary staff skills' low. Then, a growth in T3 raises the "total potential project applications per call of interested beneficiaries aware of the EU funding opportunities who find convenient to apply and who are able to co-finance" (T4), which is reduced by an increase "project co-finance percentage" asked to the beneficiaries (Berică, 2010; George, 2008; Jurevičienė and Pileckaitė, 2013; Zaman and Cristea, 2011; Sumpíková et al., 2004; Tatar, 2010) but counterbalanced if "access to finance" is relatively easy. Finally, an increase in T4 further increases the "total potential project applications per call of interested beneficiaries aware of the EU funding opportunities who find convenient to apply, who are able to co-finance and who are willing to risk" (T5) (Berică, 2010; George, 2008; Jurevičienė and Pileckaitė, 2013; Zaman and Cristea, 2011; Sumpíková et al., 2004; Tatar, 2010).

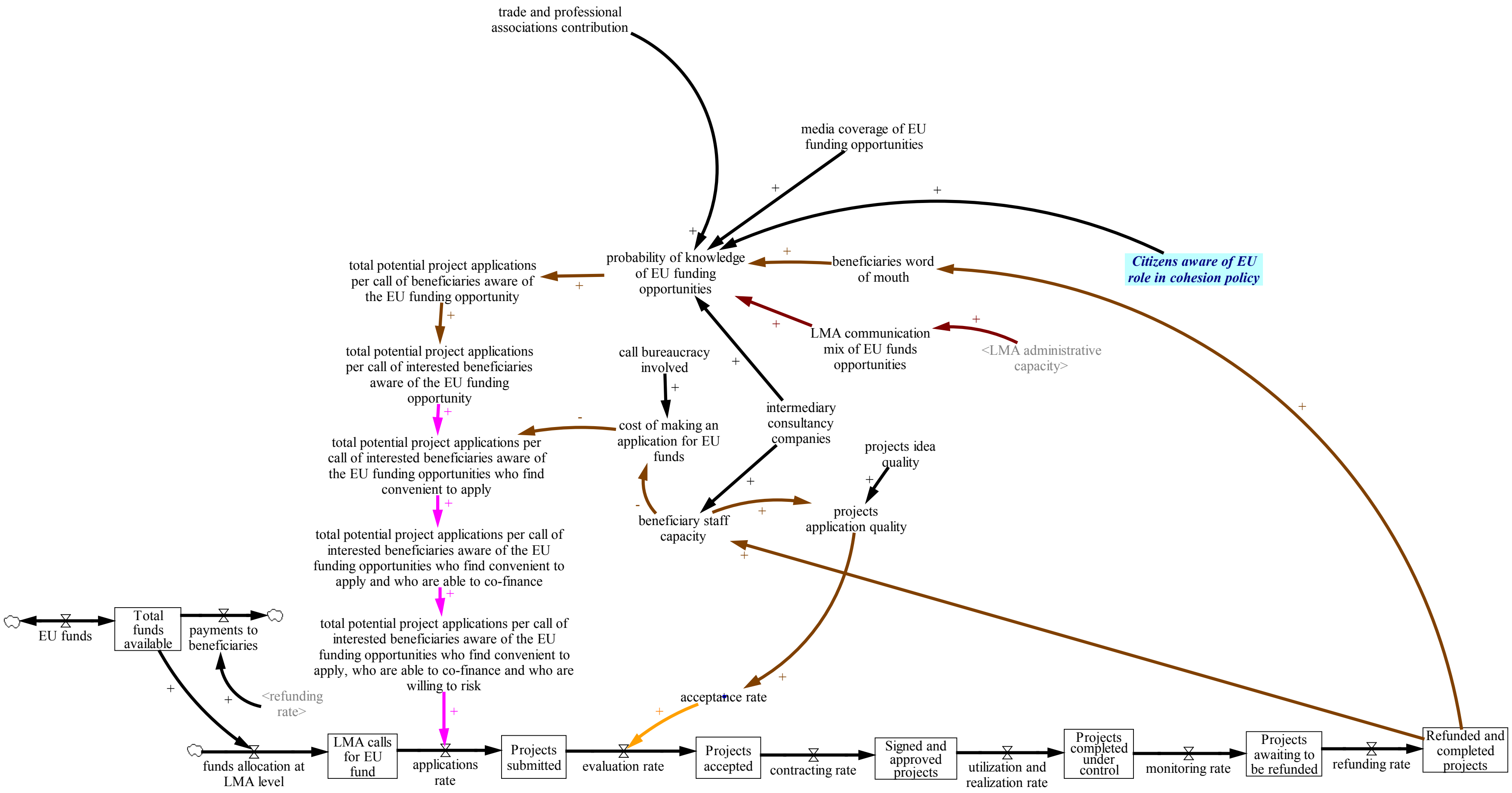
Following the loop's logic, an increase in T5, which reflects the final amount of the total potential applications that are going to be submitted, fosters the "applications rate". Hereafter, the positive relationships (i.e. increasing effects) continue up to the "LMA administrative capacity" that has a positive effect on the "call quality and support" (Barberio et al., 2017). An increase in the "call quality and support" towards the potential beneficiaries that aim to submit an application leads to an increase in the "probability a beneficiary is interested in the call" (Barberio et al., 2017; Milio, 2007; Tatar, 2010). At the end of the loop, an increase in the probability further raises T1. Given that the loop has begun with an increase in the T1 and it ends with an increase in the same variable, it is a reinforcing loop that, if stimulated, is likely to produce a self-reinforcing behaviour. A second loop is identified; beginning from an increase in T5 and following the same pattern as the previous one, the "LMA administrative capacity" that has the effect of reducing the "refunding time". A decrease in this last variable ends to make potential beneficiaries to perceive to be less risky to apply (increase in "beneficiary risk-taking willingness") which in turn augments T5 (Jaliu and Rădulescu, 2012); the more beneficiaries have to wait to be refunded, the more they perceive the investment as risky and thus they are discouraged to apply. The latter loop has begun with an increase in the T5 and such an increase is transmitted through the loop to feedback into a further increase in T5, thus it can be considered as another reinforcing loop. Notably, a high "bureaucratic requirements time" could further decrease "beneficiary risk-taking willingness".

3.1.4. Beneficiaries information enhancement loops

The main loop underlying this concept expresses that the more EU funded projects are successfully completed, the more beneficiaries will talk about CP and inform other potential beneficiaries about this opportunity (Figure 6). Such mechanism is translated in the following way: a rise in the number of "Refunded and completed projects" pushes the "beneficiaries word of mouth", which in turn fosters the "probability of knowledge of EU funding opportunities". This probability is further positively affected by the number of "Citizens aware of EU role in cohesion policy", which constitutes an input of the awareness subsystem. A growth in this probability affects T1 (Barberio et al., 2017) and, following the chain of variables, this is translated into an increase of applications and selected projects and thus into a rise in the "Refunded and completed projects" stock. This is a reinforcing loop since it started with an increase in the aforementioned stock and ended with an augmentation in the same stock.

A second loop starts again with an initial increase in "Refunded and completed projects", which in turn raises the "beneficiary staff capacity" (which is also affected by the eventual assistance of "intermediary consultancy companies") due to the staff's experience gained after the implementation of the projects. The latter variable could decrease the "cost of making an application for EU funds" because an experienced staff takes less time to prepare a project application. Then, following the projects applications loop, the series of causes and effects lead to a final increase of the "Refunded and completed projects". Continuing

FIGURE 6.
Beneficiaries information enhancement loops



from the "beneficiary staff capacity", a third loop is created; an increase in this variable enables the enhancement of the "projects application quality" due to the higher experience of the staff. Obviously, the application quality also strictly depends on the quality of the idea it describes ('projects idea quality'). In turn, an increased applications' quality could augment the "acceptance rate" of the project proposals and it could further promote the proposals' "evaluation rate", ending up in a higher number of "Refunded and completed projects". Once again, as both loops have begun with an increase in the stock and closed with an increase in the same variable, they can be considered as a reinforcing, or positive, loops.

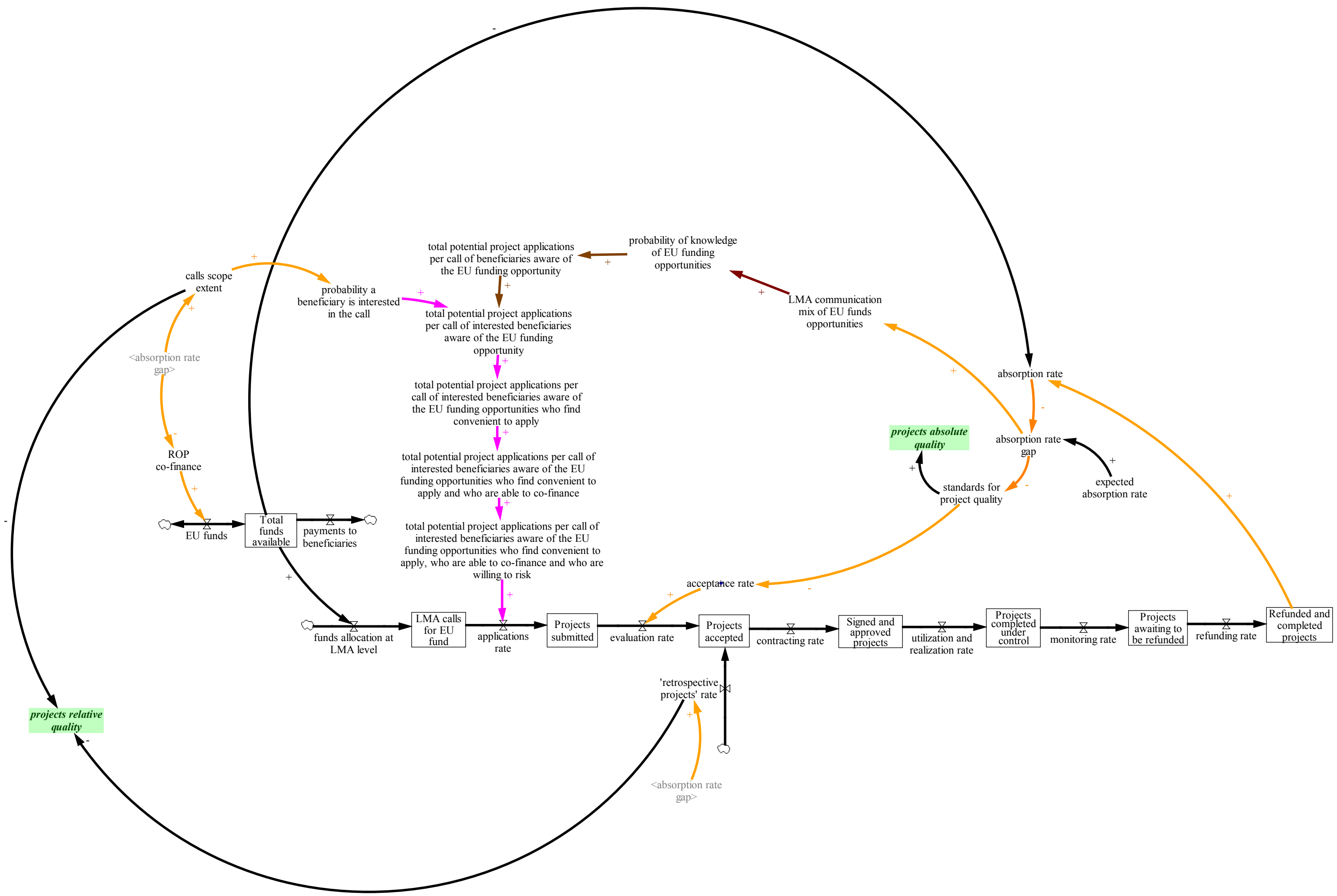
Lastly, a fourth loop always starting with an increase in the "Refunded and completed projects" state, leading to higher "LMA administrative capacity" (through increasing "LMA skills learning" and "LMA staff capacity" first). Such an increased capacity fosters the "LMA communication mix of EU funds opportunities" since the LMA becomes able to make better CP opportunities promoting, which in turn increases the "probability of knowledge of EU funding opportunities". This probability can be also increased by increments in "media coverage of EU funding opportunities", in "trade and professional associations contribution" and in "intermediary consultancy companies". All these variables may improve the communication of the funding programmes to potential beneficiaries and inform them about the existence of EU financing calls and the feasibility of accessing to these funds (Barberio et al., 2017; Borz et al., 2018; Capello and Perucca, 2017; Jurevičienė and Pileckaitė, 2013). Continuing through the loop by following again the projects applications loop, the series of causes and effects raises the "Refunded and completed projects". This is also a reinforcing loop.

3.1.5. Shortcut strategies to increase absorption loops

If necessary, LMAs can adopt several strategies for increasing absorption rate (when it is delayed with respect to the desired rate). In fact, the absorption can be increased by: (i) decreasing the standards of the projects' quality (the authority decreases its standards in order to accept more projects), (ii) by extending funding for existing projects (i.e. 'retrospective projects'), (iii) by broadening the call's scope (iv) by reducing the amount of LMA co-finance or (v) by fostering communication about CP opportunities (Figure 7). Thus, these alternative options are represented by four different loops, as described below.

The "Refunded and completed projects" divided by the "Total available funds" determine the "absorption rate" (Tatar, 2010; Zaman and Cristea, 2011). If the "absorption rate" is too low in comparison to the "expected absorption rate" an "absorption rate gap" follows, which is nothing more than the difference between the expected and desired rate and the actual. At this point, the four different loops, which correspond to the four LMA strategies to close the undesired absorption gap, separate. In the first loop, an increase in the "absorption rate gap" forces the LMAs to lower its "standards for project quality" to maximise the number of the projects accepted. Thus, a decrease in the "standards for project quality" increases the "acceptance rate" which in turn augments the "evaluation rate" (Burja and Jeler, 2018; Jurevičienė and Pileckaitė, 2013; Zaman and Cristea, 2011). As a result, an increase in this rate, following a series of positive causal links, finally leads to a higher "Refunded and completed projects" number. It must be specified that this strategy is very difficult to be put into action (LMA managers cannot easily decrease standards, they have to interface with control bodies) and therefore it is reported as a possible but unlikely solution (this 'weakness' is portrayed in the model by a dotted causal arrow connecting "absorption rate gap" and "standards for project quality"). In the second loop-strategy, a rise in the "absorption rate gap" increases the "retrospective projects' rate", which refers to the additional financing of projects already accepted and funded through an EU scheme (not necessarily CP) to facilitate the absorption of the EU funding (for example, see Corte dei Conti, 2017 for the Italian case). In fact, those projects already comply to EU regulations, their quality has been evaluated and accepted by a recognized body, while they are already in place, Thus, the LMA can easily identify them due to their high availability and rapidly insert them into the CP funding process. In the system map, such an increase rate leads to a greater "Projects accepted" number ending up raising the "Refunded and completed projects". In the third loop, a higher "absorption rate gap" force LMAs to broaden their calls' scope ("calls scope

FIGURE 7.
Shortcut strategies to increase absorption loops



extent") to persuade more potential beneficiaries to submit a proposal. A growth in the latter variable augments the "probability a beneficiary is interested in the call" and thus, following the projects application loop, increases the "Refunded and completed projects". The fourth strategy consists in a reduction of the additional co-finance provided by the LMA to the EU funds (lower "ROP co-finance"). Such decrease reduces the volume of the "Total funds available" and instantaneously increases the "absorption rate" being equal the number of projects completed, since now there are fewer funds to dispose of, and consequently the absorption gap diminishes. Finally, in the fifth loop, an increased "absorption rate gap" could push the LMAs' to invest in communication strategies to inform potential beneficiaries (by raising the "LMA communication mix of EU funds opportunities"). A higher number of such strategies boosts the "probability of knowledge of EU funding opportunities" and consequently, following the word of mouth loop, leads to a higher "Refunded and completed projects number. In all the reported loops, an increase in the "absorption rate gap" produces a stimulus that is transmitted through the loop to lead to an increase in the "Refunded and completed projects" and a decrease in "absorption rate gap". Therefore, these are balancing loops, or negative loops producing goal-seeking behaviour.

3.1.6. Absolute versus relative projects' quality

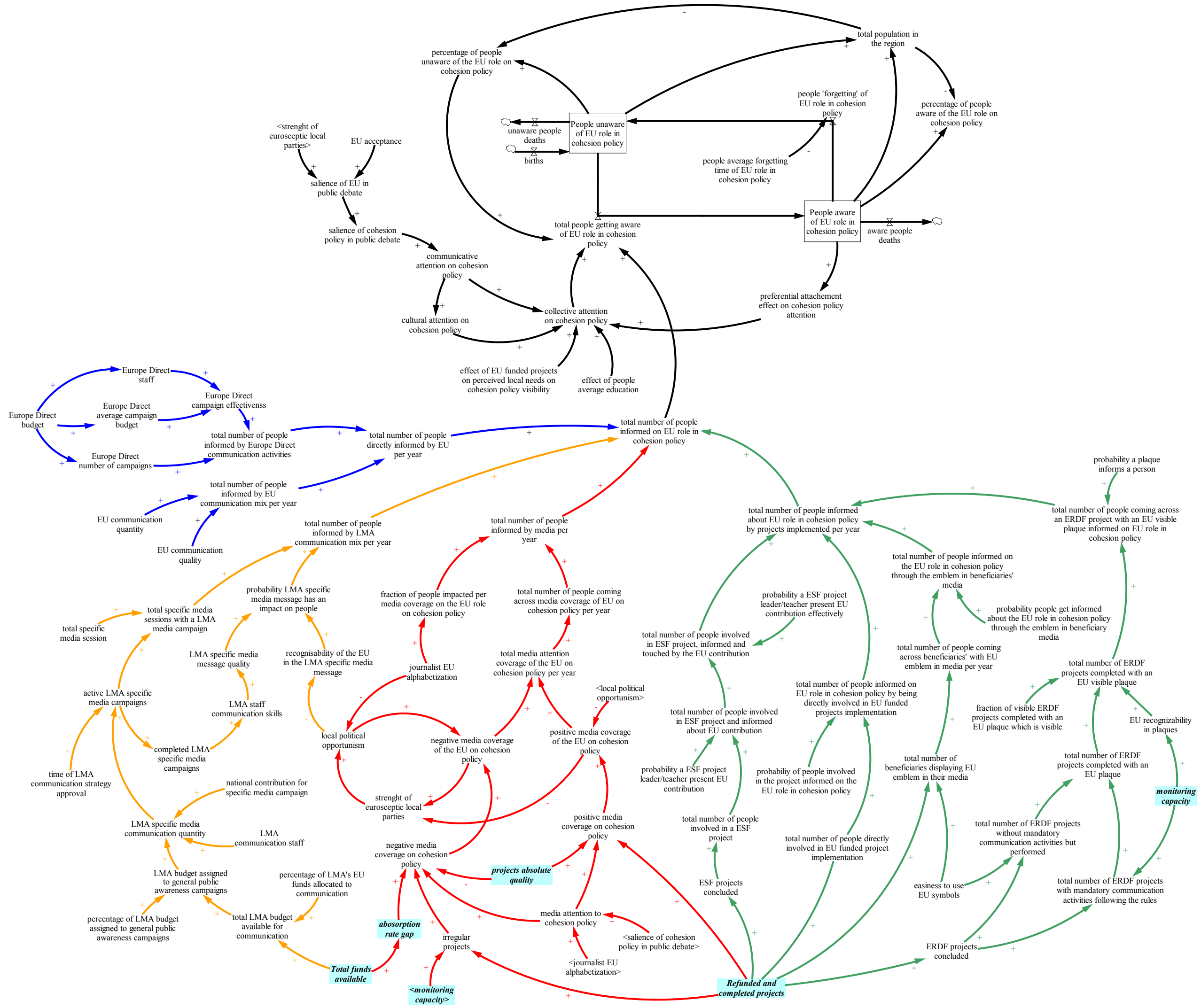
Except for the LMA strategies pointing at either increasing its communication or decreasing co-finance, the other three strategies end up to negatively affecting project quality. If LMA decreases its "standards for project quality", it also reduces its "projects absolute quality". According to a first-effort definition, "projects absolute quality" refers to the intrinsic quality of the projects, namely if they are properly performed (e.g. timely, high-quality work). On the contrary, if LMAs opt for the other two strategies to reduce absorption gap, extending the calls' scope or relying on retrospective projects, it negatively affects the "projects relative quality". The projects relative quality" is defined as the distance between the initial ROP objectives and the effective needs that a project fulfils. The greater this gap, the lower is the project relative quality.

To clarify this delicate difference, an indicative case follows; a LMA initial plan is to improve local business IT systems with new powerful computers but unfortunately the call it makes stays unfulfilled and so there is an absorption gap. Therefore, it decides to extend the calls' scope to include the possibility for companies to buy phones, surveillance systems, air-conditioning systems, etc. In this case, the projects which go for the new call and get accepted can be expected to have a high absolute quality (if the LMA keeps high its standards) but low relative quality, since the new projects scope is far away from the initial LMA objective.

3.2. Public awareness subsystem

The following subsystem reflects the main streams of information that affect the citizens' awareness about CP funds. To provide a definition of awareness, a person is considered as aware if they have heard about any EU co-financed project that improves the area where they live. To the best of our knowledge, this is a first research effort for mapping all major factors that potentially influence these streams of information. In fact, we found four main streams (Figure 8), namely: (i) the "EU direct" stream (highlighted in blue), (ii) the "local managing authority" stream (highlighted in orange), (iii) the "media" stream (highlighted in red), and (iv) the "funded projects implemented stream" (highlighted in green). The system further includes a "closed pipeline" mechanism that balances the trade-off between citizens' awareness and forgetfulness about EU funded projects on their region. In addition, the light blue boxes indicate that the respective variables act as inputs from the funds' absorption subsystem. In other words, the absorption subsystem influences the awareness subsystem through these channels.

FIGURE 8.
CLD of the public awareness subsystem



3.2.1. Closed pipeline

Figure 9 depicts the system's closed pipeline of the main flow of citizens that get either aware or forget about the European Cohesion Policy. The people of a community ("total population in the region") can be unaware ("People unaware of EU role in cohesion policy") or conscious ("People aware of EU role in cohesion policy") of the EU contribution to their region through the CP. The ratio of aware population to the "total population in the region" estimates the "percentage of people aware of the EU role on cohesion policy"), which constitutes the major outcome of the public awareness subsystem.

Two types of dynamics regulate the aware and unaware population: (i) the demographic changes, and (ii) an aware-forgetting closed mechanism. The demographic changes alter the population composition; "unaware people deaths" and "aware people deaths" negatively affect the unaware and aware populations, respectively. Notably, all new-borns ("births" flow) end up in the unaware population, as, obviously, they do not know about the CP existence. The closed mechanism illustrates the cycle between people informed and aware about EU role in CP ("total people getting aware of EU role in cohesion policy") and people forgetting it ("people 'forgetting' of EU role in cohesion policy"). The later flow transfers people from the aware population to the unaware one, expressing the idea that after a certain average time ("people average forgetting time of EU role in cohesion policy") citizens tend to forget.

On the other hand, the awareness mechanism of the EU role in CP is affected by 3 factors. The first factor refers to the "percentage of people unaware of the EU role on cohesion policy", which constitutes the ratio of unaware population to the "total population in the region". This fraction represents the susceptible citizens who can potentially move from unaware about the EU role on CP to aware (Bass, 1969). In fact, if there is a considerable pool of unaware citizens, it is potentially possible to inform more people. In contrast, when unaware people are few, the transfer rate to aware population is more challenging due to the high number of people already informed.

The "collective attention on cohesion policy" constitutes the second factor influencing the awareness flow. This variable refers to the attention a population reserves to a topic which is high when the topic emerges, while it starts to decrease inexorably when this attention reached its peak (Candia et al., 2019). In this vein, the "collective attention on cohesion policy" could consist: (i) the "communicative attention on cohesion policy", and (ii) the "cultural attention on cohesion policy". According to Candia et al. (2019), communicative attention refers to the most liable attention that a community gives to a subject, namely the initial one in which discussion on the topic is increased. Instead, cultural attention is the most solid one; it reflects the idea that cultural object sediments stay in mind for longer even if they have disappeared from the communicative attention. Notably, those two constituents are strictly dependent; the quantity of communicative attention gained by a topic defines also the quantity of the cultural one. The "communicative attention on cohesion policy" is increased when "salience of cohesion policy in public debate" is high. In fact, when the EU role becomes the centre of public debate, people, in general, pay more attention to CP. In turn, the "salience of EU in public debate" is positively influenced by the "strength of eurosceptic local parties" and the general acknowledgement of EU politics importance in daily life ("EU acceptance"), since both factors tend to mention EU in their public discourses even for opposing reasons. The "collective attention on cohesion policy" can be further affected positively by the citizens perception of the EU funded projects completed as important ("effect of EU funded projects on perceived local needs on cohesion policy visibility"), as well as by the average education of the population ("effect of people average education"). In addition, collective attention is also influenced by the so-called "preferential attachment effect on cohesion policy attention", which *'refers to a process in which attention begets attention'* (Candia et al., 2019: 82), creating a reinforcing loop that fosters the initial attention. Finally, to activate the awareness flow ("total people getting aware of EU role in cohesion policy"), citizens should be informed about EU role in CP ("total number of people informed on EU role in cohesion policy").

FIGURE 9.
Closed pipeline

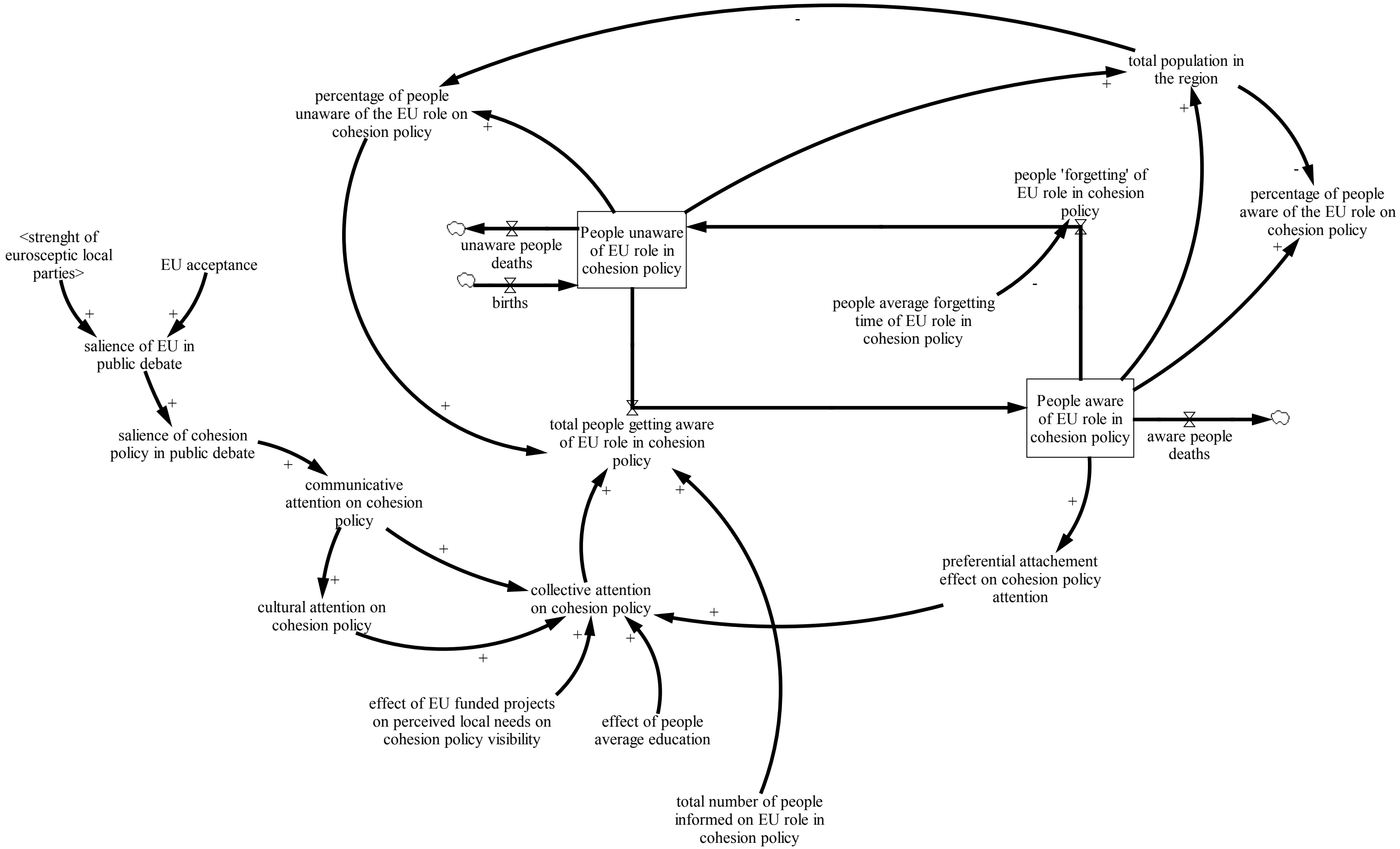
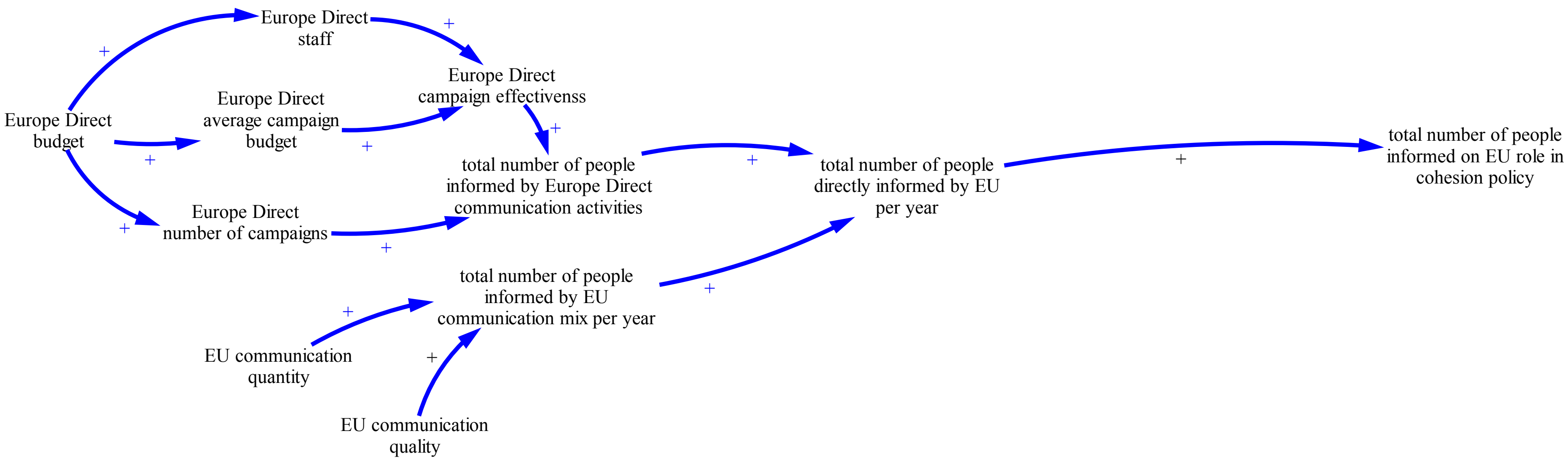


FIGURE 10.
EU direct stream of information



3.2.2. EU direct stream of information

This stream is composed of two sources: (i) the Europe Direct agencies' collaboration with locals through a network of information centres, documentation centres and speakers in every EU region, and (ii) the communication directly put in place by European institutions through media campaigns (Figure 10).

With respect to the first substream, the total budget that EU provides to the Europe Direct agency ("Europe Direct budget") can have a positive influence on: (i) the budget of the information campaigns ("Europe Direct average campaign budget"); (ii) the number of personnel that is engaged with such campaigns ("Europe Direct staff"); as well as (iii) the number of the related campaigns ("Europe Direct number of campaigns"). An increase in the first two quantities affects the ("Europe Direct campaign effectiveness"), which combined with "Europe Direct number of campaigns" in place, can lead to a rise of the "total number of people informed by Europe Direct communication activities" as the better and the more the campaigns are, the more citizens will get aware about the cohesion policy.

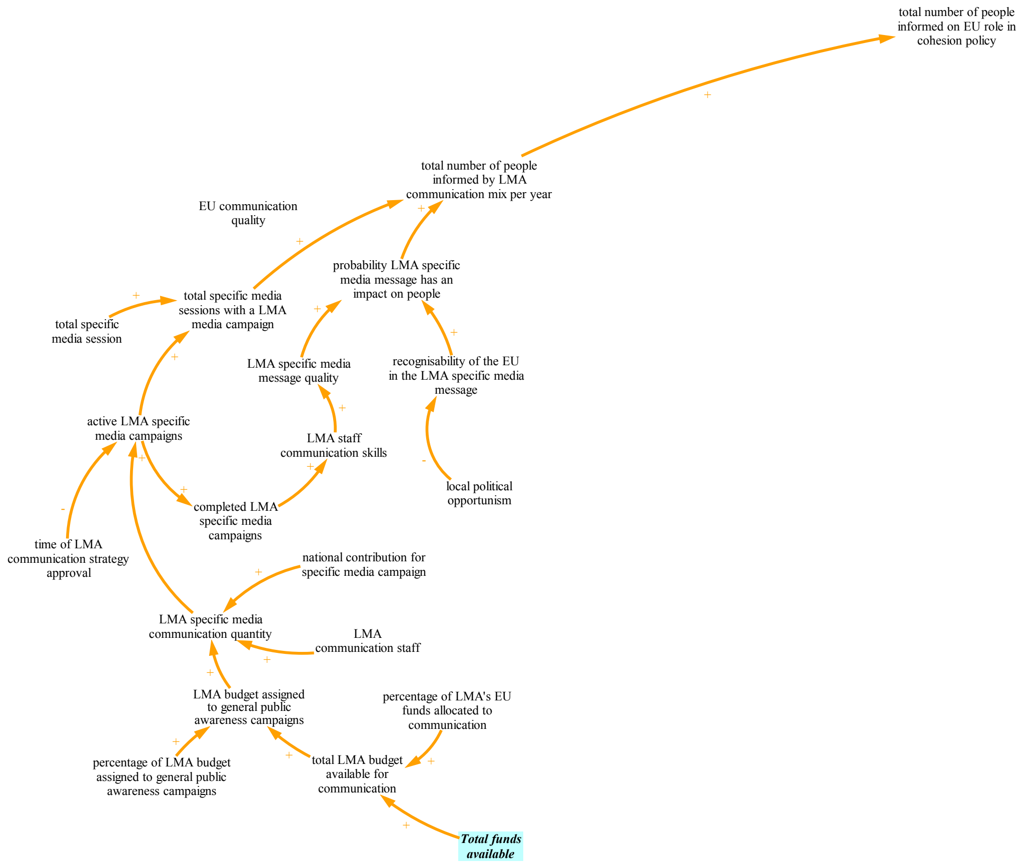
At the same time, both the "EU communication quantity" and the "EU communication quality positively influence the "total number of people informed by EU communication mix per year". The total number of citizens who are informed by both the Europe Direct agency and the EU in general equals to the "total number of people directly informed by EU per year" that, in turn, increases the overall "total citizens getting aware of EU role in cohesion policy" flow.

3.2.3. LMA stream of information

Figure 11 depicts the stream of information as provided by the LMAs. To start with, a part of the EU's "Total funds available" (as an input of the absorption system), which is calculated based on the "percentage of LMA's EU funds allocated to communication", covers the "total LMA budget available for communication" about the CP. Then, part of it (defined by "percentage of LMA budget assigned to general public awareness campaigns") is allocated to the LMA for launching campaigns to raise the general public's awareness ("LMA budget assigned to general public awareness campaigns"). An increased budget for campaigns and a high number of LMAs' personnel engaged in communication activities ("LMA communication staff"), eventually along with "national contribution for specific media campaign", foster the number of campaigns the LMA can launch ("LMA specific media communication quantity"). Then, once the communication campaign quantity is decided, the campaigns can start ("active LMA specific media campaigns"); a high quantity of approved campaigns increases the number of active ones. However, the rate of active campaigns slows down in case the "time of LMA communication strategy approval" is high, since this delay can relent the process starting. Finally, an increased total number of launched campaigns can potentially raise the "total specific media session with a LMA media campaign", that is the session of a specific media that people are involved in and in which a LMA campaign exists. Of course, since not all the media have the same usage rate, we adjust this effect by considering a "total specific media session".

However, a successful campaign needs to be impactful as well ("probability LMA specific media message has an impact on people"). A low "local political opportunism" can lead to an increased "recognisability of the EU in the LMA specific media message" by the people that in turn boosts the likelihood of a positive effect of the LMA's media campaigns on citizens ("probability LMA specific media message has an impact on people"). In addition, a high "LMA specific media message quality", which is positively affected by the "LMA staff communication skills", can further augment this probability. Notably, these skills could be further promoted by the active campaigns that are completed ("completed LMA specific media campaigns"), since a high number of campaigns performed can foster the experience is gained by the LMA staff. An increased "probability LMA specific media message has an impact on people", along with a large number of "total specific media session with a LMA media campaign", can raise the "total number of people informed by LMA communication mix per year", as the more the effective LMAs' campaigns exist, the more people get informed. Finally, the total number of people informed by the local managing authorities further adds on the "total citizens getting aware of EU role in cohesion policy" rate.

FIGURE 11.
LMA stream of information

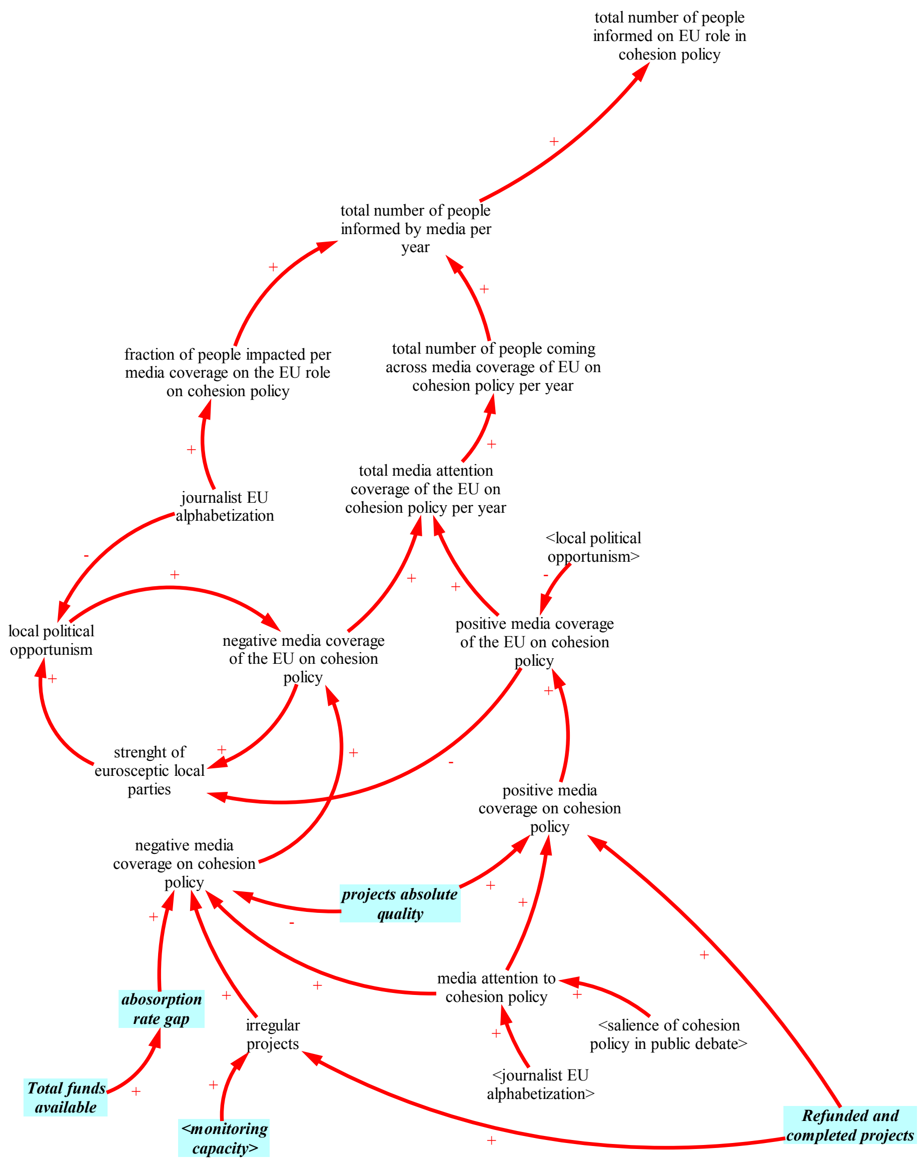


3.2.4. Media stream of information

The media affects the citizens' awareness through two different streams: (i) the positive news stream, and (ii) the negative news stream (Figure 12). Although the two streams cause contradictory types of awareness, this part of the model focuses only on the fact that citizens get informed about cohesion policy and structural funds, no matter the nature of the news.

Specifically, the "positive media coverage on cohesion policy" is directly influenced by the total number of "Refunded and completed projects", their "projects absolute quality" (both of which are inputs of the absorption subsystem) and the "media attention to cohesion policy". In fact, the more the projects completed are and the better quality they have, the more positive attention the media is likely to assign to CP. At the same time, if there is high media attention to CP related issues (fostered by augmentation in "journalist EU alphabetization" and "salience of cohesion in public debate"), the positive coverage is further increased. However, CP communication via media is not enough to inform citizens about the EU contribution to that. It is necessary that the news reports explicitly the EU role in contributing to the project under implementation or completed. In this respect, local politics might try to take full credit for a well-done project under the CP scheme, without mentioning other actors' contributions. Therefore, from the total mass of positive news about CP ("positive media coverage on cohesion policy"), it is necessary to consider only those that mention EU role ("positive media coverage of the EU on cohesion"). Positive coverage, however, can be negatively affected by the strength of the "local political opportunism", which may conceal the role of EU in funding specific appreciated local policies.

FIGURE 12.
Media stream of information



In contrast, the "negative media coverage on cohesion policy" is affected by the EU funds' "absorption rate gap" (absorption system's input), the number of "irregular projects", as well as the "project average quality" (absorption system's input) and the "media attention to cohesion policy" (as in the case of the positive media coverage). Regarding projects' quality, when it is low, the negative news on CP is increased. In addition, any irregularities on the projects completed (a high number of "Refunded and completed projects" raises the possibility of the existence of "irregular projects"), which are discovered easier when the LMA "monitoring capacity" (absorption system's input) is high, augments the negative media coverage. Finally, an increased absorption gap, which gets higher when the volume of "Total funds available" (absorption system's input) is high, can further have a negative effect on cohesion policy's media coverage. Contrary to what happens in the positive stream, if negative press attention occurs regarding CP funded projects, "local political opportunism" may try to cover own inefficiencies in EU fund management by blaming the EU instead. This shifting the burden to the EU may increase the probability of "negative media coverage of the EU cohesion policy". However, opportunism may be balanced by journalists' ability to recognize actual contributors to a CP funded project ("journalists EU alphabetization"). At this point, a vicious cycle of negative political news arises: a high "negative media coverage of the EU on cohesion policy" increases the "strength of eurosceptic local parties" in Europe, which in turn raises again the "local political opportunism", creating a self-sustained cyclical effect in which all factors continuously incite each other. Hopefully, the "strength of eurosceptic local parties" could be reduced in case significant "positive media coverage of the EU on cohesion policy" takes place. In this respect, the local parties' level of analysis was adopted since their crucial role in CP implementation and European integration relation is evident (Gross and Debus, 2018).

Negative and positive media coverage per year adds on the "total media attention coverage of the EU on cohesion policy per year", which in turn positively affects the "total number of people coming across media coverage of EU on cohesion policy per year". However, when citizens come across a media coverage on cohesion policy, they are not necessarily informed. In fact, the "fraction of people impacted per media coverage on the EU role on cohesion policy" positively affects the "total number of people informed by media per year". This means that only if there is a significant impact of the news on the citizens (which is high when the "journalist EU alphabetization" is high too), citizens actually get aware of the media message. Finally, the total number of citizens who are informed on cohesion policy by the media further add on to the final "total citizens getting aware of EU role in cohesion policy" rate.

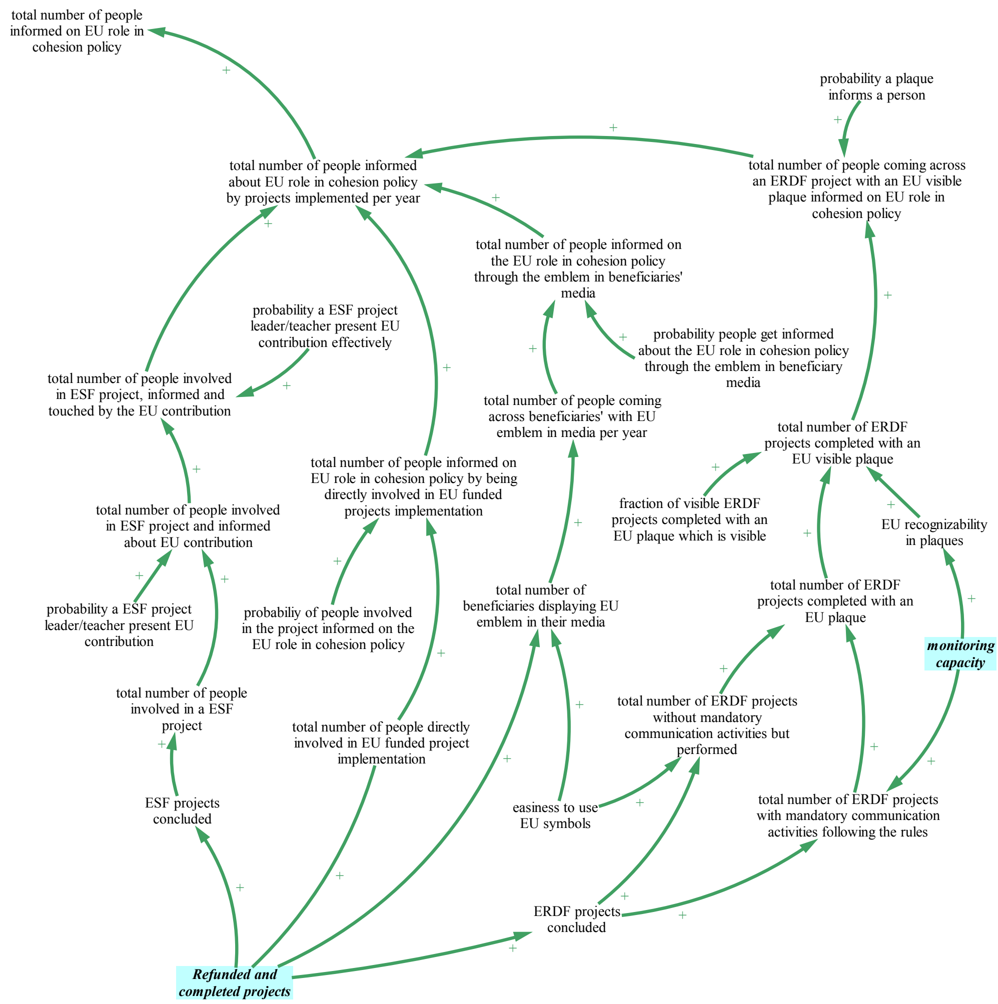
3.2.5. Funded projects implemented stream of information

This stream is divided into four substreams concerning the citizens' awareness that imply: (i) participation in an ESF project, (ii) direct involvement in a European Cohesion Policy project implementation, (iii) participation in the project beneficiaries' media networks, and (iv) coming across the related label of the European Regional Development Fund (ERDF) programme on a project plaque (Figure 13).

Beginning from the first substream, an increased number of "Refunded and completed projects", as an input of the absorption system, (that also imply a growth of "ESF projects concluded") raises the "total number of people involved in an ESF project". A high number of people participating at an ESF project, along with a considerable "probability an ESF project leader/teacher present EU contribution", can lead to an increased "total number of people involved in ESF project and informed about EU contribution". However, apart from conveying the EU contribution message to the participants, project leaders/teachers should further make it in an effective way. Such a high probability ("probability an ESF project leader/teacher present EU contribution and that is effective"), along with the number of participants informed about ESF programme, can lead to a growth in the "total number of people involved in ESF project, informed and touched by the EU contribution".

With respect of the people having direct involvement in a regional EU funded project implementation, a high number of "Refunded and completed projects" increases the "total number of people directly involved in EU funded project implementation". However, not all people involved in the projects are really informed about the role and the goals of the EU in the cohesion policy. Therefore, except for the number of people involved in the projects, a high "probability of people involved in the project informed on the EU role in cohesion policy" is further required for obtaining a growth of the "total number of people informed on EU role in cohesion policy by being directly involved in EU funded projects implementation".

FIGURE 13.
Funded projects implemented stream of information



Concerning the citizens that get informed through the beneficiaries' media networks, a high number of "Refunded and completed projects" may increase the "total number of beneficiaries displaying EU emblem in their media" (that depends on the "easiness to use EU symbols"). A significant number of beneficiaries displaying EU emblem further raises the "total number of people coming across beneficiaries' with EU emblem in media per year". However, not necessarily all the people that have seen the emblem translate the symbol in awareness concerning the role of the EU in CP. Thus, apart from an increased number of people that have observed the EU emblem, an increased "probability people get informed about the EU role in cohesion policy through the emblem in beneficiary media" is further required to augment "total number of people informed on the EU role in cohesion policy through the emblem in beneficiaries' media".

Finally, going through the substream of people that recognise the label of EU funding on an ERDF project's sign, an increased number of "Refunded and completed projects" implies an augment of "ERDF projects concluded". ERDF projects are divided into: (i) the projects that have optional communication activities ("total number of ERDF project without mandatory communication activities but performed"), and (ii) the ones that have mandatory ("total number of ERDF projects with mandatory communication activities following the rules"). Therefore, an increase of the total ERDF projects leads to a growth of both categories. It should be also mentioned that the number of optional activities may be enhanced by a higher "easiness to use EU symbols" (if it's complicated to use the EU symbols, beneficiaries might be discouraged to use them), while the mandatory ones could be fostered by a higher level "monitoring capacity" of LMA (absorption system's input) to control beneficiaries add in their site a plaque. The number of projects that actually fulfil optional and mandatory communication requirements sum to the "total number of ERDF projects completed with an EU plaque" for communicating the EU funding contribution. However, only if the plaques are visible ("fraction of visible ERDF projects completed with a visible plaque", namely the projects' information need to be in visible locations and with a visible plaque)" the "total number of ERDF projects completed with an EU visible plaque" increases. In addition, since EU flag and symbols have to be understandable, "EU recognizability in plaques", which in turn is affected positively by the "monitoring capacity", plays a role in increasing visibility of projects' information. Thereafter, if many projects have a visible EU plaque, the "total number of people coming across an ERDF project with an EU visible plaque informed on EU role in cohesion policy" raises constrained by the probability that the plaque provides a meaningful and impactful information about EU funding ("probability a plaque informs a person"). Finally, all citizens of the four different substreams add to the "total number of people informed on EU role in cohesion policy".

4. Discussion and Conclusions

4.1. Modelling insights

The described conceptual SD model crystallizes the expertise of the academic society, policy-makers and related stakeholders, as collected through literature review, interviews, official documents, focus groups and workshops. While scattered literature is available on the organisational perspective of CP, our modelling framework fills this gap as a first attempt to develop a comprehensive view on the system through identifying various factors that affect the CP absorption and communication, as well as to provide an integration of the absorption and awareness subsystems that are considered as interrelated reinforcing each other.

Our novel SD model contributes towards providing a solid basis for: (i) an in-depth analysis of relevant actors and variables that affect the behaviour of the system, and (ii) a rigorous development of hypotheses concerning major "cause-effect" relationships in both subsystems of the structural funds' absorption and the citizens' awareness about the EU role in the local socio-economic development. In practice, this model constitutes a tool for exploring: (i) the dynamics between CP regional demand (e.g. beneficiaries' applications) and supply (e.g. LMAs' calls) over time, and (ii) the manner in which the equilibrium between them affects the absorption system. In addition, the proposed model could be used to analyse the interconnections among the funds' expenditure, the volume of information about CP results in the local communities and the actual level of citizens' awareness.

More specifically, our work aims at encouraging researchers and policy-makers to embrace a systemic approach to the study of CP. Besides the complexity of each subsystem ("absorption" and "awareness"), our model suggests that an appropriate perspective considers the quandaries that ensue from the interaction of the two subsystems; they are interweaved by a number of processes so that, in the long-term, the evolution of CP can be fully investigated only by looking at the nature of the feedback between the two subsystems. For example, the absorption dynamics depend on the number of potential beneficiaries and on their awareness about the existence and mainly the functioning of CP. Yet, the awareness dynamics depend on the communication policy, which includes the word of mouth that occurs when projects are funded and beneficiaries share their experiences. In this light, in the long term, the more effective the processes of funds allocation and absorption is, the easier the communication of potential benefits and opportunities about CP will be. From this perspective, the dynamics of fund allocation, we strongly advice, cannot be considered disconnected from the communication of the policy. On this ground, we suggest that the communication of Cohesion Policy is an integral element of the policy itself.

Thus, the proposed interpretative framework could support: (i) European policy-makers in understanding the system's complexity and, subsequently, designing more efficient funding schemes and policy interventions, (ii) LMAs in managing efficiently the funds and increasing the quantity and quality of the projects implemented, (iii) all actors involved in the funding procedure in improving the approach with which they communicate the projects' outcomes to the citizens for increasing awareness. In addition, we anticipate that this model could enable the scientific community to foster and deepen the research in the CP field. Specifically, by providing a boundary object, our qualitative model stimulates a better and more focused discussion on the CP system, from theoretical contexts (i.e. orienting practitioners and researchers in positioning their thinking within the CP system) to more practical (i.e. improved and facilitated communication). In line with this, we envisage that the proposed dual definition of project quality could assist in creating a common background on this "missing" concept.

4.2. Research directions

After the conceptual mapping of the system, the next phase of the usual SD modelling approach is the quantification, which entails the conversion of the CLD into a dynamic simulation model (Sterman, 2000) followed by a rigorous and tested validation procedure aiming at assessing its reliability (Forrester and Senge, 1980; Barlas, 1989). This process is useful for estimating the strengths of the different mechanisms in the structure and can translate the proposed qualitative framework into a computer-simulation model for providing policy-makers and stakeholders with meaningful sensitivity and scenario analysis.

Acknowledging the outcomes of this study, future efforts on CP should direct towards broadening the research scope to improve CP comprehension and provide new perspectives for more specific studies. Therefore, apart from SD, the innovative use of methodologies suited to the analysis of complex systems, such as soft system methodologies (Al-Harrasi, 2017) or agent-based modelling (Bao and Fritchman, 2018), is suggested. In addition, due to the multitude of actors involved in the system, the development of models through participatory approaches could be meaningful (Vennix, 1996); this process could improve outputs quality and create diffused commitment towards shared policy interventions.

Except for the methodological issues, emphasis should be placed on the research concerning the projects' quality. Although a first attempt to provide a definition of the dual nature of this concept is made, future research should focus on the development of empirical research to provide potential evidence on its existence. In a different direction, research in the field of CP should be expanded towards investigating the cause-effect relationships between citizens' awareness about funds' absorption and European identity. In this perspective, awareness about the positive impact of CP on local needs could be conceptualized as a precondition for building a stronger EU identity. Given that awareness is a more neutral term including citizens that may have either a negative or a positive perception about EU, a differentiation between these two types of perception could provide meaningful insights about the factors that influence the European integration.

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