

Cohesion policy and citizens' identification with the European union

Eva Výrostová

<https://doi.org/10.33542/VSS2023-2-4>

Abstract

European identity is recognised as an important element of the European Union's (EU) sustainability. It can be influenced by economic benefits from EU membership and a combination of historical, cultural, social, economic, and political factors. The paper focuses on identifying the relationship between citizens' identification with the EU and Cohesion policy expenditures as perhaps one of the most visible benefits of EU membership at the regional level. Results of econometric analysis reveal that citizens' identification with the EU is higher in regions with higher EU funds expenditures and better socio-economic situation. European identity seems to be positively influenced by perceived EU benefits, understanding how the EU works, and persuasion that country interests are considered in the EU. Moreover, we confirm the positive relationship between awareness of Cohesion policy and identification with the EU.

Keywords: European structural and investment funds, European identity, European regions

Introduction

The primary objective of the Cohesion policy (CP) is to contribute to the economic, social, and territorial cohesion of the European Union (EU) to reduce regional disparities and differences between countries. It also contributes to achieving EU political priorities, such as the European Green Deal, digital transformation, and strengthening the EU economy and social Europe. As the Cohesion policy accounts for one-third of the EU budget, it is one of the most visible policies of the EU. In the 2021-2027 programming period, this policy accounts for 392 billion euros, which are delivered through four different funds: European Regional Development Fund (ERDF), European Social Fund Plus (ESF+), Cohesion Fund (CF), and the Just Transition Fund (JTF). As the Cohesion policy solves regional needs, it is perhaps the most tangible for EU citizens. It is reasonable to assume that this policy is more visible in regions that receive more funding (less developed regions) or those that receive funding for longer periods (regions in the original 15 member countries). Visibility is enhanced by the fact that the beneficiaries are obliged to publicise the funding, projects, and achievements to increase awareness of the benefits of the EU and the use of the EU budget.

Moreover, the multilevel governance character of CP encourages the participation of various socio-economic actors at the subnational level in regional development policies. Therefore, we expect a positive relationship between CP funding and citizens' identification with the EU. Responsibility for implementing this policy is carried out at the level of member states. Therefore, we expect that success or failure in implementing this policy may influence citizens' attitudes to the EU. When the Cohesion policy effectively reduces regional disparities, promotes sustainable development, and increases the quality of life, e.g., through improved infrastructure, job opportunities, education, investment, etc., it could affect attitudes towards the EU.

Nevertheless, although the Cohesion policy has heavily supported some regions, their citizens voted for parties with strong Eurosceptic orientation (Rodríguez-Pose and Dijkstra, 2021). In recent years, national elections have revealed an increasing popularity of Eurosceptic parties and a declining confidence in European institutions (Aiello et al., 2019). The example of the United Kingdom stresses how important it is to better inform about the benefits of CP and other EU policies. Fidrmuc et al. (2019) found that the relationship between CP and the remaining vote in the UK was weak at the regional level. The support for the EU was highest in economically strong regions, which benefitted from globalisation and international flows of capital and labour. Moreover, according to Fidrmuc et al. (2019), regions that benefitted the most from CP had lower voter participation in the Brexit referendum.

Several authors explore how Cohesion Policy influences European identity or ability to generate a positive perception of the EU among citizens. While some of the studies find that CP contributes to European identity (Rodríguez-Pose and Dijkstra, 2021; Borz et al., 2022), others found no impact of EU structural funds on the feeling of European identity (Verhaegen et al., 2014) and support for the EU (López-Bazo and Royuela, 2019).

There are also other factors influencing European identity, such as other EU policies, broader socio-political context, crisis (e.g., Armingeon and Ceka, 2014; Smętkowski and Dąbrowski, 2019), media, personal experiences, or attitudes and resources, e.g., socio-economic status, education, information, or language skills (Kaina and Karolewski, 2013), or political narratives. Armingeon and Ceka (2014) confirm some evidence for a direct effect of EU policies. They found that the most significant determinant of trust and support for the EU was the level of trust in national governments. Reinl and Braun (2023) argue that the group of citizens that hold the EU together experiences a personal benefit from the EU, is worried about the global crisis and has a general interest in politics and relative satisfaction with the current political affairs.

Our empirical research tests the utilitarian approach, according to which the respondents feel more like EU citizens when they perceive benefits from the Cohesion policy.

To evaluate such a relationship (hypothesis 2), first, citizens must be aware of the projects financed from EU funds in the regions where they live (hypothesis 1).

Hypothesis 1: There is a positive relationship between awareness of Cohesion policy and citizens' identification with the European Union.

Hypothesis 2: There is a positive relationship between Cohesion policy transfers and citizens' identification with the European Union.

The primary goal of Cohesion policy is to reduce regional disparities and improve the social welfare of the regions. Therefore, we assume that the socio-economic situation of the region where citizens live may influence European identity (hypothesis 3). In addition to the objective results of the Cohesion policy, the European identity can also be influenced by the subjective perception of the benefits of EU membership, which is tested by the last hypothesis.

Hypothesis 3: A positive relationship exists between the socio-economic situation of the region where citizens live and citizens' identification with the European Union.

Hypothesis 4: A positive relationship exists between the perception of benefits from the EU and citizens' identification with the European Union.

This paper is structured as follows. The first section provides a literature review on European identity or citizens' identification with the EU and the factors that influence it, focusing on the relationship between Cohesion policy and European identity. The second section describes the data and methodology. The third section presents the analysis of our main variables and the results on the relationship between cohesion policy and European identity. We conclude with the implications of the empirical findings.

1. European identity and Cohesion policy - literature review

European identity is recognised as an essential element for the sustainability of the EU as a political regime (Borz et al., 2022) and a prerequisite for forming a European community and legitimising the European integration process (Aiello et al., 2019). Several authors point to the benefits of European collective identity development for further integration (Kaina and Karolewski, 2013), effective functioning of the euro (the relationship between money and identity is reciprocal according Kaelberer, 2004), citizens' political support for the EU (van Klingeren et al., 2013), willingness to accept EU's redistributive policies and show solidarity

(Lengfeld et al., 2015), financial solidarity support with member states in economic crisis (Verhaegen, 2018).

Explanatory factors of public opinion towards the EU can be divided into economic and utilitarian (so-called hard factors) and soft factors relating to identity and cultural aspects (van Klingereren et al., 2013). "Economic utilitarian theory assumes a relationship between economic benefits, support for European integration, and European identity" (Verhaegen et al., 2014). This theory suggests that citizens are more likely to support integration if there is a net benefit for the whole economy (macro explanation) or direct support for their self-interest (micro explanation), e.g. de Vries and Edwards (2009). Utilitarian (hard) factors are based on rational choice theory. They can be measured by socio-economic variables such as GDP per capita, unemployment rates, education, occupation, income level, wealth, or perception of the economic situation in the region.

Soft factors are examined by van Klingereren et al. (2013), who, based on Social identity theory and Realistic group conflict theory, assume that people who have a strong attachment to their nation may perceive the European identity as a potential threat and increasing migration between EU countries can lead to Euroscepticism. Their results did not support both theories, as national pride and a possible increase of cultural threat by immigrants do not always lead to more Euroscepticism. De Vries and Edwards (2009) stressed that the importance of political elites shapes public opinion towards the EU. They point out that Eurosceptical elites can be found on both extremes, right and left, of the political spectrum, but for different reasons. Extreme right parties' argument is based on the defence of national sovereignty, and the extreme left's argument is based on economic insecurity and fights against the neoliberal nature of the EU project (De Vries and Edwards, 2009).

According to López-Bazo and Royuela (2019), other factors influencing attitudes toward the EU include communal identity, demographics, and political and institutional factors, such as EU effectiveness and corruption. Economic benefits from EU membership can influence European identity development, together with geographic proximity, especially in border regions, historical events, such as wars, alliances, cooperation, cultural diversity, media, and crises (such as financial, debt crisis or COVID-19 crisis). Attitudes towards the EU vary among individuals and regions and are subject to change over time.

European identity can be influenced by economic benefits from EU membership, which are the results of EU policies, such as Cohesion policy, Common agriculture policy, internal market, monetary union, foreign policy, Erasmus programme, Citizens, Equality, Rights and Values Programme, and other EU programmes and funds. One of the most visible for the citizens is the EU Cohesion policy, which is also the most redistributive.

The role of EU Cohesion policy in developing European identity has been investigated by several authors with mixed results. Citizens' support for and identification with the EU on a

regional level became the object of research only recently. Borz et al. (2022), using the survey in 17 regions across 12 member states, found that citizens who recognise the advantages of EU Cohesion policy for themselves and their region's development were more likely to develop European identity. They confirm that cognitive awareness of the CP and its communication contributes to citizens' identification with the EU. However, they found that individuals who think that their country benefitted from EU membership still have a predominant country identity. Most individuals who declare a sole European identity were from old member states who don't think their country benefitted from EU membership. Based on a case study of two Dutch regions (the Netherlands is one of the largest per capita net contributors to the EU budget), CP and citizens' perception in old member states is investigated by Dąbrowski et al. (2021). They mention growing Euroscepticism through the rejection of the 2005 referendum on the EU constitutional treaty, anti-immigrants' sentiments, rejection of the EU Association Agreement with Ukraine in 2016, and extreme right-wing parties in government in the 2017 national election.

Moreover, CP funding does not play an important role in total public investment (only 0,59% in the Netherlands in 2015-17 compared to 84% in Portugal, 80% in Croatia, or 55% in Slovakia based on Cohesion data, 2020). Dąbrowski et al. (2021) confirm that the scale of funding, awareness of CP among citizens, and implementation architecture matter for EU identification. In the case of Dutch regions, low allocations of EU funding, way of communication, fragmented funding, bureaucratic government structure, and distance from the levels of government with which the citizens identify can have limited impact on positive EU identification. Based on the analysis of Eurosceptic voting at the regional level, Rodríguez-Pose and Lewis Dijkstra (2021) conclude that vote for parties strongly opposed and opposed to European integration is higher in areas with lower CP investment per capita, economic decline, lower level of education, higher level of unemployment and higher share of elderly population.

On the contrary, some studies suggest no relationship between cohesion policy and identification with the EU. Attitudes towards the EU are influenced by people's perceptions of the economic situation in their region and the EU institutions' ability to address regional challenges, but not by the allocated amount of structural funds per capita (Aiello et al., 2019). These authors found that subjective and individual indicators are more important in determining the support for the EU. Capello and Perucca (2019) conclude that awareness and satisfaction with CP are determined not by objective policy needs but by individuals' perceived needs. Most studies did not make a distinction between various types of funding. Still, Dellmuth and Chalmers (2018) examined different forms of spending. They realised that not all forms of spending support EU integration and that examining how transfers are spent is necessary. They reveal that transfers based on regional needs in three areas – human capital,

infrastructure, and environmental projects, increase support for the EU. López-Bazo and Royuela (2019) have found that the intensity of CP in the region doesn't impact support for the EU, although it affects the perception of the subjective benefit.

2. Data and methodology

The analysis uses representative data from residents of 27 EU countries using a Eurobarometer survey 2019 before the COVID crisis. Periods of crisis within the EU, such as economic downturns, influence how people perceive their European identity. These crises may lead to increased nationalism or calls for greater integration, depending on public sentiment. Smętkowski and Dąbrowski (2019) analysed the change in the EU image during the economic crisis of 2008-2016. They found that the role of Cohesion policy in shaping inhabitants' EU image was relatively small compared to the economic crisis. Compared to other authors, their results showed convergence of opinions on the EU across the regions, so the crisis has a different impact on European identity in different regions. As our primary goal within this paper is to evaluate the relationship between Cohesion policy and European identity, we are using data from before the COVID crisis, which can potentially substantially impact EU identity formation.

The United Kingdom was omitted from the main analysis because it is no longer a member of the EU. Our analysis is performed on a regional level, specifically NUTS 2 regions and NUTS 1 regions in several countries, due to the availability of data from the Eurobarometer 91.5 survey (European Commission and European Parliament, 2019). This survey is based on a representative sample of EU citizens aged 15 and over.

Citizens' identification with the EU (European identity) can be measured in different ways, such as citizens' attachment to Europe of EU (e.g., Mendez and Bachtler, 2017; Dąbrowski et al., 2017), European vs. national identification (e.g., Borz et al., 2022), support for European integration measured by evaluation of membership in EU (Verhaegen et al., 2014; Dellmuth and Chalmers 2018; López-Bazo and Royuela, 2019, Aiello et al., 2019) or support for European integration measured as the desired speed of European integration (de Vries and Edwards, 2009). Several authors combined indicators into the Euroscepticism indicator (van Klingeren et al., 2013), Dąbrowski et al. (2017) who combined the EU image and attachment to the EU, and Verhaegen (2018) who combined attachment to Europe and feeling like an EU citizen. Most authors used results of surveys (such as Eurobarometer, projects COHESIFY, or PERCEIVE).

Within this paper, we apply an approach partially similar to Verhaegen et al. (2014), and our dependent variable (European identity) is measured by Standard Eurobarometer survey results on opinion on this statement: "*You feel you are a citizen of the EU*".

2.1 Eurobarometer

The Eurobarometer Survey is a series of public opinion surveys conducted regularly on behalf of the European Commission since 1973. The Eurobarometer employs a standardised methodology to ensure consistent and comparable results across countries and time. While there is some critique related to the potential biases in question phrasing, the influence of current events on respondents' answers, or the challenges associated with representing the diverse views of the European public within a single survey, the consistent methodology and broad scope of the Eurobarometer render it a valuable tool for gauging public sentiment across the EU. Our analysis is based on standard Eurobarometer 91.5 (European Commission and European Parliament, 2019).

The explanatory variables that can influence people's views of the EU included in our analysis are knowledge about the EU and subjective indicators, such as perceived benefits of a country's membership in the EU and the perception that the country's interests are well taken into account in the EU (Table 1). Individual control variables include gender, age and perceived financial situation of the respondent's household. We expect that younger respondents have higher identification with the EU, because of potential higher benefits from free movement within the EU, participation in programmes like Erasmus+ or experience growing up in a more integrated Europe.

While the Standard Eurobarometer is conducted bi-annually and examines public opinion on broad topics, specialised surveys are known as 'Special Eurobarometers' and 'Flash Eurobarometers.' We are also using data from Flash Eurobarometer conducted as a phone survey on "Citizens' awareness and perception of EU Regional policy", taken seven times between 2010 and 2023. The newest Flash Eurobarometer 531 from 2023 allows us to see the relationship between awareness of CP and feeling like an EU citizen (this question was not included in the Eurobarometer survey 2019). In 2023, the survey included 25 718 interviews.

Table 1: Definition and encoding of variables based on Eurobarometer 91.5

Variable	Question ID	Question	Questionnaire options	Variable encoding
FEEL	QD2_1	Please tell me to what extent it corresponds or not to your own opinion: You feel you are a citizen of the EU.	Yes, definitely Yes, to some extent No, not really No, definitely not Don't know	0 if no, 1 if yes
BNFT	QF2	Taking everything into account, would you say that (OUR COUNTRY) has on balance benefited or not from being a member of the EU?	Benefited Not benefited Refusal Don't know	0 if not benefited, 1 if benefited
UNDRST	QA18A_1	Please tell me to what extent you agree or disagree with each of the following statements: I understand how the EU works.	Totally agree Tend to agree Tend to disagree Totally disagree Don't know	0 if disagree, 1 if agree
ACCTD	QA18A_2	Please tell me to what extent you agree or disagree with each of the following statements: The interests of (OUR COUNTRY) are well taken into account in the EU.	Totally agree Tend to agree Tend to disagree Totally disagree Don't know	0 if disagree, 1 if agree
HFIN	QA1A_5	How would you judge the current situation in each of the following? The financial situation of your household.	Very good Rather good Rather bad Very bad Don't know	0 if bad, 1 if good
GNDR	D10	Gender.	Woman Man	0 if woman, 1 if man
AGE	D11	How old are you?	Number	Number

Note: Answers to all questions indicating indifference ("Don't know") or refusals to answer were encoded as missing values.

2.2 ARDECO and Eurostat

The economic situation of the region can influence European identity. Regional control variables came from ARDECO, maintained by the European Commission's Directorate General for Regional and Urban Policy and updated by the Joint Research Centre, which serves as the Annual Regional Database for the European Commission. The predominant data source for ARDECO is Eurostat, augmented with information from other national and international sources. Country control variables also include dummy variables for joining the EU and membership in the Eurozone. Kaelberer (2004) showed that the relationship between money and identity and entering the EU are relevant control variables.

Table 2: Definition and encoding of variables based on ARDECO and Eurostat

Variable	Description	Units	Time
GDP	Regional GDP (source ARDECO, variable SHVGDP)	PPS, per capita.	2018
UNEM	Unemployment rate (source Eurostat, table lfst_r_lfu3rt).	Percentage.	2018
NEWEU	New EU member country, joining in 2004 or later.	0 = not new member, 1 = new member	
EURO	Eurozone member.	0 = not Eurozone member, 1 = Eurozone member.	

2.3 Cohesion open data platform

Based on utilitarian theory, the main variable of our interest is Cohesion policy funding. We use data from the Cohesion open data platform. This dataset offers a consolidated regional annual EU expenditure data source for European structural and investment funds (ESI funds¹). These payments are mapped to or estimated by NUTS-2 regions based primarily on the NUTS-2013 version. When EU-funded programs span multiple NUTS-2 regions, payments are allocated using data from managing authorities or by applying specific distribution rules. The usual annual division of expenditure aligns with the European Commission's payment schedule to the Member States rather than the actual expenditure timing on-site. This discrepancy may have a considerable impact on policy evaluation analyses. The Commission engaged BERGEN to model the genuine annual spending to better approximate yearly expenditure. This "Modelled_annual_expenditure" variable, made available in the dataset, is derived from the average of 100,000 simulations assessing annual EU payments for realistic expenditure estimation (European Commission, 2020).

This dataset on modelled expenditures has two main advantages. First, using the modelled values instead of the formally declared expenditure allows for its more precise attribution to individual years, which is essential when pairing the data with the views and perceptions of respondents in the Eurobarometer survey. Second, the dataset integrates the expenditure over various funds and different programming periods, allowing for the estimation of the total effect of EU funding in the given period.

One of the disadvantages of this dataset is its limited coverage: the dataset does not include expenditures of 2019 and beyond. However, we do not expect this shortcoming to be

¹ ESI funds in programming period 2014-2020 include Cohesion policy funds (ERDF, ESF, CF, Youth Employment Initiative - YEI), Fund for European Aid to the Most Deprived (FEAD), European Agricultural Fund for Rural Development (EAFRD) and European Maritime and Fisheries Fund (EMFF).

significant vis-à-vis our research objective, as the data for late 2019, but mainly 2020 and 2021, are greatly influenced by the COVID-19 pandemic. The pandemic substantially affected the perceptions and attitudes of EU citizens and EU spending, where it had a redistributive effect. Overall, limiting the scope of the study to the end of 2018 allows for interpretation and inference during standard, non-crisis periods.

We use the Cohesion open data platform to aggregate EU expenditure over the 2014-2018 period by NUTS2 units in two variables of interest (see Table 3). The first variable (EXPND) covers all ESI funds expenditure over five years, while the EXPNDCF variable aggregates only expenditure from Cohesion policy funds. Interreg expenditures are not included in any variables. We use the EXPNDCF as a robustness check and a way to verify whether Cohesion policy initiatives are the main factor driving the results.

Table 3: Definition and encoding of variables based on cohesion open data platform

Variable	Description	Funds	Time coverage
EXPND	modelled annual expenditure per capita	CF, ERDF, ESF, YEI EAFRD, EMFF, FEAD	2014 - 2018
EXPNDCF	modelled annual expenditure per capita	CF, ERDF, ESF, YEI	2014 - 2018

2.4 Methodology

The relationship between awareness of CP and identification with the EU is based on data from the newest Flash Eurobarometer 531, June 2023. The first hypothesis is tested on the country level using linear regression. To test other hypotheses (H2-H4), we use a univariate logistic regression to model our binary dependent variable (FEEL), describing how the respondent's identity is aligned with the EU (do you "feel you are a citizen of the EU?").

Even though our main objective is to model the relationship of the dependent variable with EU expenditures, other control variables are necessary to better describe the spatial and country-level heterogeneity. In its simplest form, our model contains only the explanatory variables on EU expenditure (EXPND) and regional gross domestic product, which should capture much of the differences between regions (GDP).

We augment this baseline model with two extended groups of control variables captured by two additional model specifications. The first group is respondent-specific and contains information provided in the Eurobarometer questionnaire. These variables capture the personal characteristics (AGE and GENDER), perceived household financial situation (HFIN), the respondent's understanding of the workings of the EU (UNSTD), the belief that the home country's interests are accounted for within the EU (ACCTD), and the respondent's belief whether the home country benefited from EU membership (BNFT).

The second additional group of control variables captures regional unemployment (UNEM) and additional country-level information, including the status of a new EU member state, joining the group in or after 2004 (NEWEU) and the membership in the Eurozone (EURO).

In its most detailed form, the model specification may be written as:

$$f(FEEL_i) = \beta_0 + \beta_1 EXPND_i + \beta_2 GDP_i + \beta_3 AGE_i + \beta_4 GENDER_i + \beta_5 HFIN_i + \beta_7 UNSTD_i + \beta_8 ACCTD_i + \beta_9 BNFT_i + \beta_{10} UNEM_i + \beta_{11} NEWEU_i + \beta_{12} EURO_i$$

where $f()$ is the logit function. All country-level and regional variables are chosen for each respondent (i).

3. Results

3.1 Awareness of the Cohesion policy and European identity

Citizen's identification with the EU can be shaped by awareness of the Cohesion policy. We evaluate awareness through the Eurobarometer question, "*Have you heard about any EU co-financed projects to improve the area where you live?*". In 2023, about 39% of respondents have heard about EU co-financed projects. The highest awareness was in Poland (80%), the biggest recipient of CP funds, followed by Slovakia and other new member states (Figure 1). The lowest awareness of CP projects was in Denmark, the Netherlands, and Germany (less than 20% of respondents heard about EU co-financed projects). These differences could be explained by the scale of allocated EU funds and differences in communication strategies between countries. Based on the Flash Eurobarometer survey, the most important sources of information are the internet, national television, and billboards. ERDF and ESF are the most visible funds, and 66% of respondents in 2023 have heard of at least one of the CP funds. Slovakia leads the ranking with a 90% awareness of at least one of the EU funds (Flash Eurobarometer 531, 2023). Most of the respondents in the EU (81%) agree that EU-cofinanced projects positively impact the development of their region or city.

Of the entire sample of EU respondents, 57% replied that EU co-financed projects in their area make them feel like EU citizens. The highest perception is in Poland (81%), and the lowest is in the Netherlands (23%). *The relationship between awareness and identification with the EU is positive.* The highest awareness of CP is accompanied by higher identification with the EU (Figure 1), so we may accept our research hypothesis 1.

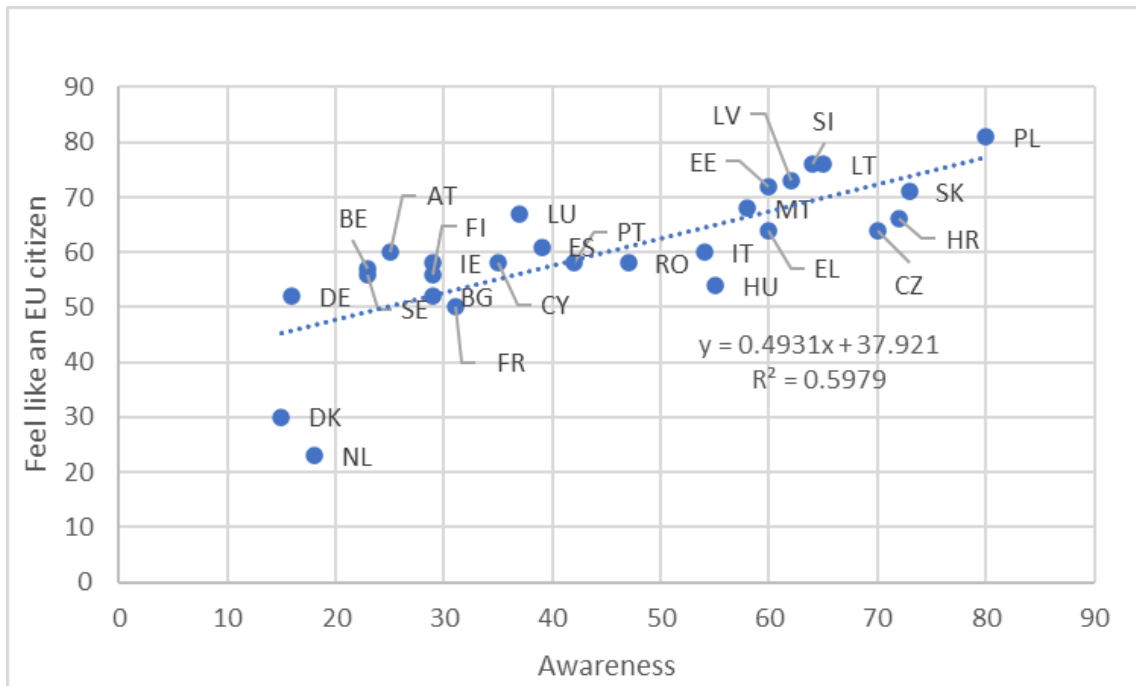


Figure 1: Relationship between awareness of CP and identification with the EU

Source: authors' elaboration, based on data from Flash Eurobarometer 531, June 2023

Note: Awareness is measured by the proportion of respondents who have heard about any EU co-financed projects to improve the area where you live. Identification with EU (feel like EU citizens) is measured by the proportion of respondents who answered "yes" or "some yes" to the question "Do EU-funded projects in your area make you feel like an EU citizen?"

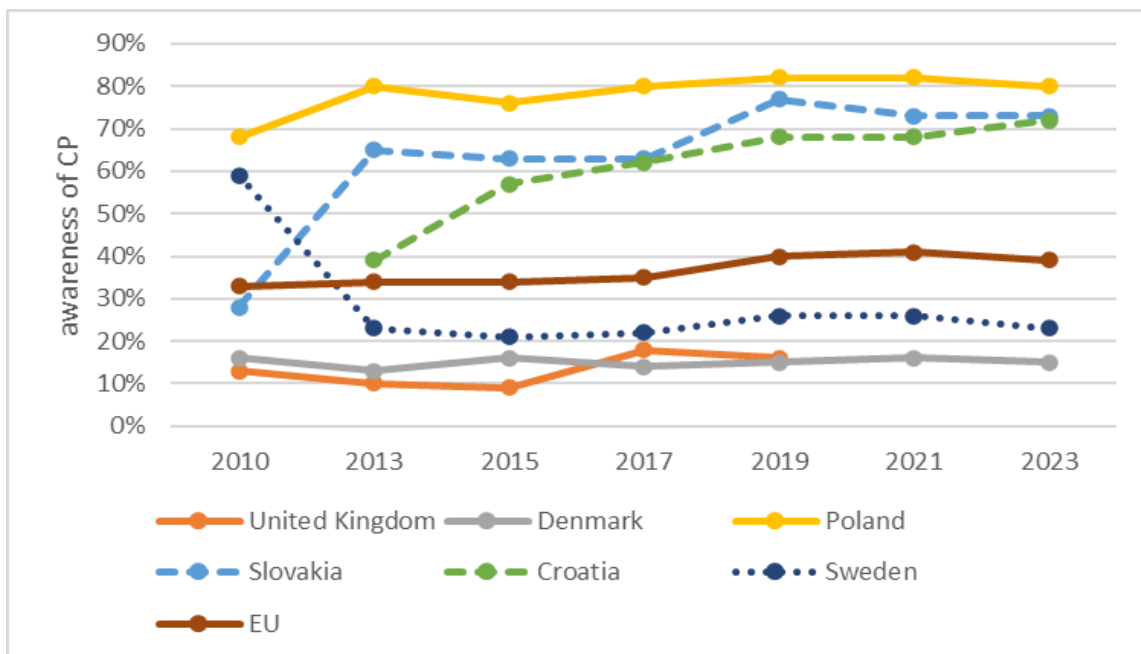


Figure 2: Awareness of Cohesion policy in EU and selected EU countries

Source: authors' elaboration, based on data from Flash Eurobarometer 2010 – 2023.

Figure 2 shows us that there is not much variability in awareness of CP in countries with the highest awareness (Poland) and countries with the lowest awareness (Denmark, Netherlands).

Even though the United Kingdom is no longer a member of the EU, we can see that the lowest percentage of people within the EU until 2019 have heard about EU co-financed projects improving the area where they live in this country. Based on economic utilitarian theory, a low perception of CP benefits can lead to low identification with the EU within this country. The highest growth of awareness of CP between 2010 and 2023 was in Slovakia, which can be attributed to better communication from national and regional authorities and growing CP funding per capita. Croatia has the second highest growth of awareness, which is explained by entering the EU in 2013 and gradually implementing EU co-financed projects. Looking at the other "new" member countries, not all experienced a growing awareness of CP (e.g., Romania). The highest decline within the old member state was in Sweden. Although since 2010, the EU average citizen's awareness of projects funded by the EU has slowly increased (Figure 2), it should be noted that there was a significant decline in awareness before 2010, when the EU's average awareness reached its peak of almost 50% (this dynamic of awareness is analysed by Cunico et al., 2021).

3.2 Modelling the relationship between Cohesion policy expenditures and European identity

Our primary analysis focuses on the determinants of the EU identity among Eurobarometer respondents (FEEL variable, "You feel you are a citizen of the EU"). The spatial distribution of the dependent variable across EU regions is shown in the left part of Figure 3. Note that the Eurobarometer does not follow a single definition for EU regions. While most responses have been recorded at the NUTS2 level, several countries (e.g., Germany) have used only the NUTS1 level. Figure 3 integrates the data by the most detailed level at which the results have been reported.

As shown in Figure 3, the feeling of European identity is not spatially uniform. There are notable differences among EU countries in general but also between groups of older and newer countries that became EU members in or after 2004. For example, while there is a strong EU citizenship feeling in Germany and most of Poland, it is relatively weak in France, the Czech Republic, and Bulgaria. When compared to the cumulative level of EU payments (or their logarithms, as shown in the right panel of Figure 3), it is clear that the respondent's attitudes cannot be explained just by EU financing. For example, the Czech Republic, Greece, southern Italy and Bulgaria have a relatively low score in EU identity despite receiving relatively high EU funds in 2014-2018.

QD1a: How attached you feel to the European Union?

Historic EU payments (log)

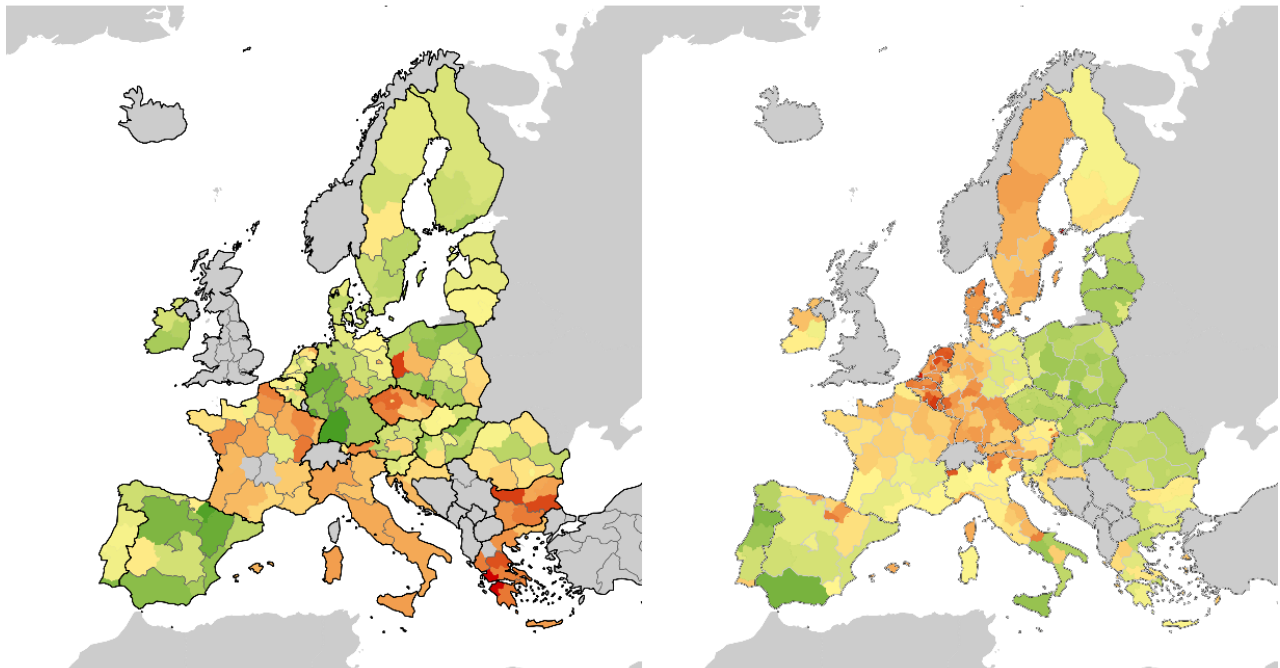


Figure 3: Spatial distributions for the dependent variable (FEEL, left) and the logarithm of historic ESI funds payments over the 2014-2018 period (right)

Source: authors' elaboration, based on data from the European Commission (2020) and Eurobarometer 91.5

Note: For the FEEL variable (left), red/green shading corresponds to disagreement/agreement with the statement "You feel you are a citizen of the EU" in 2019.

On the contrary, the south of Spain scores relatively high in pro-EU attitudes and the historic amount of financing. The highest amount of ESI funds allocations is received in regions with the lower GDP per capita, mostly peripheral regions of new member states, less developed southern regions in former EU countries, such as Greece, Portugal, Spain and southern Italy, following the CP allocation rules. However, in some regions with lower ESI funds expenditures, the identification with the EU is higher, such as northern EU countries, Germany or Ireland.

Figure 4 further explores the interrelationships among the dependent and explanatory variables. As several variables, mainly based on the Eurobarometer, are ordinal or binary, we report nonparametric Spearman rank correlations. While most of the pairwise correlations suggest medium to low dependence, there are three variables with stronger relationships: the GDP, ESIF expenditures, and membership among the newer member states joining the EU after 2004. There are negative correlations between GDP and expenditures and GDP and new member state status, both intuitive. As the more recent member states are economically weaker than the older EU member states, the GDP also reflects this.



Figure 4: Spearman rank correlations

Source: author's elaboration

The negative correlation between GDP and ESI funding is directly related to the EU Cohesion policy objective of decreasing regional disparities between EU member states – the funding is primarily allocated to economically weaker regions to achieve convergence.

The main results of our models are presented in Table 4. In model (1), we explain the dependent variable only by the ESI funds expenditure and the GDP. Both variables positively influence respondent's feeling like an EU citizen: the more economically developed the region and the more funds are allocated to the region, the more likely the respondents are to feel associated with the EU. However, the model's explanatory power is relatively low, with pseudo-R2 being close to zero. More control variables to explain the dependent variable are needed.

Table 4: Logistic regression results

Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
EXPND	0.000126***	0.000252***	0.000101***	0.000230***				
<i>(ESI funds payments, per capita)</i>	(2.87e-05)	(3.03e-05)	(3.57e-05)	(4.16e-05)				
EXPNDCF					0.000143***	0.000270***	0.000125***	0.000298***
<i>(CP payments, per capita)</i>					(3.26e-05)	(3.45e-05)	(4.02e-05)	(4.73e-05)
GDP	2.05e-05***	1.57e-05***	1.01e-05***	2.84e-06	2.06e-05***	1.56e-05***	1.04e-05***	3.07e-06*
<i>(regional GDP, PPS per capita)</i>	(1.23e-06)	(1.27e-06)	(1.52e-06)	(1.75e-06)	(1.23e-06)	(1.27e-06)	(1.53e-06)	(1.75e-06)
AGE		-0.0144***	-0.0118***	-0.0126***		-0.0143***	-0.0118***	-0.0126***
<i>(respondent age)</i>		(0.000800)	(0.000941)	(0.000950)		(0.000799)	(0.000941)	(0.000950)
GENDER		-0.00850	-0.101***	-0.105***		-0.00967	-0.101***	-0.105***
<i>(0 = woman, 1 = man)</i>		(0.0282)	(0.0329)	(0.0330)		(0.0282)	(0.0329)	(0.0331)
HFIN		-0.721***	-0.421***	-0.398***		-0.719***	-0.421***	-0.399***
<i>(household fin. situation)</i>		(0.0195)	(0.0229)	(0.0233)		(0.0195)	(0.0228)	(0.0233)
UNSTD			0.799***	0.821***			0.800***	0.826***
<i>(understand how EU works)</i>			(0.0341)	(0.0343)			(0.0341)	(0.0343)
ACCTD			0.953***	0.950***			0.954***	0.952***
<i>(country interests accounted for)</i>			(0.0350)	(0.0351)			(0.0350)	(0.0351)
BNFT			1.344***	1.346***			1.343***	1.345***
<i>(EU benefited as EU member)</i>			(0.0348)	(0.0349)			(0.0348)	(0.0349)
UNEM				-0.0292***				-0.0296***
<i>(unemployment rate)</i>				(0.00468)				(0.00469)
NEWEU				-0.332***				-0.350***
<i>(new EU state, member after 2004)</i>				(0.0507)				(0.0507)
EURO				0.241***				0.261***
<i>(0 = no, 1 = Eurozone membership)</i>				(0.0406)				(0.0408)
Constant	0.456***	2.925***	0.600***	0.893***	0.468***	2.957***	0.596***	0.886***
	(0.0490)	(0.0824)	(0.101)	(0.117)	(0.0472)	(0.0816)	(0.100)	(0.117)
Pseudo R2	0.009	0.064	0.214	0.217	0.009	0.063	0.214	0.217
Observations	30 671	30 083	27 962	27 962	30 671	30 083	27 962	27 962

Note: Binary dependent variable FEEL ("You feel you are a citizen of the EU"). Coefficients with standard errors are in parentheses.

Sig. codes: *** p<0.01, ** p<0.05, * p<0.1.

We augment our baseline model with three additional groups of variables. For the first group (model (2)), we add variables describing the respondent in the Eurobarometer survey (age, gender, and the state of household finances of the respondent). The second additional group of variables is also based on the Eurobarometer. It accounts for other attitudes the respondent might have towards the EU – the beliefs of whether the respondent understands the workings of the EU, whether the EU accounts for home country interests, and whether the respondent's country has benefited from EU membership in general. Including these characteristics substantially increases the model goodness of fit to the previous models (model (3)). Finally, the last group of additional explanatory variables captures further characteristics, like status as a newer member state (members from 2004), membership in the Eurozone, and regional unemployment.

Following Table 4, a significant and positive influence of EXPNDCF on FEEL means we may accept our research hypothesis 2, so we have identified a positive relationship between Cohesion policy transfers and citizens' identification with the European Union. We have also identified a positive relationship between socio-economic situation and citizens' identification with the EU. Higher regional GDP and lower unemployment rate is connected to higher citizens' identification with the EU (hypothesis 3). Finally, Table 4 shows a positive relationship between the perceived benefits from the EU (BNFT) and citizens' identification with the EU (hypothesis 4).

As shown in Table 4, the results seem very robust, as the inclusion of additional control variables does not substantially change the sign of the coefficients and their magnitude across model specifications. Furthermore, the results remain qualitatively the same even when substituting Cohesion policy payments instead of total ESI funds expenditure (models (5)-(8)). The stability of the results provides further evidence for the robustness of the results and shows that the main results on EU funding are mainly driven by Cohesion policy.

Discussion and conclusion

This paper confirms the positive correlation between CP expenditure and citizens' identification with the EU. The amount of money spent in the region is not the only factor influencing the relationship between Cohesion policy and European identity. We agree with Reinl and Braun (2023) that EU citizens must be well-informed about CP projects' benefits. We confirm a positive relationship between awareness of CP and citizens' identification with the EU. On the other hand, CP performance, which not have been investigated within this paper, may influence the formation of European identity. Pegan et al. (2018) mention several challenges, such as inefficient and non-strategic use of funds, implementation of unsustainable projects, rent-seeking behaviour, cost overruns, project delays, bureaucracy, noncompliance

with rules, fraud and corruption. Based on discussions in all focus groups, Pegan et al. (2018) conclude that despite respondents' appreciation of the benefits of the projects, they did not contribute to European identity, even though some respondents consider the EU's financial contribution as a mechanism of control and power. New Flash Eurobarometer data with the direct question "Do EU-funded projects in your area make you feel like an EU citizen?" shows us that Cohesion policy funds contribute to citizens' identification with the EU, mainly in countries with high allocation of EU funds.

Our empirical research supports the utilitarian approach by showing a positive relationship between EU identity and the amount of EU funds, but also by subjectively perceived benefits from the EU, including eurozone membership. This paper confirms and complements previous research in confirming that other factors can explain variation in citizens' identification with the EU, such as personal persuasion that country interests are taken into account in the EU and information on how the EU works. Our results showed that being a citizen from an old member state positively relates to identification with the EU, which is a similar result to Borz et al. (2022), who declare that most respondents with a sole European identity were from old member states. As we expected, our results confirm a negative relationship between age and identification with the EU, which is consistent with Rodríguez-Pose and Lewis Dijkstra (2021), who say that voting for parties strongly opposed and opposed to European integration is higher in areas with a higher share of elderly population, lower CP investment per capita and higher level of unemployment.

Although the exploration of all factors of heterogeneity of citizens' attitudes towards the EU is beyond the scope of this paper, future research should focus more on political factors as identification with the EU can be influenced by political interest, opinions of political leaders, identification with pro-European parties or Eurosceptic parties, trust and effectiveness of EU institutions, satisfaction with democracy or fear of potential global crises.

Acknowledgement

This work was supported by the Vedecká Grantová Agentúra MŠVVaŠ SR a SAV (VEGA), grant number 1/0837/21 "Spatial and Temporal Aspects of EU Cohesion Policy: Lessons Learned and Future Perspectives".

References

AIELLO, V., P. REVERBERI, & C. BRASILI. 2019. European Identity and Citizens' Support for the EU: Testing the Utilitarian Approach. *Regional Science Policy & Practice* 11 (4), 673–693, DOI:10. 1111/rsp3.12242.

- ARMINGEON, K., & CEKA, B., 2014. The loss of trust in the European Union during the great recession since 2007: The role of heuristics from the national political system. *European Union Politics*, 15(1), 82-107, DOI: 10.1177/1465116513495.
- Borz, G., Brandenburg, H., & Mendez, C., 2022. The impact of EU Cohesion Policy on European identity: A comparative analysis of EU regions. *European Union Politics* 23, 259–281, DOI: 10.1177/14651165221076444.
- CAPELLO, R., & PERUCCA, G., 2019. Citizens' perception of Cohesion Policy: from theory to empirical evidence. *Regional Studies* 53, 1520–1530. DOI: 10.1080/00343404.2019.1587398. Cohesion data, 2020. *Share of Cohesion Policy per Member State to public investment 2015-2017*. [cit. 23-9-2023]. Available at: <https://cohesiondata.ec.europa.eu/Other-Eurostat/Share-of-Cohesion-Policy-per-Member-State-to-public/drqq-sbh7/data>
- CUNICO, G., AIVAZIDOU, E., & MOLLONA, E., 2021. Building a dynamic theory of citizens' awareness of European Cohesion Policy interventions. *European Journal of Operational Research* 289, 758–773, DOI: 10.1016/j.ejor.2020.07.017.
- DĄBROWSKI, M., SPAANS, M., FERNANDEZ-MALDONADO, & A.M., ROCCO, R., 2021. Cohesion Policy and the citizens' perceptions of the EU: the role of communication and implementation. *European Planning Studies* 29, 827–843. DOI: 10.1080/09654313.2020.1805413.
- DABROWSKI, M., STEAD, D., & MASHHOODI, B., 2017. Towards a regional typology of EU identification. *COHESIFY Research Paper 6*. Work Package 2 – Task 2.4: Output 2.4. H2020 COHESIFY. [cit. 23-9-2023]. Available at: <https://research.tudelft.nl/en/publications/towards-a-regional-typology-of-eu-identification-cohesify-research>
- DE VRIES, C. E., & EDWARDS, E. E., 2009. Taking Europe to its extremes: Extremist parties and public Euroscepticism. *Party Politics*, 15(1), 5-28, DOI:10.1177/13540688080978.
- DELLMUTH, L.M. AND CHALMERS, A.W., 2018. All spending is not equal: European Union spending, policy feedback and citizens' support for the EU. *European Journal of Political Research* 57, 3-23, DOI: 10.1111/1475-6765.12215.
- European Commission and European Parliament, 2019. *Eurobarometer 91.5*, June-July 2019. Kantar Public, Brussels [Producer]; GESIS, Cologne [Publisher]: ZA7576, dataset version 1.0.0, DOI:10.4232/1.13393.
- European Commission, 2020. *Historic EU payments - regionalised and modelled*. [cit. 23-9-2023]. Available at: <https://cohesiondata.ec.europa.eu/Other/Historic-EU-payments-regionalised-and-modelled/tc55-7ysv>
- FIDRMUC, J., HULÉNYI, M., & TUNALI, Ç. B., 2019. Can money buy EU love? *European Journal of Political Economy*, 60, 101804, DOI: 10.1016/j.ejpoleco.2019.07.002.
- Flash Eurobarometer 531, 2023. *Citizens' awareness and perception of EU regional policy: Report*. June 2023.
- Flash Eurobarometer, 2010-2023. *Citizens' awareness and perception of EU Regional policy*. European Commission. Available at: <https://europa.eu/eurobarometer/surveys>
- KAELBERER, M., 2004. The euro and European identity: symbols, power and the politics of European monetary union. *Review of International Studies*, 30(2), 161-178, DOI: S0260210504005996.

KAINA, V., & KAROLEWSKI. I.P., 2013. EU Governance and European Identity. *Living Reviews in European Governance* 8, DOI: 10.12942/lreg-2013-1.

LENGFELD, H., SCHMIDT, S. & HÄUBERER, J., 2015. Is There a European Solidarity? Attitudes Towards Fiscal Assistance for Debt-Ridden European Union Member States. *SSRN Scholarly Paper*. Rochester, NY, DOI: 10.2139/ssrn.2597605.

LOPEZ-BAZO, E., & ROYUELA, V., 2019. Citizens' perception of the Cohesion Policy and support for the European Union. *Region Sci Policy Practice* 11, 733–749, DOI: 10.1111/rsp3.12223.

MENDEZ, C. & BACHTLER, J., 2017. European Identity and Citizen Attitudes to Cohesion Policy: What do we know? *COHESIFY Research Paper 1*. [cit. 23-9-2023]. Available at: http://www.cohesify.eu/downloads/Cohesify_Research_Paper1.pdf#zoom=100

PEGAN, A., MENDEZ, C., & TRIGA, V., 2018. What do citizens think of Cohesion Policy and does it matter for European Identity? A comparative focus group analysis. *COHESIFY Research Paper 13*.

REINL, A. K., & BRAUN, D., 2023. Who holds the union together? Citizens' preferences for European Union cohesion in challenging times. *European Union Politics*, 24(2), 390-409, DOI 10.1177/14651165221138000.

RODRÍGUEZ-POSE, A., & DIJKSTRA, L., 2021. Does cohesion policy reduce EU discontent and Euroscepticism?. *Regional Studies*, 55(2), 354-369, DOI: 10.1080/00343404.2020.1826040.

SMĘTKOWSKI, M., AND M. DĄBROWSKI, 2019. Economic Crisis, Cohesion Policy and the Eroding Image of the European Union at the Regional Level. *Regional Science Policy & Practice* 11 (4), 713–732, DOI:10.1111/rsp3.12238.

VAN KLINGEREN M, BOOMGAARDEN HG, & DE VREESE CH, 2013. Going soft or staying soft: Have identity factors become more important than economic rationale when explaining Euroscepticism? *Journal of European Integration* 35(6): 689–704. DOI:10.1080/07036337.2012.719506.

VERHAEGEN, S., 2018. What to expect from European identity? Explaining support for solidarity in times of crisis. *Comparative European Politics*, 16, 871-904, DOI: 10.1057/s41295-017-0106-x.

VERHAEGEN, S., HOOGHE, M., & QUINTELIER E., 2014. European identity and support for European integration: A matter of perceived economic benefits? *Kyklos* 67(2), 295–314, DOI: 10.1111/kykl.12055.

Contact address

Ing. Eva Výrostová, PhD., university associate professor
ID ORCID: 0000-0003-2446-2421
Pavol Jozef Šafárik University in Košice
Faculty of Public Administration
Popradská 66,
040 11 Košice
E-mail: eva.vyrostova@upjs.sk