The EU Macro-regional Strategies Through the Prism of Regional GDP

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Abstract The European Council is in favour of a macro-regional strategy, an integrated framework to address common challenges faced by a given geographical area and relating to Member States and third countries in the same geographical area. The differences in development between regions within macro-regions are considerable. In this chapter, we review the longitudinal data on GDP per capita within the EU macro-regional strategies and compare the macro-regions with each other. The research presented attempts to answer how the implementation of EU macro-regional strategies is reflected in the GDP per capita of EU member regions. The results show that the efforts and financial strategies of the EU in the macro-regions are not reflected in the GDP per capita to the extent that it would contribute to the primary indicator of the cohesion regions.

Keywords: • macro-regional strategies • EUSALP • EUSDR • EUSBSR • EUSAIR • European Union

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1 Introduction

Since 2009, the EU has been developing strategies for the Baltic, Danube, Adriatic – Ionian Sea and Alpine macro-regions. These macro-regional strategies are new instruments of EU governance that aim to combine territorial cooperation and community cohesion policies with intergovernmental "regional cooperation" involving EU member states and partner countries. The macro-regional strategy aims to mobilise EU member states and non-member states to promote and coordinate territorial and cross-governmental cooperation by creating comprehensive governance structures for cross-sectoral and cross-border policy coordination in the areas of transport infrastructure and environmental protection. Both macro-regional strategies and macro-regions have aroused growing interest in multiple disciplines, including geography, regional planning, political science and public administration, raising questions about their impact on existing territorial co-operation practises and their relevance for regional co-operation. They scrutinise and debate issues such as the relationships between the previously established forms of regional cooperation (Gänzle et al., 2019; Gløersen et al., 2019). A characteristic of macro-regional cooperation is that the strategies cover different policy issues and are not limited to a single topic (such as environmental protection of shared marine or river systems). However, some topics play a more vital role in certain macro-regional strategies than others, reflecting regional geographical specificities and political priorities. The areas of co-operation in the current macro-regional strategy range from shipping, climate change, biodiversity and infrastructure to economic development, education, skills development, tourism and civil security. These areas vary from strategy to strategy and reflect specific regional interests and priorities. The results in the four macro-regions are very different, which is partly due to their development periods. Above all, however, they vary depending on the geopolitical context, organisational landscape, administrative capabilities and political priorities (Gänzle et al., 2019). One of the key aspects of regional cooperation is also regional proximity in industrial symbiosis networks, which can play an essential role in the transformation to a circular economy (Fric et al., 2020; Ursic & Jelen, 2022). Promoting macro-regional integration facilitates the flow of knowledge, information, technologies and good practises, which is particularly important for regions lagging behind in development.

Macro-regional strategies can play a role in future cohesion policies. Indeed, they represent a meso-level intervention that can effectively implement transnational multi-level governance and co-operation, including in innovation policy. (Faludi, 2010; Metzger & Schmitt, 2012; Pagliacci et al., 2020; Stead et al., 2016). Promoting territorial cooperation and cohesion leads to better economic, social and territorial outcomes (Pagliacci et al., 2020).

According to the Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of the EU's macro-regional strategies, all four macro-regional strategies

are well aligned with the overall objective of cohesion policy. They strengthen economic, social and territorial cohesion in the European Union and correct imbalances between countries and regions (European Commission, 2022a). In addition, the proposed cohesion policy regulations for the period 2021–2027 contain provisions to facilitate support for projects/activities under the macro-regional strategies, as cooperation between countries and regions is to become common practise (European Commission, 2020), as stated in the 2020 report.

1.1 The relevance of the Gross Domestic Product

Economic growth represents an increase in the potential GDP of a nation. A related concept is the growth rate of per capita output, which determines the rate at which a country's standard of living increases (Samuelson & Nordhaus, 1998). GDP can be calculated using the following approaches: (i) the production approach totals the "value added" at each stage of production, where value added is defined as total sales minus the value of intermediate inputs into the production process, (ii) the expenditure approach adds up the value of purchases made by final consumers, or (iii) the income approach totals the income generated by production (Callen, 2023). Potential GDP is the amount of national product that would be produced if the economy were operating at normal capacity or full employment. The calculation of GDP and national income can be visualised as a cycle of income and expenditure. In practise, final consumption is not only represented by household consumption. If we approach the interpretation of GDP from the consumption side, we must also add investment, government spending and exports (Lipsey & Chrystal, 2007).

As Tim Callen, a former deputy director in the IMF's communications department, says, it is also important to understand what GDP cannot tell us. GDP is not an indicator of a nation's overall standard of living or prosperity. While GDP per capita, which measures changes in the amount of goods and services produced per person, is often used to judge how wealthy the average resident of a nation is, it ignores factors that may be considered crucial to overall well-being. For example, higher productivity could lead to environmental degradation or other external costs such as noise. But it could also lead to a reduction in leisure time or the exhaustion of non-renewable natural resources. The Human Development Index, which ranks nations based on variables such as life expectancy, literacy and school enrolment in addition to GDP per capita, is calculated by the UN to take these elements into account. The Genuine Progress Indicator and the Gross National Happiness Index are two other attempts to address some of the shortcomings of GDP, although they are not entirely uncontroversial (Callen, 2023).

Although funds are invested in many areas according to EU strategies, the eligibility criteria for Cohesion funds are solely dependent on GDP per capita. For this reason, in this chapter we review the longitudinal data on GDP per capita under the EU macro-regional strategies and compare the macro-regions with each other. The study presented

attempts to answer the following research question: How is the functioning of EU macro-regional strategies reflected in the GDP per capita of EU member regions?

2 The European macro-strategies

There are four macro-regional strategies covering nineteen EU and ten non-EU countries: The EU Strategy for the Baltic Sea Region (EUSBSR, 2009)[1], the EU Strategy for the Danube Region (EUSDR, 2011)[2], the EU Strategy for the Adriatic and Ionian Region (EUSAIR, 2014)[3] and the EU Strategy for the Alpine Region (EUSALP, 2016)[4]. The macro- regions are quite different, but on the other hand pursue the same or similar objectives that are in line with the EU's development strategy. Some countries and their regions are part of one or more macro-regional strategies and are therefore eligible for funding from multiple sources. In the following paragraphs we briefly describe the macro-regional strategies.

2.1 Baltic Sea Region – EUSBSR

The first macro-regional strategy in Europe is the European Union Strategy for the Baltic Sea Region (EUSBSR). The Baltic Sea basin and the surrounding areas make up the largest part of the area covered by the EUSBSR. Around 85 million people live there, spread across eight EU member states (Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden), from Lapland to the northernmost point of Germany. It is the second largest and most diverse macro-regional strategy of the EU Member States (European Commission, 2018). The implementation of the EUSBSR is carried out in close consultation with the European Commission and all relevant parties, including local, regional and intergovernmental organisations of the other Member States. The strategy is also open to cooperation with Iceland and Norway, two EU neighbours. The EUSBSR is an inclusive, multi-level governance, open and transparent platform for cooperation and coordination. The strategy focuses on the opportunities and challenges that can be better addressed if the nations of the region make a coordinated effort. Saving the sea, connecting the region and increasing prosperity are the three goals of the EUSBSR. They are interlinked and interdependent, and each of them affects a wide range of policies areas and influences the other goals. Sub-goals are used to support the objectives (EUSBSR, 2023).

2.2 Danube Region – EUSDR

The EUSDR primarily covers the 2,857 km long Danube River basin, as well as the mountain ranges (such as the Alps and the Carpathians) from which its tributaries flow. It stretches from the Black Forest in Germany to the Black Sea in Romania, Moldova and Ukraine. 115 million people live in this region. It is the largest and most diverse macro-regional strategy, encompassing 14 nations, including nine EU Member States (including Austria, Bulgaria, Croatia, the Czech Republic, parts of Germany, Hungary, Romania,

Slovakia and Slovenia), three accession countries (including Bosnia and Herzegovina, Montenegro and Serbia) and two neighbouring countries (including Moldova and parts of Ukraine) (European Commission, 2017; EUSDR, 2023). One of the largest macro-regions, the Danube Region, struggles with a number of problems such as environmental threats (water pollution, flooding, climate change), unutilised shipping potential and lack of modern road and rail connections, insufficient energy connections, uneven socio-economic development, uncoordinated education, research and innovation systems, security deficiencies (European Commission, 2017; EUSDR, 2023), technology transfer (Besednjak Valič et al., 2021) and more. Better coordination and cooperation between countries and regions is needed to address these challenges (European Commission, 2017; EUSDR, 2023).

2.3 Adriatic and Ionian Region – EUSAIR

The Strategy for the Adriatic and Ionian Region – EUSAIR is a functional area defined mainly by the basins of the Adriatic, Ionian Sea. It also includes important land areas and considers marine, coastal and land areas as interconnected systems (EUSAIR, 2023). Ten countries are involved in EUSAIR: four EU Member States (Greece, Croatia, parts of Italy and Slovenia), five candidate countries (Albania, Bosnia and Herzegovina, Montenegro, Serbia and North Macedonia) and a third country, San Marino (European Commission, 2022b). The port hinterland plays a prominent role in view of the intensive movement of goods, services and people triggered by Croatia's accession to the EU and the prospect of other countries in the region joining the EU. The focus on land-sea connections also highlights the impact of unsustainable land-based activities on coastal areas and marine ecosystems. With a population of more than 70 million people, the region plays a key role in strengthening the geographical continuity of Europe. The strategy is based on and closely co-operates with the Adriatic-Ionian initiative. EUSAIR priority projects are proposed as solutions to key challenges of macro-regional importance and are in line with national needs and EU policy objectives for a greener, low-carbon and better-connected Europe. Countries will take concrete actions at national level to achieve common goals/solutions in the region. Seven countries participate in the EU (EUSAIR, 2023).

2.4 Alpine region – EUSALP

The Alpine Regional Strategy comprises seven countries: Austria, France, Germany, Italy, Liechtenstein, Slovenia and Switzerland (European Commission, 2023a). The regions have different demographic, social and economic developments as well as cultural and linguistic diversity. This diversity goes hand in hand with a wide range of government systems and traditions. The common features of the Alpine region and its diversity require cooperation. The Alpine region is a living and working space for its inhabitants and an attractive destination for millions of tourists every year (EUSALP, 2023). The Alps are the water towers of Europe and are recognised around the world for

their natural beauty, diverse landscapes, rich biodiversity and cultural heritage. The region is a unique area with a great potential for dynamism, but faces significant challenges, such as (i) economic globalisation, which requires the region to improve its competitiveness and innovation capacity by developing a knowledge and information society, (ii) demographic trends, in particular the combined effects of ageing and new immigration patterns, (iii) climate change and its foreseeable impact on the environment, biodiversity and the living conditions of the population, (iv) the energy challenges at European and global level, in particular managing and meeting demand in a sustainable, secure and affordable way, and (v) the unique geographical location in Europe, both as a transit area and as an area with specific geographical and natural characteristics, which provides the framework for all future developments. The macro-Regional Strategy is set to provide opportunities to improve cross-border co-operation between the Alpine countries, identify common goals and implement them more effectively through transnational co-operation. Better cooperation between regions and countries is needed to meet these challenges (EUSALP, 2023).

3 Methodology

The list of regions was compiled based on the EU macro-regional strategies (European Commission, 2023b) and Eurostat's NUTS 2 nomenclature (Eurostat, 2021) for each of the macro-regional strategies. Data for gross domestic product (GDP) per capita were extracted from the Eurostat database (Eurostat, 2023) for each region in each macro-regional strategy that is part of the EU member states. Data for non-member states were not selected as we are interested in the impact on EU regions. The data covers several years, from 2010 to 2021, which allows us to take a longitudinal view.

First, the average GDP per capita growth for the macro-region was calculated as one unit. All available years were included in the calculation. Secondly, the average growth in GDP per capita was calculated for each region. The results are percentages. All available years from 2010 to 2021 were included in the calculation, where 2010 is the starting year or year 0. The formula used is a standard formula for growth:

$$\left(\sqrt[number\ of\ years\ minus\ starting\ year]{\frac{s\ (the\ last\ year)}{x\ (starting\ year)}} - 1 \right) * 100$$

Using the results for the regions, the next step was to calculate the average growth of a microregion under consideration.

4 The EU regional development

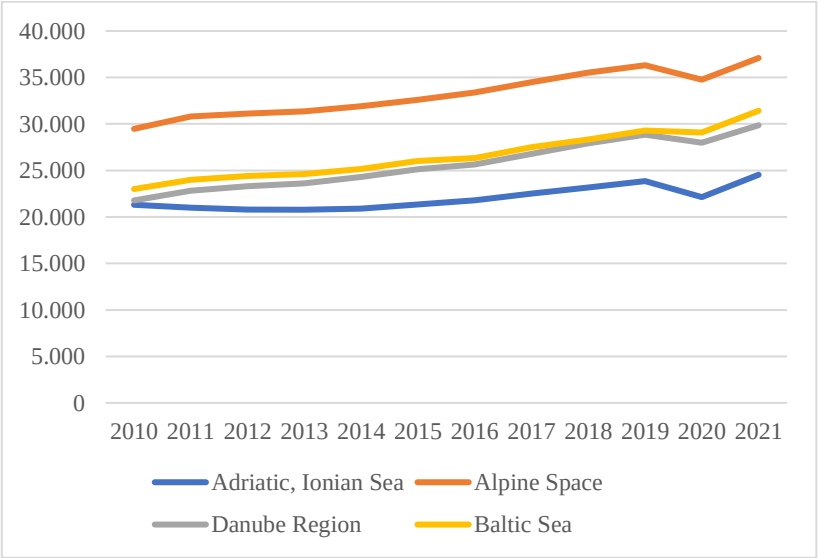
As mentioned in the introduction, regions are eligible for cohesion funding based on GDP. Cohesion policy distinguishes between “less developed regions”, “transnational regions” and “more developed regions”. Less developed regions are those whose GDP per capita is less than 75% of the EU average, transition regions between 75% and 100% of the EU average and more developed regions whose GDP per capita is above 100% of the EU average. Under Cohesion Policy 2014 – 2020, the total number of regions was 274, under Cohesion Policy 2021 – 2027 it is 240 (European Commission, 2014; 2021). The total number of regions has changed due to two factors: The UK is not an EU member, so there are 37 regions, and the other is a statistical factor. There are 3 more regions at NUTS 2 level.

The total number of less developed regions has increased from 72 under the 2014–2020 Cohesion Policy to 78 under the 2021–2027 Cohesion Policy. On the other hand, the total number of more developed regions has fallen from 151 to 95 over the same period. These changes in the distribution of less developed and more developed regions reflect the dynamic nature of regional development and the efforts of cohesion policy to address inequalities and promote balanced growth in the European Union. Even with decreasing numbers due to no UK regions, the decrease in the "more developed" regions is much higher, which means that the distribution of GDP has changed.

4.1 Macro-regional average GDP per capita

The annual averages of all four macro-regional GDP per capita were compared. As can be seen in Figure 1, the differences between the macro-regions are considerable. On the other hand, the level of growth is very similar. Even a decline in 2020 and further growth from 2020 to 2021 are similar in all four regions.

Figure 1: GDP per capita, Macro regional average



Source: (Eurostat, 2023); author's own calculations.

4.2 Comparison of average growth in a region

To support the previous statement, we have calculated the average growth in the macro-regions under consideration. Table 1 shows that the Adriatic, Ionian Sea has the lowest average growth, while the Danube Region has the highest. The difference between them is large, as the Adriatic, Ionian Sea region achieves about 1/3 of the growth in the Danube Region.

Table 1: Average GDP per capita and average growth of GDP per capita in EU Macro-regions

EU Macro-region	GDP per capita 2010	GDP per capita 2021	average growth in a region
Adriatic, Ionian Sea	21,321	24,542	1.15
Alpine Space	29,474	37,097	2.12
Baltic Sea	23,000	31,422	3.21
Danube Region	21,778	29,863	3.43

Source: (Eurostat, 2023); author's own calculations.

The Adriatic, Ionian Sea also has the lowest average GDP per capita. It started at the same level as that of the Danube Region, but then developed much more slowly. Overall, the

Alpine Space has the highest GDP per capita. Interestingly, the Danube Region reached in 2021 the level of the Alpine Space from 2010.

4.3 Number of regions with negative GDP per capita growth

If we take a closer look at the data, we have to emphasise an interesting result. Not all regions had growth in GDP per capita. There are 10 regions, all belonging to the Adriatic, Ionian Sea macro-region, with negative growth. These regions are all part of Greece. Greece has 13 regions, and only 3 of them have positive average growth.

4.4 Comparison between the least developed and the most developed regions

We were also interested in whether the difference between the most and least developed regions in the macro-region has narrowed over the years. We ranked the regions from the region with the lowest to the region with the highest GDP per capita. The ranking was first based on the baseline year 2010 and then on the latest year 2021. We calculated the difference between the values. Based on the data obtained, we were also able to calculate how close the two regions are to each other and what share of GDP the most developed region has in the least developed region.

The region with the lowest GDP changed from 2010 to 2021 in the Adriatic, Ionian Sea macro-region. For this reason, two tables with calculations were created. The least developed region in 2010 was Panonska Hrvatska, which now shows considerable growth, namely 3.1 (see Table 2). Nevertheless, it accounted for just over a quarter of the GDP of the most developed region, the Provincia Autonoma di Bolzano/Bozen, in 2010 and less than a third in 2021.

Table 2: The least and most developed regions' GDP comparison – Adriatic, Ionian Sea per 2010

	2010	2021	average growth
Panonska Hrvatska	10,300	14,400	3.09
Provincia Autonoma di Bolzano/Bozen	39,000	49,100	2.12
difference	28,700	34,700	
% reach	26.41	29.33	

Source: (Eurostat, 2023); author's own calculations.

In 2021, the least developed region became Voreio Aigaio (see Table 3), which achieved negative GDP growth. In 2010, it still accounted for just over 40% of the GDP of the most developed region, but by 2021 this share had fallen to just over 27%.

Table 3: The least and most developed regions' GDP comparison – Adriatic, Ionian Sea per 2021

	2010	2021	average growth
Voreio Aigaio	16,600	13,500	-1.86
Provincia Autonoma di Bolzano/Bozen	39,000	49,100	2.12
difference	22,400	35,600	
% reach	42.56	27.49	

Source: (Eurostat, 2023); author's own calculations.

The least developed region in the Alpine macro-region is Vzhodna Slovenija, which achieves higher average GDP growth than the most developed region, Oberbayern (see Table 4). Vzhodna Slovenija achieves the closest approximation to the most developed region when looking at the macro-regions. Despite the higher average growth, there is no significant difference in reaching the GDP of the most developed region.

Table 4: The least and most developed regions' GDP comparison – Alpine Space

	2010	2021	average growth
Vzhodna Slovenija	17,200	23,900	3.04
Oberbayern	42,700	56,600	2.60
difference	25,500	32,700	
% reach	40.28	42.23	

Source: (Eurostat, 2023); author's own calculations.

The least developed region in the Baltic Sea macro-region is Lubenskie (see Table 5). It achieves very high relative GDP growth, but unlike the Eastern region in the Alpine macro-region, Lubenskie reaches only one fifth of Hamburg's GDP in 2010 and just over 27% in 2021.

Table 5: The least and most developed regions' GDP comparison – Baltic Sea

	2010	2021	average growth
Lubelskie	10,800	16,900	3.87
Hamburg	51,700	61,900	1.65
difference	40,900	45,000	
% reach	20.89	27.30	

Source: (Eurostat, 2023); author's own calculations.

The otherwise least developed region of the Danube macro-region shows the highest average growth among the regions presented so far (see Table 6). Severozapaden is

growing by as much as 5.9%, while the most developed region, Praha, is growing by 2.9%. Nevertheless, its GDP level is insufficient, barely reaching 14% of Prague's GDP in 2010 and less than 20% in 2021. At the same time, it is the Danube macro-region where Praha has the highest GDP in 2021. In 2010, it was Hamburg with a GDP per capita of 51,700, which reached a GDP per capita of 61,900 in 2021, but was overtaken by Prague with a GDP per capita of 65,800.

Table 6: The least and most developed regions' GDP comparison – Danube Region

	2010	2021	average growth
Severozapaden	6,800	12,800	5.92
Praha	47,700	65,800	2.97
difference	40,900	53,000	
% reach	14.26	19.45	

Source: (Eurostat, 2023), Author's own calculations.

5 Discussion and conclusion

In this chapter we have looked at the macro-regional average GDP per capita, a comparison of the average growth in a region, the number of regions with negative GDP per capita growth and a comparison of the least developed and most developed regions. What conclusions can be drawn from the data presented? First of all, given the similarity in the development of GDP per capita of the European macro-regions over the decade, it is difficult to say that one or the other macro-region has developed in a different direction from the others. It is also obvious that the regions reach quite different levels of GDP per capita. The Danube and Baltic Sea regions are fairly equal, but the Alpine region is characterised by the highest GDP and the Adriatic, Ionian Sea by the lowest, reaching only two thirds of the Alpine region. An even greater difference can be seen in the average growth: Adriatic, Ionian Sea achieves only one third of the growth in the Danube Region.

On the other hand, it is also clear to see that the least developed regions in the macro-region are making more progress than the most developed. The only deviation can be seen in the Adriatic, Ionian Sea macro-region, where the picture is strongly influenced by the decline in all Greek regions; not all regions had positive GDP growth. Ten regions in the Adriatic, Ionian Sea macro-region, all belonging to Greece, show negative growth.

If we look at the lowest value of GDP per capita from 2010, we also see a higher average growth in the least developed regions than in the most developed ones. Regardless of the increase in the growth rate, we must recognise the data on the differences within the regions. The least developed region in the Adriatic, Ionian Sea Macro-region was Panonska Hrvatska, which recorded considerable growth but accounted for less than a third of the GDP of the most developed region. Vzhodna Slovenija achieved higher

average GDP growth than Oberbayern, but no significant difference in reaching the GDP of the most developed region. The least developed region in the Baltic Sea macro-region was Lubenskie. Severozapaden recorded growth of 5.9%, while the GDP of Praha was 2.9%. However, it was only 14% of Prague's value in 2010 and less than 20% in 2021. Prague's highest GDP per capita in 2021 was 65,800.

The differences have narrowed slightly over the 11 years. Nevertheless, they are still considerable. From the above, we can therefore conclude the following: (i) with various political-investment and financial instruments we can influence the increase in the development of regions, (ii) the impact can be so large that it exceeds the achievements of already highly developed regions, (iii) a decade is not long enough with the current financial input to significantly reduce the differences, and (iv) the EU's efforts and financial strategies in the macro-regions are not reflected in GDP per capita to the extent that it would contribute to the primary indicator of cohesion regions.

We must bear in mind that in this chapter we are looking at development solely in terms of GDP per capita. This does not mean that there were no other economic, social or infrastructural impacts. Investment in development cannot be measured in short time intervals, so specific impacts will only become apparent after many years. Nor can we talk about macro-regional policies influencing the harmonisation of regions based on GDP, which, as we mentioned at the beginning, is currently the only indicator that divides regions into less developed regions in transition and more developed regions.

Notes:

[1] https://ec.europa.eu/regional_policy/sources/policy/cooperation/macro-regional-strategies/baltic/council_concl_30102009.pdf
[2] https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52010DC0715
[3] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52014DC0357
[4] https://ec.europa.eu/regional_policy/sources/policy/cooperation/macro-regional-strategies/alpine/eusalp_communicationtion_en.pdf

References:

Besednjak Valič, T., Kolar, J. & Lamut, U. (2021) Fighting the big bad wolf of global trends: Technology transfer between HPC centres and SMEs, *Digital Policy, Regulation and Governance*, 24(6), pp. 498-512, https://doi.org/10.1108/DPRG-11-2020-0162.

Callen, T. (2023) *Gross Domestic Product: An Economy's All*, available at: https://www.imf.org/en/Publications/fandd/issues/Series/Back-to-Basics/gross-domestic-product-GDP (October 17, 2023).

European Commission (2014) *Commission Implementing Decision of 18 February 2014 setting out the list of regions eligible for funding from the European Regional Development Fund and the European Social Fund and of Member States eligible for funding from the Cohesion Fund for the period 2014-2020 (notified under document C(2014) 974)*, available at: http://data.europa.eu/eli/dec_impl/2014/99/oj/eng (October 17, 2023).

European Commission (2017) *The Danube Region Strategy*, available at: https://ec.europa.eu/regional_policy/policy/cooperation/macro-regional-strategies/danube_en (August 28, 2023).

European Commission (2018) *EU Strategy for the Baltic Sea Region*, available at: https://ec.europa.eu/regional_policy/policy/cooperation/macro-regional-strategies/baltic-sea_en (August 28, 2023).

European Commission (2020) *Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of EU macro-regional strategies*, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1600880135115&uri=CELEX:52020DC0578 (August 28, 2023).

European Commission (2021) *Commission Implementing Decision (EU) 2021/1130 of 5 July 2021 setting out the list of regions eligible for funding from the European Regional Development Fund and the European Social Fund Plus and of Member States eligible for funding from the Cohesion Fund for the period 2021-2027 (notified under document C(2021) 4894)*, available at: http://data.europa.eu/eli/dec_impl/2021/1130/oj/eng (August 28, 2023).

European Commission (2022a) *Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of EU macro-regional strategies*, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A705%3AFIN (August 28, 2023).

European Commission (2022b) *EU Strategy for the Adriatic and Ionian Region*, available at: https://ec.europa.eu/regional_policy/policy/cooperation/macro-regional-strategies/adriatic-ionian_en (August 28, 2023).

European Commission (2023a) *EU Strategy for the Alpine Region*, available at: https://ec.europa.eu/regional_policy/policy/cooperation/macro-regional-strategies/alpine_en (September 19, 2023).

European Commission (2023b) *Inforegio—Macro-Regional Strategies*, available at: https://ec.europa.eu/regional_policy/policy/cooperation/macro-regional-strategies_en (August 18, 2023).

Eurostat (2021) *NUTS - Nomenclature of territorial units for statistics*, available at: https://ec.europa.eu/eurostat/web/nuts/background (September 17, 2023).

Eurostat (2023) *Regional gross domestic product (PPS per inhabitant) by NUTS 2 regions*, available at: https://ec.europa.eu/eurostat/databrowser/view/TGS00005/default/table?lang=en (September 17, 2023).

EUSAIR (2023) *Adriatic-IONIAN*, available at: https://www.adriatic-ionian.eu/ (September 20, 2023).

EUSALP (2023) *EUSALP*, available at: https://www.alpine-region.eu/ (September 20, 2023).

EUSBSR (2023) *EUSBSR*, available at: https://www.eusbsr.eu/ (September 20, 2023).

EUSDR (2023) *EUSDR - Danube Strategy Point*, available at: https://danube-region.eu/ (September 20, 2023).

Faludi, A. (2010) Centenary paper: European spatial planning: past, present and future, *Town Planning Review*, 81(1), pp. 1-22, https://doi.org/10.3828/tpr.2009.21.

Fric, U., Rončević, B. & Uršič, E. D. (2020) Role of computer software tools in industrial symbiotic networks and the examination of sociocultural factors, *Environmental Progress & Sustainable Energy*, 39(2), https://doi.org/10.1002/ep.13364.

Gänzle, S., Stead, D., Sielker, F. & Chilla, T. (2019) Macro-regional Strategies, Cohesion Policy and Regional Cooperation in the European Union: Towards a Research Agenda, *Political Studies Review*, 17(2), pp. 161-174, https://doi.org/10.1177/1478929918781982.

Gløersen, E., Balsiger, J., Cugusi, B. & Debarbieux, B. (2019) The role of environmental issues in the adoption processes of European Union macro-regional strategies, *Environmental Science & Policy*, 97, pp. 58-66, https://doi.org/10.1016/j.envsci.2019.04.002.

Lipsey, R. G. & Chrystal, K. A. (2007) *Economics* (Oxford: Oxford University Press).

Metzger, J. & Schmitt, P. (2012) When Soft Spaces Harden: The EU Strategy for the Baltic Sea Region, *Environment and Planning A: Economy and Space*, 44(2), pp. 263-280, https://doi.org/10.1068/a44188.

Pagliacci, F., Pavone, P., Russo, M. & Giorgi, A. (2020) Regional structural heterogeneity: Evidence and policy implications for RIS3 in macro-regional strategies, *Regional Studies*, 54(6), pp. 765-775, https://doi.org/10.1080/00343404.2019.1635689.

Samuelson, P. A. & Nordhaus, W. D. (1998) *Economics* (New York: Irwin/McGraw-Hill).

Stead, D., Sielker, F. & Chilla, T. (2016) Macro-regional Strategies: Agents of Europeanization and Rescaling?, In: Gänzle, S. & Kern, K. (eds.) *A 'Macro-regional' Europe in the Making: Theoretical Approaches and Empirical Evidence* (London: Palgrave Macmillan UK), pp. 99-120.

Ursic, E. & Jelen, I. (2022) From industrial district to industrial symbiosis: An opportunity. The case of the Ponte Rosso industrial area, Italy, *Acta Geographica Slovenica*, 62(3), pp. 21-32, https://doi.org/10.3986/AGS.10513.