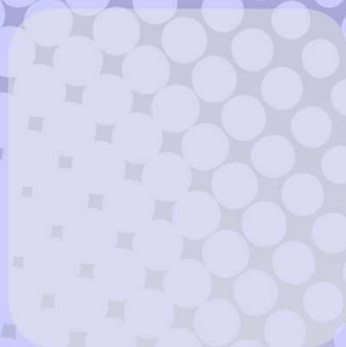


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EDITORIAL

Opportunities of core and peripheral regions in Central Europe

Dear Reader,

It is a pleasure for the Guest Editors to introduce the new thematic issue of DETUROPE – The Central European Journal of Tourism and Regional Development. Our publication provides a selection of papers presented at the 18th Annual Meeting of the Hungarian Regional Science Association (HRSA) entitled Opportunities of core and peripheral regions for their sustainable future. The first paper in the current issue presents a thorough report on the scientific conference, prepared by the editors, Szilárd Rác and Ildikó Egyed.

Due to the large number of presentations (four plenary and 185 section presentations were given over the four days), HRSA offered participants three publication opportunities. In addition to the international journal DETUROPE, two others in Hungarian or English language, in the Hungarian scientific journals *Észak-magyarországi Stratégiai Füzetek* (Strategic Issues of Northern Hungary, published by University of Miskolc), and *Tér-Gazdaság-Ember* (Space-Economy-Society, published by Széchenyi István University, Győr). The papers were selected in three steps. After the HRSA conference, session chairs were requested to propose the best presentations for publication. In the second round, the submitted English language abstracts were revised by anonymous reviewers. The authors of the best eight proposals were invited to submit a manuscript in the subject of the thematic issue of DETUROPE: Opportunities of core and peripheral regions in Central Europe. The submitted manuscripts were reviewed by two anonymous reviewers. The accepted articles were revised and corrected according to the provided critical remarks.

The first original scientific paper addresses the issue of geopolitics – Central European opportunities of core and peripheral regions in a global and European perspective. This keynote lecture was given in the section entitled: Central Europe after historical burdens, facing new beginnings. The study of Professor *James W. Scott* examines the current state of Visegrád Group Geopolitics: “Illiberalism” and Positionality within the European Union. The Visegrád Four (Czechia, Hungary, Poland and Slovakia) represent an important platform for macroregional cooperation within the EU. The author analyzes the shifts in the Visegrád Group’s identity as a regional integration platform and, in particular, links between Europeanization, ‘illiberal regionalism’ and new Central European geopolitical identity. This regionalism does not represent a coherent or stable Central European political project (see the

‘revolutionary’ Hungarian and Polish national conservative agendas versus the pragmatism of the Czech Republic and Slovakia). On the one hand – according to the researcher's conclusions – the V4 cooperation remains salient in order to prevent the political marginalization of its members. On the other hand (despite the troubling backdrop of illiberalism) European integration should be interpreted as an agonistic and contested process that offers space for a more heterocentric understanding of Europeanization and EU political community. This is a potential point of departure for moving towards a common European future.

One of the major challenges today is digitalisation and automatisisation. A significant part of transport is realized due to tourism motivations. Therefore, such disruptive innovations like automation in passenger transport might also affect tourism. In the second article *Márk Miskolczi, László Kökény, Katalin Ásványi, Melinda Jászberényi, Tamás Gyulavári and Jhanghiz Syahrivar* present an insight into the impacts and potential of autonomous vehicles in tourism. The study aims to identify the expected changes in tourism arising from technology, and the openness towards autonomous vehicle-based tourism services, based on a data collection completed among 671 Hungarian tourists. The empirical results have shown that tourists would be willing to give up control to the autonomous vehicles in a foreign environment, and hence, to pay more attention to the surroundings. The attitude analysis concerning autonomous vehicles provides a basis for further empirical research in social sciences and helps to prepare for the technology revolution for practitioners in tourism.

After global challenges the second group of papers examines socio- economic development in Hungary on various spatial levels. The paper of *Réka Horeczki and Ildikó Egyed* explores the small town development processes in Hungary. The paper also analyses the national development policy and the governance of small towns in Hungary. Small towns present a highly heterogeneous picture but play a quintessential role in the settlement network, concentrating one-third of the urban population. In many respects, the classification of small towns (with less than 5,000 inhabitants) as urban settlements is a mere formality. This is clearly demonstrated by the development funds of the recently launched Hungarian Villages Programme that have put these small towns on equal footing with the rest of the settlements with a population below 5,000 inhabitants.

Pál Szabó, Viktória Józsa and Tamás Gordos present the cohesion policy challenges of Hungary in the 2021–2027 EU programming period. The expanse of the study is remarkable due to its complexity. The main objective is to present the most important challenges at the member state level in a bottom-up and practice-oriented perspective. The researchers identified and studied three specific factors as a significant challenge for policymaking: the new NUTS2

regions (the capital city became a separate macroregion); the economic aspect of newly created territorial units (Economic Development Zones); the nature-focused aspect (management of surface water).

The paper of *István Finta and Péter Dombi* presents the practical experiences, regulatory principles and issues of the territorial delimitation of development policy in Hungary. Both at national and community level, the differentiation of specific territorial units is a key issue in development policy. Hungary has been operating and developing a delimitation system since the '90s, the elements of which can serve as a model, and can be well-utilized at the community level. The authors present the regulatory starting points and principles of spatial delimitation, the statistical methods used so far, the range of data used, and the problems that can be associated with the methods and data used so far. It can be defined as a basic requirement that the developmental classification based on statistical calculations and non-statistical methods should not conflict with each other.

The last paper in the special issue focuses on tackling the measurement of cross-border cooperation intensity. *Zoltán Pámer* presents an empirical example of the Hungarian-Croatian border and a transparent methodology on how the intensity of cross-border cooperation may be measured. In the first part of the paper, the author provides a brief overview of border studies and a summary of the evolution of European Territorial Cooperation. This refers back to the conclusions of James W. Scott. Strengthening local and regional elements of cross-border cooperation would indeed be of essential importance in recreating networks and addressing many border-transcending problems that the Visegrád Four states face.

The current issue is the 7th thematic issue prepared with the cooperation of DETUROPE and HRSA. The members of the Association – as previous or potential authors – hereby express their gratitude to the journal and particularly its Editor-in-chief, Dr. Kamil Pícha.

We hope that you will find inspiring ideas, research results or practical achievements in this collection. We wish you a good reading,

Szilárd Rác and Ildikó Egyed¹

Editors of the thematic issue

¹ The research of Szilárd Rác and Ildikó Egyed (research fellows of CERS Institute for Regional Studies) is supported by the János Bolyai Scholarship of the Hungarian Academy of Sciences.

**OPPORTUNITIES OF CORE AND PERIPHERAL REGIONS FOR
THEIR SUSTAINABLE FUTURE
REPORT ON THE 18TH ANNUAL MEETING OF THE HUNGARIAN
REGIONAL SCIENCE ASSOCIATION**

Ildikó EGYED^a, Szilárd RÁCZ^b

^aInstitute for Regional Studies, Centre for Economic and Regional Studies; Papnövelde u. 22., H-7621 Pécs, Hungary; egyed.ildiko@krtk.hu

^bInstitute for Regional Studies, Centre for Economic and Regional Studies; Papnövelde u. 22., H-7621 Pécs, Hungary; racz.szilard@krtk.hu

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Due to the coronavirus epidemic, the 18th Annual Meeting of the Hungarian Regional Science Association was organized in a hybrid form at different venues between 27–30 October 2020. The concept of the conference had to be fundamentally revised on 4 September when it became obvious that it could not be organised as an attendance-based event. We decided to organise a special regionalist conference in line with the HRSA's objectives, dedicated to the ideals of decentralisation and prioritising grassroots organisation. According to the satisfaction questionnaire, the majority of colleagues had no or limited experience in giving online conference presentations prior to this year's annual meeting. Overall, the feedback suggests that the online transition was smooth.

The conference was co-organized by the Department of Economic Geography, Geoeconomics and Sustainable Development of the Corvinus University of Budapest. 18 Hungarian and four English language sessions, as well as two English language plenary sessions were included in the four day long conference (videos of plenary sessions are available on the website of the Association). A total of 185 session presentations were given, a record in the history of annual meetings. The event and sessions were attended by a large audience, 135 people free of charge.

The first plenary session took place on the afternoon of 28 October 2020. *Eveline van Leeuwen*, Vice President of ERSA, Professor at Wageningen University and Scientific Director of the Amsterdam Institute for Advanced Metropolitan Solutions analysed the urban-rural aspects of the lockdown in the context of the Covid-19 epidemic. During the first wave of the pandemic, the spatial heterogeneity of the regional and local effects of the crisis was manifest in the heightened vulnerability of backward regions and disadvantaged urban areas. Exposure of regions to export sectors, global value chains and the nature of regional economic specialization (e.g. tourism) largely contributed to the differential nature of economic impacts. The lecture presented the results of a survey conducted by the author (Bourdeau-Lepage & Leeuwen, 2020) on the impact of lockdown restrictions on the well-being of the Dutch population, highlighting the existence of an urban-rural divide in terms of the quality of life indicators. The effects of the coronavirus contributed to the aggravation of health and socio-economic inequalities, the revalorisation of local and regional value chains, and increased population outmigration from bigger cities, thereby reversing previous migration trends. The presentation drew attention to the importance of place-based regeneration strategies, investment in the SME sector and the creation of sustainable jobs as the most efficient tools for economic revitalisation of regions and for the mitigation of territorial disparities.

Jan Fidrmuc, Senior Research Fellow at the Department of Economics and Management at the University of Lille, founder of the Institute for Strategic Research of the Slovakian Government Office analysed the impacts of European cohesion policy, focusing on the economic returns, political and welfare aspects of cohesion funding. The first part of the lecture was devoted to discussing the regional growth effects of cohesion policy and the spatial modelling of inter-regional spillover effects. Cohesion transfers are included as an endogenous variable, European NATURA 2000 sites as an external variable in the presented standard growth model (Fidrmuc, Hulényi, & Zajkowska, 2020) that also takes into account the relationship between institutional development and the effectiveness of cohesion policy. Protected areas provide a potential instrument of cohesion policy, imposing constraints on use of land for industrial purposes and real estate investments. The results underline the positive correlation between cohesion transfers, the quality of institutions at national level and the efficiency of cohesion policy, as well as the importance of spillover effects of cohesion funding beyond the boundaries of beneficiary regions. The impact of cohesion transfers is spatially differentiated, generally positive effects on growth are observed in the new Member States. In terms of funding elasticity, the multiplier effect of a per unit increase of cohesion spending was

0 for Hungary and 0.15 for Poland, i.e. an additional €1 of aid generated an increase of €0.15 in Polish GDP and €0.42 in Slovak GDP, respectively. Conversely, a significant negative effect was observed in the case of Denmark and the Southern Member States. In terms of regional output, an increase in cohesion spending did not produce a significant multiplier effect in the short run (an additional €1 investment in cohesion policy spending generated an increase in GDP of 0.24 cents for an average region). The presentation concluded with a discussion of cohesion policy in the post-Brexit period in the context of UK regions. The results of the presented bivariate and multivariate analyses of variance (Fidrmuc, Tulényi, & Tunali, 2016) showed that Brexit voters were typically older and lower skilled, while wealthier regions with higher employment and wage levels typically voted for remain. At NUTS2 level, cohesion policy had no visible effect on the distribution of Brexit voters, but at NUTS3 level it was positively correlated with the proportion of the population voting against Brexit.

On 29 October 2020, with the goal of starting a new tradition, the opening lecture of the second plenary session was delivered by the 2019 Distinguished Young Regionalist Award winner. *Zoltán Elekes*, research fellow at the CERS Institute of Economics, member of the Lendület Agglomeration and Social Networks research group, examined the role of foreign-owned enterprises as the agents of structural change in regions, focusing on the concept of related diversity as the key driver of regional economic diversification. The presented study (Elekes, Boschma, & Lengyel, 2019) investigated the agency of multinational corporations in the diversification of regional economies through the analysis of the skill relatedness network of manufacturing firms at micro-regional level. The study distinguished between foreign-owned or domestically-owned firms, new entrants, growing, declining or exiting incumbents. The analysis shows that the implantation of foreign firms heavily relies on previous regional specialisation and contributes to increasing unrelated diversification locally, while at the level of the Central European manufacturing core related diversification is the defining feature. Large multinational enterprises exert a stronger impact than indigenous firms on the economic restructuring of regions, creating more jobs in unrelated sectors, while a shift to related diversification is observed in the long run. Another study (Szakálné Kanó, Lengyel, Elekes, & Lengyel, 2019) sought to explore how the relational proximity of foreign and domestic firms affects firm survival in regions undergoing significant structural and institutional change. The study, based on the National Tax Authority's firm-level panel database and restricted to manufacturing firms between 1996–2012, applied an entropy decomposition method used for measuring sectoral diversification, which allowed to detect the balance of ownership structure

in each sector at the highest level of the economy. The analysis showed that over the studied period ownership diversity had a positive effect on firm exits, the more balanced structure of foreign and indigenous firms increased the risk of exit for both types of firms, as a sign of growing competition. In the case of domestic firms, over time unrelated diversification was less able to prevent their exit, while related diversification had a more positive impact on the survival of domestic firms in a later phase of the transition period, generating agglomeration effects. Foreign firms were the main agents of structural change in regions in the initial period of transition, but were less affected by spillover effects under the examined period.

Alexander Wandl, Senior Research Fellow at the Faculty of Architecture and Built Environment at Delft University of Technology, presented his lecture on the relationship between public spaces and sustainable development. More than 30% of the European population live in in-between areas comprised of small towns and villages, also represented as "backyards" for the storage of things that are no longer useful, concentrating landscape distorting elements, such as industrial deposits, wind farms, railways, airports, etc. outside the administrative boundaries of cities. The proliferation of these hybrid, „dispersed urban areas” merging rural and urban characteristics was triggered by urban sprawl, a phenomenon foreshadowing the death of cities and gaining in pace under the impact of the coronavirus, and it represents a significant potential for the increasingly space consuming circular economy. Attempts at the assessment and delineation of intermediate spaces were demonstrated through the example of ten Western European urban areas. 80% of the population of the presented urban areas reside in zones defined as in-between areas. Finally, in a multidisciplinary approach to sustainable development, the speaker presented a specific typology of open spaces using cluster analysis, and explored in a comparative perspective the relationship between access to open spaces and landscape fragmentation in the case of in-between areas.

For years, HRSA has offered an opportunity for its members to organise sessions in the first circular of the organisation, and *in 2020 the following sessions were organised:*

- Innovation and Development in Linked Regions;
- Territorialisation of the Circular Economy;
- Core and Periphery in Central and Eastern Europe;
- Consequences of Multipolarisation on the Core–Periphery Relationships;
- Theoretical and methodological issues of spatial analysis;
- The changing spatial dimensions of centres and peripheries;

- Territorial disparities and territorial policy options or 2021–2027 from a bottom-up perspective- contemporary development visions and processes;
- Governance challenges in peripheral regions;
- Local development strategies beyond growth;
- Enterprises and local society;
- Municipal (de)segregation – an assessment of domestic de-segregation efforts;
- Investigation of social inequalities, labour market processes;
- Creative and cultural industries;
- Spatial transformation of consumption and employment during the Covid-19 epidemic;
- Social, economic, environmental and spatial impacts of the coronavirus crisis and their spatial implications;
- Cities and urban networks in Central and Eastern Europe;
- Interpreting centre-periphery relations in urban development;
- Central Europe: after historical burdens, facing new beginnings;
- Regions, countryside, forests;
- Spatial dimensions of sustainable development;
- Sustainable transport.

Unconventionally, the General Assembly took place in the afternoon of 30 October 2020, as the closing event of the conference. Zoltán Gál, President of HRSA presented the organisation's medium-term programme for the period 2020–2023 (Gál & Rácz, 2020). The report of the Audit Committee was followed by the ceremonial granting of awards.

For the fifth time, the Hungarian Regional Science Association distributed its highest award, the *Pro Regional Science Award* based on a decision of the General Assembly following the recommendation of the Board. The members of the Society awarded the prize to Professor *Imre Lengyel* (Professor at the SZTE Faculty of Economics, former Head of the Doctoral School of Economics, former Vice President of HRSA, former President of the HAS Regional Scientific Committee) to honor his outstanding achievements in research and education, his science organization and school-founder role in the field of regional science.

For the twelfth time, the HRSA's Presidential Board, enlarged by the division leaders, awarded the Outstanding Young Regional Scientist Award to *Judit Berkes*, Assistant Professor

at the Department of Economic Analysis of the Gyula Kautz Faculty of Economics of Széchenyi István University for her valuable results in regional science.

The Regional Science Publication of the Year Awards founded by the HAS Committee on Regional Studies were distributed for the first time this year. In the domestic category, the prize was awarded to *László Faragó* for his monograph entitled “Spatial existence: a Social Shift in Spatial Theory” (Faragó, 2019). In the international category, the prize was awarded to *Izabella Szakálné Kanó, Balázs Lengyel, Zoltán Elekes and Imre Lengyel* (2019) for their study entitled „Agglomeration, foreign firms and firm exit in regions under transition: the increasing importance of related variety in Hungary”.

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POST-MILLENNIAL VISEGRÁD FOUR GEOPOLITICS: ILLIBERALISM AND POSITIONALITY WITHIN THE EU

James Wesley SCOTT^a

^aKarelian Institute, University of Eastern Finland, 80100 Joensuu, Yliopistokatu 2. Finland
James.scott@uef.fi

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Abstract

This research paper analyses shifts in the Visegrád Group's (Czechia, Hungary, Poland and Slovakia) identity as a regional integration platform and, in particular, links between Europeanization, illiberalism and V4 geopolitical identity. This provides a background for investigating contested ideas of European integration that discursively frame Central Europe's 'illiberal regionalism'. I suggest that this regionalism does not represent a coherent or stable political project. Tensions involved in this regionalist shift are exemplified by 'revolutionary' Hungarian and Polish national conservative agendas and their interaction with the more measured pragmatism of the Czech Republic and Slovakia. This analysis supports the argument that V4 cooperation represents an adjustable geopolitical space that reflects Hungarian and Polish cultural politics of national identity as well as more issue-oriented Czech and Slovak concerns. Moreover, V4 cooperation remains salient in order to prevent the political marginalization of its members.

Keywords: Europeanization, Visegrád Four, Central Europe, Critical Geopolitics, Illiberal Democracy

INTRODUCTION

The Visegrád Group (comprised of the Czech Republic, Hungary, Poland and Slovakia) represents an important platform for subregional cooperation within the European Union. This relationship between the 'V4' and the EU formally began in 1991 as part of the 'return to Europe' proclaimed by Vaclav Havel and was celebrated as a historical break with State Socialism and Cold War divisions. However, by 2016 western European media were characterizing the Visegrád 4 (henceforth V4) as an 'awkward quartet' (Buckley & Foy, 2016), a loose association of post-socialist EU members bent on overturning the European Union's institutions. Indeed, the vehement nature of anti-refugee political sentiment in V4 countries has been interpreted as a shift in the group's geopolitical identity. This shift has been characterised as a partial abandonment of Europeanization and, in the most negative readings, as a project of fragmentation and contestation of the European project itself (see Nič, 2016). Aliaksei Kazharski (2018) has therefore posed the provocative question whether the V4's increasing

lack of normative conformity with the European Union mainstream signifies an ‘end’ to the idea of Central Europe or whether Central Europe itself is in the process of transforming the EU into a more heterogeneous space of political and cultural norms.

Clearly, the geopolitical identity of V4 is not merely an academic issue, nor is it a solely a question of cooperation policies and practices. This is evident from the different ways in which V4 geopolitics can be interpreted and the rich scholarship that has pondered the V4’s significance within the wider European context. From this literature emerges a diverse array of perspectives, not all of them overly positive. For example, despite the group’s almost three decades of cooperation in areas such as energy, culture, education, environmental protection and the economy, recent framings of V4 cooperation paint a stark picture of the group’s future, both in terms of East-West difference within the EU and divisions between V4 members themselves (Klus, 2015; Pakulski, 2016; Racz, 2014). Moreover, powerful narratives of Central European illiberalism have promoted a tendency to associate all V4 members with the national-conservative agendas of Hungary and Poland.

We must remind ourselves that the visionaries behind the idea of Central European cooperation were striving to make their own imprint on Europe rather than simply appropriate pre-defined rules, values and ideas. The notion of Central Europe was recast by intellectuals such as Jenő Szűcs, Czesław Miłosz and Milan Kundera in order to signal a move from imagining Central Europe as a sphere of influence to constructing it as a partner in the broader integration of Europe (Trencsényi, 2017). Vaclav Havel saw in Visegrád cooperation a wider contribution to developing Europe based on “the special ethos created by our freshly won freedom.” However, it is undeniable that while guaranteeing democratic freedoms, post-1989 reforms also promoted a sense of core-periphery dependency and economic if not political domination by powerful western European states, Germany in particular (Dutka, 2016; Vliegthart, 2010).

The illiberal turn can be thus partly explained in terms of realist geopolitical contestations of pan-European conformity, for example with regards to accommodating asylum seekers (Szalai, Csornai, & Garai, 2017). Shifts in the V4’s geopolitical orientations can also be interpreted as a reflection of post-Millennial contexts of political and economic crisis and the renewed salience of national identity politics within the context of European integration. Indeed, some observers see disruptive transformation as the principal explanation for Central and East European illiberalism. Krastev and Holmes (2019) argue, for example, that liberalism was a ‘God that failed Eastern Europe’, creating a broad sense of discontent and disillusionment

that has fed a nativist backlash against Europeanization. Krastev and Holmes (2018) also suggest that the illiberal turn is in large part a ‘humiliation-driven’ repudiation of western standards. As Buzogány and Varga (2018) remind us, the conflation of liberal democratic values with capitalism and neo-liberal ideology acted as a catalyst for eurocritical shifts. Hence, suggestions have been ventured that V4 cooperation could be evolving into an alternative model of bottom-up Europeanization (Mogildea, 2018) and/or a new form of regional cohesion based on social conservatism and national interests (Kazharski, 2018).

Consequently, the ‘illiberal turn’ is anything but a straightforward issue of ‘East-West difference’ but rather the result of a complex interplay of factors. Moreover, populism and illiberalism have become general features of national politics within the EU, albeit to different extents, forming an anti-EU mainstream of sorts. ‘Illiberal Eastness’ is itself a geopolitical imaginary based on normative notions of Europeanization and stereotyped thinking, both of which ignore the contested nature of European construction. I therefore suggest that these questions can be approached through an ontological security perspective that links instrumental, ideological and identity-driven rationales which condition the creation of European political and security community (see Della Sala, 2016; Mitzen, 2006; Kinnvall & Mitzen, 2017). Ontological security involves, among other things, a constant process of creating and recreating narratives of political community, including a national sense of Self. A major aspect in this context is the emphasis of values, narratives of national purpose and historical memories that stabilise the identity of a given country (Rumelili, 2018). In the case of Central European EU member states, identity questions are accentuated by processes of what I suggest can be described as a specific kind of ‘nation-making’, that is: the forging of a sense of positionality and purpose within an evolving European political community.

As discussion will indicate, the political shifts of Visegrád 4 states are not simply opportunistic reactions to the EU’s shortcomings, they reflect political struggles to achieve a new ‘strategic positionality’ in uncertain times (see Richardson, 2018). In terms of V4 subregional cooperation, illiberalism can be interpreted as conditioned by EU positionalities, domestic concerns and political pressures against common V4 positions. In the following, discussion will first centre on the theoretical background and assumptions relating to the concept of ontological security relevant to this study. Analysis will then focus on the nexus between ontological security and positionalities reflected in conservative agendas, value orientations and pragmatic national interests. I will particularly focus on Hungarian national conservative appropriations of V4 cooperation as exemplifying the emergence, ideological

rationales but also the tensions involved in the illiberal turn. In concluding, I argue that the V4's geopolitical flexibility could ultimately be threatened by illiberalism should the nation-building projects of Hungary and Poland vie for hegemony in defining the V4's Central European identity. 'Alternative' European values might provide a basis for greater V4 relevance but only to the extent that regional coordination, economic modernisation, territorial development and a lobbying of influence within the EU 27 are not jeopardised.

Connecting Critical Geopolitics to Ontological Security

Particularly salient for this discussion is the close link between ontological security, Europeanization and strategies of national positionality within the wider European context. In terms of (geo)political psychology, ontological security is a question of identity and the stability of ideas, values and points of common reference that create a sense of group belonging (Mitzen, 2006). The salience of the concept is evidenced by attempts to achieve "epistemic coherence in times of uncertainty" (Natorski, 2015, p. 4). Along similar lines Gerard Toal (2017:39) argues that "every state or aspiring state has a geopolitical culture (...) defined as its prevailing sense of identity, place and mission in the world." The histories of Central European geopolitical thinking are rich and exhibit a conceptual continuity that has withstood turbulent times. In this way, Hungarian Turanism (see Balogh, 2020), Polish Jagellonianism (Ištók, Kozárová, & Polačková, 2018) or Czech anti-geopolitical traditions (Drulák, 2006; Kazharski, 2019) continue to be mobilised in contemporary contexts. Nevertheless, these geopolitical ideas are neither hegemonic nor immutable. Ontological security also implies a need for adaptive change in order to address new challenges. Favouring continuity in situations of deep uncertainty or in the exclusion of alternative policy options carries a risk of misrecognition and misleading understandings of reality (Chernobrov, 2016). Richardson (2018) suggests that ideological positions as well as pragmatic and dynamic elements of geopolitical thinking need consideration in order to reflect shifting geo-economic realities and domestic concerns. Following Richardson, a nuanced perspective would also consider the inherently fluid nature of subregional cooperation and geopolitical imaginaries which, despite their historical anchorings, represent national attempts at achieving 'strategic positionality' in uncertain times.

Ontological security, for example, can be threatened by rapid political change and can be manipulated via threat scenarios which target specific communities and organisations. Thus, the threat potential of perceived negative difference between peoples, cultures and states is a constant concern (Rumelili, 2014). More than merely an abstract concept, ontological security

is observable in concrete situations such as in the self-referential nature of securitisation and threat perception (Palonen, 2018). This is, for example, clearly evident in the ‘Hungarikum’ of the moral panic button through which government-controlled media in Hungary instil popular fear of the migrant Other, conflating existential threats with cultural anxieties about Hungary’s future within the EU (Barlai & Sik, 2017).

Europeanization is a powerful geopolitical imaginary according to which economic integration, socio-political interaction and socialisation are creating a common space based on a recognition of mutual interdependence. However, interpretations of the rationales, mechanisms and impact of Europeanization differ considerably. An ontological security perspective can be used to challenge understandings of Europeanization based on convergence between European states and societies and a shared transcendence of past traumas. On this view, Europeanization cannot be reduced to policy adaptation and conformity, nor can it be comprehended as unidirectional political socialisation – it is a process that is conditioned by socio-spatial imbalances, centre-periphery tensions (Buhari-Gulmez & Rumford, 2015; Celata & Coletti, 2019) as well as national experience and narratives that link national pasts with European futures (Della Sala, 2018). These narratives are instrumental in interpreting the social world, which includes geopolitical environments, and as such aim at stabilising the biographical continuity of political communities. Such narratives can also involve a break with uncomfortable pasts (Della Sala, 2016) and as well reinterpretations of history that serve to consolidate a sense of national identity. For example, Bahar Rumelili (2018) argues that temporal othering with regard to historical memory – i.e. the central role of *Stunde Null* moments of national re-birth with regard to overcoming traumatic events and legacies of fascism, communism, war, etc. – was central to the constitution of the EU’s identity as a political community.

Central Europe’s process of accession to and membership in the EU has involved finding a place within an already established political community. Central European states have very different national pasts from the founding member states and, as Mälksoo (2010) states, they have also challenged the imposition of EU-European identities based on western interpretations of post-World War II experience. Common to all post-socialist states, at least in general terms, is the experience of societal transformation and the socially polarizing effects of economic reform, particularly of neo-liberal reforms necessitated by European integration. Another issue is certainly the narration of an ‘East-West divide’ within Europe and the European Union. This

divide has been conceptualised in rather different ways: as a reflection of structural and socio-economic asymmetries, as historical and cultural difference and as an expression of core-periphery relations between old and new member states (Ágh, 2010; Kuus, 2007; Müller, 2014; Zarycki, 2014). Structural and socio-economic data indeed substantiate the existence of development and income gaps as well as the argument that the EU is dominated by a more-or-less permanent hegemony of strong states to which Germany, France and other members belong (Della Sala, 2018). Post-1989 transformation was disruptive to the societies of V4 states in many senses; full de jure sovereignty was regained, and state socialist institutions quickly dismantled, but the construction of new democratic societies proceeded fitfully. Ultimately, with the crisis of 2008/9 and its aftermath, belief in the EU's ability to provide greater prosperity suffered (Cichocki, 2017). As the geopolitical imaginary of Europeanization has faltered, East-West normative gaps, crises of national purpose and social well-being have been met by more nationally oriented policy choices in tandem with culturalist and 'illiberal' narratives that influenced popular attitudes towards mainstream EU values.

East-West 'difference' as frequently narrated in the media is reflected in the suggestion that Central European member states are questioning their commitments to the EU. However, this simplified narrative obscures the fact that through the platform of Visegrád cooperation its members are striving to maintain identifiable political roles with regard the European Union. Appropriating the ontological security approach, I suggest that Visegrád cooperation is closely linked to projects of *nation-making* in the very specific sense of defining political roles (positionality) within the context of European integration. As will be discussed below, this is also evidenced by the fact that the Visegrád Group operates as a geopolitical space that provides an overarching narrative of European integration while allowing for the adjustable alignment of domestic agendas and concerns.

VISEGRÁD 4 AND (GEO)POLITICS OF EUROPOSITIONALITY

Understanding Europeanization through the prism of national positionalities directs our attention to processes by which narratives of national purpose within the EU are generated, particularly under conditions of disruptive change and geopolitical uncertainty. Moreover, positionality is used here to suggest a means of adjusting domestic political agendas, including national conservative ones, to acting politically as EU member states. It is a process of mutual conditioning and contestation that helps explain variation within Europe – for example,

between that which is considered 'East' and 'West'. The Visegrád Group's geopolitical orientations have therefore reflected historical experiences of its members as well as vicissitudes of accession to and membership in the European Union. Heralded as an example of post-Cold War political and economic integration, the V4 maintain an official identity as a platform for dialogue and cooperation within Central Europe and this is expressed by a number of institutions and platforms that maintain the cooperation agenda (Cabada, 2018).

Irrespective of the V4's shortcomings, the group's sustainability and significance is arguably due to the fact that in Central Europe nation-building represents unfinished business – it is a process that was curtailed by war and its geopolitical aftermath and that has often coincided uncomfortably with the simultaneous project of European integration. At one general level the Visegrád Group is founded on a sense of identity that derives from 'betweenness' and geographical, political and historical liminality (Lebow, Mazurek, & Wawrzyniak, 2019). There is arguably a shared 'sense of tragedy', described by Milan Kundera (1984) as a forced separation from Western Europe and István Bibó (1946) as frustrated nation-building due to external interference and geopolitical circumstances. A further common experience, at least in general terms, is the 'condition of post-Communism' (Schöpflin 1993) in which the construction of liberal democracies has taken place in hierarchical political cultures unfamiliar with the agonistic workings of parliamentary systems. Under these circumstances, it is clear why Visegrád cooperation was conceptualised by visionary advocates such as Vaclav Havel as a means to develop a sense of common European values. In addition, the visionary idea of creating Europe as a joint project was (and remains) closely linked to a need to create stable conditions for national development and economic transformation (see Nagy & Nagy, 2013; Pisciotta, 2016 and Varró, 2008). Examples of this were the facilitation of EU and NATO membership and the formation of the Central European Free Trade Area (CEFTA) in 1992. Above and beyond this, V4 cooperation has been instrumental in promoting the response capacities of its members to external challenges (Törő, Butler, & Grüber, 2014). It also provides leverage to its members who face obstacles in negotiating influence within the EU against the political and economic weight of the larger member states.

The Illiberal Turn: Disruption, Populism and Conservative Nation-Making

Central to this discussion is the context of change brought about by post-Millennial political and social disruption. In the last few years the Visegrád Four has gained notoriety as a centre of EU contestation and the media have characterised the group as political front against, for

example, the EU's attempts to manage its refugee dilemma. While by no means underplaying the dangers of populism and creeping autocracy, I suggest that the so-called illiberal turn reflects a strategy of linking domestic and European-level concerns and a need to stabilise 'national selves' in the post-Millennial context of economic crisis, insecurity, neo-liberalism, austerity and the near-demise of a sense of EU-wide solidarity. As Algan et al. (2017) document, crisis-driven economic insecurity has been a major driver of populism in Europe. We can thus trace a chronological progression from the political strengthening of populist-nationalist parties in the early 2000s, financial crisis of 2008–2009, the 2010 national-conservative electoral victory in Hungary, a similar Polish political shift in 2015 and, in the same year, the dramatised spectacle of refugees seeking safety in the EU. The turn was precipitated in large part by the confluence of several factors, including the rise of domestic populism and nationalist identity politics. This favoured the emergence of new and more conservative stabilizing narratives of positionality that have partly incorporated right-wing culturalist and anti-elitist rhetoric (Havlík & Stojarová, 2018).

Kazharski (2018) suggests that events such as the refugee issues not only supported radicalism in Visegrád Four countries but revealed already existing normative divides in terms of values and political culture. At one level, this divide reflects more general trends in Europe – nationalist populism has achieved a degree of common-sense status through invoking threat scenarios, Euroscepticism, everyday insecurity and islamophobia (Scott, 2017). Krasteva (2017) argues that, in addition to multiple crises, populist Euroscepticism of Central and Eastern Europe has been fuelled by the inability of national elites to communicate EU integration as a meaningful political project as well as by the inability of Brussels to convincingly connect the conditionalities of EU integration with a sense of democratic development and ownership. As Fenko, Požgan and Lovec (2019) indicate, overoptimistic popular expectations of EU membership, encouraged by a lack of measured debate on the costs and benefits involved, gave way to disillusion and a loss of faith in the utility of European integration. For example, according to some assessments the EU's institutional responses to the financial and refugee crisis have led to popular disaffection. Among lower-income Czech citizens, for example, EU membership was not perceived as helping local economies while the refugee crisis increased Euroscepticism among the Czech middle-class (McEnchroe, 2019).

To varying degrees, the anti-EU and anti-elitist backlash that ensued has manifested itself in identity re-borderings and a discursive reassertion of national sovereignty. Austerity and neoliberal policies have been disruptive to the transformation trajectories of Central Europe

states (see Wilkin, 2016). It is not just a case of disappointment with the results of membership benefits; neoliberalism in particular has been interpreted as an anti-statist political strategy foisted upon new member states with which to subject control of national societies and economies to globally operating market actors. Rather than using ‘zombie’ State Socialism (Chelcea & Druță, 2016) as the template for othering, a common denominator of illiberal populism in Central Europe is a questioning of many of the basic premises of European Union, particularly more cosmopolitan ideas of shared European citizenship and cultural tolerance. Playing on a politics of national alienation, illiberalism has sought to change the rules by which questions of migration, citizenship, and ultimately mobility are discussed and dealt with politically. Nevertheless, as dramatic as it appears, the illiberal turn marks only a partial transformation of the group’s geopolitical identity. There is no question that the visionary Europeanism shared by Central European elites remains part of the historical identity of the Visegrád Group as it references epochal shifts in Europe’s interstate relations and democratic development while signalling the transformative political role of Central Europe. It is a positive story of national rebirth and a popular desire for freedom that has promoted transcendence of the state socialist legacy. In practical terms, however, this intellectual vision has receded from view, taking a back seat to the problematic task of promoting national interests within a European context. Moreover, European integration has revealed historical divisions between the four countries, for example in the form of ethnopolitical tensions between Hungary and Slovakia. While such these tensions potentially threaten the viability of V4 cooperation, Europeanist momentum has been sustained through developing European agendas in areas such as defence policy, energy security and efficiency, food security, water, Cohesion Policy and the EU’s Eastern Partnership. Moreover, Visegrád cooperation has also involved lobbying in EU agencies and representations for Central Europe (Törő, Butler, & Grüber, 2014).

The maintenance of the Visegrád Group’s positionality between the level of European politics, different member interests and domestic pressures has required balancing EU-critical positions with sustained commitments to developing the EU as a functioning political community. Common Visegrád positionalities contain value-based and pragmatic elements, as is evidenced by the joint statement issued at the occasion of the Rome Declaration of March 2, 2017. The statement reiterates the group’s rejection of centralised relocation of refugees and multi-speed Europe policies, but also voices redoubled support for EU Cohesion Policy (Gotey, 2017). One common message that emerges from the V4 stance on refugees is that local sensibilities and cultures need to be taken into consideration and indeed, there appears to be

scant popular support in any of the four countries for admitting refugees (Zachová et al., 2018). However, far from representing a concerted shift in orientation, the Group's move towards conservatism, nationalism and culturalist understandings of Europe is highly nuanced and reflects specific national contexts. Furthermore, Czech and Slovak commitments to illiberal ideas have been much less pronounced and sustained than those of Hungary and Poland.

Hungarian and Polish Positionalities

In the case of Hungary and Poland, the illiberal turn reveals a very strong ideological bent that is closely tied to conservative re-framings of national identity within the European context. Hungarian and Polish versions of national-conservative nation-building are premised on a specific set of beliefs with regard to history and the political consequences that can be drawn from past experience. For example, Hungary's 2011 Fundamental Law, or Constitution, outlines a conservative understanding of the country's place in Europe. The new constitution emphasises the 'role of Christianity in preserving nationhood' (Republic of Hungary, 2011), and also conveys a clear ethnopolitical message directed at Hungarian minorities living in the Carpathian Basin. Furthermore, according to the Hungarian government's strategic foreign relations strategy, adopted in 2014, national identity is: '(...) shaped by idiosyncratic national, Central European and European values, interests and experience.' (Hungarian Ministry of Foreign Affairs, 2014). Moreover, the historical memory of once large nations features prominently in the evocation of Hungarian Kingdom – and the Carpathian Basin that it encompassed, and the Polish-Lithuanian Rzeczpospolita as a basis for new cooperation and the desires of Hungary and Poland to be recognised as 'middle powers' (Hajdú, 2019; Nyssönen, 2018). In both cases the emergence of powerful nation-building discourses reflects a desire, particularly on the part of conservatives, for a more positive understanding of national pasts as well as present and future positionality within the European Union. These narratives are aimed at re-framing a national sense of pride and purpose, extolling the contribution of the nation to the greater European good and civilisational development. Significantly, these narratives are also culturalist in Vertovec's (2011) sense of the term, involving a conception of (national) culture as reified, static, and largely homogeneous.

The conservative push involves a directed campaign of temporal othering in which the victory of national-conservative forces signifies a genuine end to transition and the re-establishment of true and legitimate national sovereignty. For example, according to this narrative, while the socialist system as such was swept aside in 1989, the post-socialist

experience was an incomplete process of national becoming until the grand electoral victory of FIDESZ was achieved in 2010.¹ These expressions of cultural politics are part of a national-conservative project of nation-building,² in which Hungary is (finally) realizing its role as a ‘strong and proud European nation’, following its own political destiny but within the context of European cooperation.³

Similarly to the Polish government, Hungary has injected its national message of moral rebirth into Central European cooperation with the highly ambitious goal of changing the trajectory of European Union towards a nationally constituted one. In a visit to Kraków, Poland in December 2016, Hungary’s Prime Minister announced that “Central Europe is experiencing a renaissance and is growing and developing continuously and dynamically”. Similarly, the Future of Europe Conference organised in Budapest in May 2018 was framed by several provocative questions that left little doubt as to the central ideological message conveyed by the Hungarian V4 presidency:⁴

Is the war for Europe’s body and soul a winnable one? Can we defeat censorship, the shaming of those who think differently, the increasing cultural self-hatred in Europe? (...) Will Europe become the new melting pot? Shall we, out of cultural guilt or simple calculation, sacrifice Christianity, freedom and our way of life? Or should we retreat to our fortress, defend ourselves and strengthen our values and cohesion within? Is the creation of the New European Man realistic through migration?

Prime Minister Viktor Orbán has portrayed Hungary and its Central European neighbours as a centre of new European ideas that more closely adhere to public sentiment. On this view, Visegrád members are not mere emulators of the West, but are innovators and makers of Europe according to notions of a nationally defined Christian Europe – and against Brussel’s ‘political correctness’ (Butler, 2017; Szarka, 2017). Hungarian and Polish commitments to value-orientations have in fact emerged as a broader geopolitical strategy to stabilise the national conservative narrative, for example through a rejection by the most conservative political

¹ Lovas, I.: Húsz éve erre vártunk. Magyar Nemzet (4 November 2010). The central message of this opinion piece is that Hungary has waited 20 years for a truly national government, a government that represents national interests.

² The Fidesz official website announces in a June 2014 blog that ‘a new era of nation-building is possible’ (A nemzetépítés új korszaka jöhet), available at <http://www.fidesz.hu/hirek/2014-06-09/a-nemzetepites-uj-korszaka-johet/> (accessed 12 June 2017).

³ As reflected in a poster campaign that advertises Hungary as a ‘strong and proud European country’, <http://putitright.eu/?p=2523> (accessed 12 June 2017).

⁴ The text is taken from the following conference website: The Future of Europe’/„Európa Jövője”, <http://europajovojev4.eu/en/#koszonto> (accessed 10 January 2020).

groupings of liberalism's individualist character and as a force that has undermined society and state in economic, political and social terms (Buzogány, 2017). The consolidation of Hungary's activist positionality is furthermore evidenced by the highly visible exploitation of refugee 'threat' as part of a broader geopolitical ambition to push for a more conservative turn within the EU *as a whole*. And indeed, the forceful nature of the Hungarian government's arguments against accommodating refugees is based on a strategy of invoking the inviolability of national borders and exaggerating threats to national cohesion, identity and sovereignty (Scott, 2020).

Poland's national conservative government has also projected national identity politics, as well as its Catholic religious identity, onto V4 cooperation. Since 2015, the Polish government has sought to strengthen a sense of V4 identity based on national traditions and to fortify a common position on European reform. Similarly to Hungarian proclamations, the Polish conservative vision of Europe includes a moral Union explicitly based on Christian values. According to the Polish Ministry of Foreign Affairs (2017, 21):

“Since the European Union is not only a Union of interests, but also a Union of values, the Republic will support its activities to respect democratic freedoms and human rights. Referring to the most glorious traditions of the Polish-Lithuanian Commonwealth, we will attach great importance to freedom of thought and conscience and interreligious dialogue as a way of building peaceful relations between religious communities, preventing extremism, intolerance and terrorism. Actions on this should also be seen in the context of improving the position of Christians, the most persecuted religious community in the world.”

These ideas informed the priorities of the Polish Visegrád Presidency (2016–2017) which included strengthening the voice of the V4 within the EU, security and stability, transportation networks, commitment to more regional dialogue, and, as mentioned above, emphasizing common values as a means to strengthen V4 identity. Moreover, in the opinion of the present Polish administration, the main threat to the sustainability and stability of the European Union is the prospect of transforming it into a bureaucratic project with little subject to democratic (i.e. national parliamentary) control. A further deepening of integration is interpreted as undermining the sovereignty of Member States. Nevertheless, despite sharing an ideological stake in political illiberalism, Polish national conservatives maintain a certain distance from their Hungarian partners due to ambitions of regional influence that are enabled by European-level policy processes. Furthermore, Poland's antagonism towards Russia as a security threat

and as a revisionist power cannot be easily reconciled with Orbán's much more accommodating position (Zajac, 2018).

The Czech Republic and Slovakia: A Pragmatic Middle Ground?

Populism and conservative attitudes are embedded in the post-1989 political cultures of the Czech Republic and Slovakia. However, in these two countries illiberalism does not manifest itself as a clear geopolitical strategy directed towards the European Union; it lacks the ideological drive that stems from Hungarian and Polish nation-building projects. Slovakian national populists are illiberal in substance, for example in terms of governance, but as yet do not have a national development vision that could be injected into the V4 context (Havlík, 2019). Czech populists also lack a strong nationalist narrative or ideological foundation (Hanley & Vachudová, 2018) and, as Havlík (2019) argues, are instead rather technocratic in approach. Nevertheless, V4 unity was instrumental in politically bolstering decisions to reject the EU's solidarity quotas for admitting refugees – this was indeed based on a shared fear of renewed disruption and, as a result, social tensions and financial burdens (Zachová et al., 2018).

The lack of an ideological nation-building agenda is evidenced by comments of Slovak State Secretary Korčok, who has stated that the role of Slovakia within the V4 (and EU more generally) is to promote a politics of compromise as well as contribute to economic competitiveness (Gabrizová, 2018). Korčok has also suggested that "... Slovakia is a voice of rationality in its region in the sense that Slovakia communicates the importance of preserving and even the deepening of European integration" (ibid). Of the four Visegrád states, Slovakia is the only one that is part of the Eurozone and the only country that has targeted carbon neutrality by 2050. As Geist (2017) suggests, Slovakia would rather actively participate in 'Core Europe' than in a V4 which is clearly instrumentalised for domestic political objectives by its members. The election of Zuzana Čaputová as Slovakian President in 2019 confirmed the country's more marked Europeanist stance. Nevertheless, while President Čaputová supports pan-European management of migration she has also advised that the EU recognise and respect the anxieties and fears of the CE countries who are unfamiliar with and fearful of mass migration and multiculturalism (Kaufmann, 2019).

One of the main divergences between the V4 members are the intergovernmental options for European integration favoured by Hungary and Poland. The reasons for this difference are self-evident: as mid-size regional actors, Hungary and Poland are much more interested in a greater degree of national freedom of movement within an EU of sovereign nation-states. In contrast,

the Czech Republic and Slovakia prefer federalist arrangements in order to maximise their political voice within the EU. Slovakia, a small country with five million inhabitants, advocates the communitarian model as a means to balance different regional interests. For Slovak elites, avoiding marginalisation within an East-West division of Europe is a long-standing constant geopolitical narrative that partly explains, broadly speaking, a more pro-European positionality, particularly within the disruptive context of fragmentation within the European Union (Kazharski, 2019).

With its assumption of the V4 presidency in 2019 the Czech government advocated “a rational, pragmatic and constructive approach to the challenges and problems, which our countries and the whole Europe are facing.” (Ministry of Foreign Affairs of the Czech Republic 2019). However, it is also true that Czech governments have at times been among the least enthusiastic supporters of regional cooperation, particularly under Eurosceptic President Vaclav Klaus (2003–2013). The priorities defined by Czech V4 presidencies are informed first and foremost by development concerns: economic growth, innovation, support to lagging regions, communication networks and a broadening of cooperation options within and beyond the EU.

While Hungary and Poland accentuate normative divides as a Central European strength, the Czech Republic and Slovakia are much more circumspect. Szomolányi and Gál (2016) have, for example, identified a gap between the populist rhetoric of the ruling Slovak political class, and their political practices which have been much more in line with EU policies. Similarly, Czech and Slovak political elites have refrained from criticising Hungary and Poland openly, however, this solidarity ends when concrete decisions regarding the thorny issue of political sanctions against Poland are taken. For example, the Czech Republic and Slovakia did not oppose the 2018 suspension of Poland’s National Judiciary Council from the ENCJ (European Network of Councils of the Judiciary (Ochman, Zbytniewska, & Plevák, 2018). At the same time, Visegrád countries are united in the promotion of EU enlargement and against reforms of membership negotiation rules. They also support the maintenance of a robust Cohesion Policy targeted at socio-economic convergence while negotiating and managing sustainability initiatives such as Green Europe that will affect energy-intensive sectors.

Vít Dostál (2019), Executive Director of the Prague-based Association of International Affairs, has argued that the

“Hungarisation’ of the Visegrád Group is harmful to the rest of Central Europe, and the ‘East-West divide’ rhetoric, on which Viktor Orbán relies to present himself as the saviour of a new Europe, is a disaster for Slovakia – the only Eurozone member of the Central European bloc”.

Hungarisation has created tensions in other ways as well. Slovakian Justice Minister Mária Kolíková and Foreign Minister Ivan Korčok forcefully rejected Hungary’s suggestions of mainstreaming a more conservative model of the rule of law, adding that there was little sense in creating a parallel rule of law contradicting the principles set by the EU (quoted by Slovakian Spectator, 2020). Minister Kolíková, who expressed ‘shock’ at the Hungarian initiative, also railed against Hungarian and Polish attempts to appropriate the ‘V4 brand’ for their own political agendas (Gabrizová, 2020).

CONCLUSIONS

Two questions guided this study: the extent to which the imaginary of illiberal Eastness reflects the actual positionalities of V4 member states and reasons for V4 resilience as a geopolitical strategy despite a questioning of its overall political impact. Returning to the ontological security perspective elaborated earlier, the illiberal turn in V4 geopolitics can be characterised as a blend of pragmatic and identity-based agendas through which nation-building trajectories and the European positionality of its members have been enhanced. V4 cooperation derives strength from bundling together common elements of Central European national experience while remaining open for the individual articulation of regional and European positionalities. This cooperation also addresses popular insecurities in the face of disruption and change, both real and imagined, that economic crisis and refugee controversies laid bare. The above suggests that V4 cooperation has allowed for a certain solidarity during a period of insecurity in national actorness, it has allowed its members to jointly manage the legacy of marginality by serving as a vehicle for negotiating a place and role within Europe (Neuman, 2017). This has been possible because the group operates without the need for consensus (Boros, 2017). According to Slovak State Secretary for European Affairs Ivan Korčok: “... the V4 works by forming ad hoc positions to ad hoc issues. If we agree, we are together, if we do not agree, we are not together without breaking up” (Gabrizová, 2018). As Krastev (2017) points out, what Brussels describes as a lack of solidarity with regard to the acceptance and treatment of refugees is actually a clash of national, ethnic, and religious solidarities and thus moral and legal obligations. In this way,

the illiberal turn is largely an issue of exploiting normative divides as a strategy of positionality that, to an extent, has strengthened the hand of V4 states. However, the extent to which this is put into practice differs considerably.

Celata and Coletti (2018) remind us that imposing an overarching and ultimately West-centric narrative of the EU's historical emergence could create a backlash de-Europeanization. V4 geopolitics indicate that, despite the illiberal turn and its baleful consequences, East-West divisions are overstated in terms of civilisational and deep cultural difference but that they exist as historical contingencies and collective understandings of national positionality that influence interpretations of the European Union and its sense of purpose. Ontological security indeed implies a need for adaptability and interpretative openness (see Vieira, 2016) – only in this way has it been possible to reconcile the nationalist agendas of Hungary and Poland with the more measured 'Europragmatism' of the Czech Republic and Slovakia. Nevertheless, pragmatic positionality is now sorely tested by the divergence of national positionalities with regard to the European Union. Indeed, Hungary's and Poland's projects of national-conservative autocracy could have a long-term negative effect. Novotná and Stuchlíková (2017) criticise that V4 cooperation has been used to shield its members from critical scrutiny (in this regard) rather than generate constructive proposals for EU reform. For example, strengthening local and regional elements of cross-border cooperation would indeed be of essential importance in (re)creating economic, social and political networks and addressing environmental and many other border-transcending problems that the V4 states face.

Predicting the future development of illiberalism and autocracy within the EU in general and Central Europe in particular is fraught with countless unknowns. However, despite the troubling backdrop of illiberalism, European integration should be interpreted as an agonistic and contested process that nevertheless offers space for a pluralistic understanding of political community. Hence, as Maria Mälksoo (2010) has suggested, a more heterocentric understanding of Europeanization could be the point of departure for moving towards a common European future.

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IMPACTS AND POTENTIAL OF AUTONOMOUS VEHICLES IN TOURISM

**Márk MISKOLCZI^a, László KÖKÉNY^b, Katalin ÁSVÁNYI^c,
Melinda JÁSZBERÉNYI^d, Tamás GYULAVÁRI^e, Jhanghiz SYAHRIVAR^f**

^a Corvinus University of Budapest, Institute of Marketing, mark.miskolczi@uni-corvinus.hu

^b Corvinus University of Budapest, Institute of Marketing, laszlo.kokeny2@uni-corvinus.hu

^c Corvinus University of Budapest, Institute of Marketing, katalin.asvanyi@uni-corvinus.hu

^d Corvinus University of Budapest, Institute of Marketing, jaszberenyi@uni-corvinus.hu

^e Corvinus University of Budapest, Institute of Marketing, tamas.gyulavari@uni-corvinus.hu

^f Corvinus University of Budapest, Institute of Marketing, jhanghiz@uni-corvinus.hu

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Abstract

Autonomous vehicles (AVs) are developing rapidly, but the deeper understanding of tourists' attitudes towards AVs is still little explored in social sciences. Bearing this in mind, this study aims to identify the expected changes in tourism arising from the technology, and the openness towards AV-based tourism services. For this, an online data collection (n = 671) has been completed among Hungarian tourists. Prior to the data collection, a literature review was conducted to identify and categorise the changes expected from the spread of AVs. Based on the empirical results, tourists would be willing to give up control to the AVs in a foreign environment, and so to pay more attention to the surroundings. The majority of respondents would be also open to participating in AI-based city tours, especially those with the "Extraversion" and "Openness to Experiences" personality types, based on the Big Five Theory. The findings can serve as a basis for practitioners in preparing for the technology and for the further analysis of attitudes towards tourism-based AV services (e.g., modeling of technology acceptance).

Keywords: autonomous vehicles (AVs), tourism service development, attitudes towards autonomous vehicles, tourism consumer behavior

INTRODUCTION

Nowadays, one of the biggest issues of passenger transport is to find a balance between economic sustainability, environmental regulations, and even travelers' satisfaction (Tromaras et al., 2018; Bagloee et al., 2016). Automation is one of the promising technologies of Industry 4.0 that can transform many industries, including tourism and passenger transport (Fagnant & Kockelman, 2015). According to optimistic (pre-pandemic) estimates, 27 million AVs are expected to be on the roads by 2030 in Europe, and 40% of passenger kilometers will be performed by AVs (PWC, 2018). Despite this radical improvement, there are several unanswered questions (legal – e.g., Glancy, 2015; moral and sectorial – e.g., Miskolczi et al.,

2021, De Sio, 2017; social – Bissell et al., 2020) around the technology. Most of the literature on AVs consider primarily the technical feasibility (Run & Xiao, 2018; Zhao et al., 2018) as well as the general advantages and disadvantages of spread (Nielsen & Haustein, 2018; Du & Zheng, 2021).

In our study, we especially concentrate on the attitudes towards the use of AV for tourism purposes. Our research aims to reveal how tourists with different consumer habits relate to AV-based tourism services that we have identified in the literature. In our empirical research, the correlation between the subjects' personality type and attitude towards AVs has also been analyzed. There are only a few papers (e.g., Tussyadiah & Zach & Wang, 2017; Cohen & Hopkins, 2019) that analyze the impact of AVs on tourism which reinforces the relevance of our research objective. Findings revealed a generally positive attitude towards AV-based tourism services. According to respondents' assumptions, AVs would improve the tourism experience, as their use would allow for a more convenient way of visiting the destination and its attractions.

Our study is structured as follows: In Section 2, the basic definitions of AV technology and the results of previous research related to our research topic are discussed. The process and results of empirical research (Section 3) are interpreted along with three main topics (Section 4): tourism habits of subjects, attitudes towards AV-based tourism services, and the correlation between personality types and openness to the AV technology. In Section 5, we answer our research questions and make suggestions for the application of AVs in tourism.

THEORETICAL BACKGROUND

A significant part of transport is realized due to tourism motivations. Therefore, such disruptive innovations like automation in passenger transport might also affect tourism (Jászberényi & Munkácsy, 2018). Nowadays, the main objective of transport development initiatives is to reduce the number of accidents caused by human error, which currently accounts for 90% of road accidents (Menezes et al., 2017). Automation determines the replacement of processes by machines that previously required human intervention (Fagnant & Kockelman, 2015; Nikitas et al., 2017).

Automation is an incremental innovation in transport. To define the nature of this phenomena, the SAE¹ (Society of Automotive) framework developed by the National

¹ <https://www.sae.org/news/press-room/2018/12/sae-international-releases-updated-visual-chart-for-its-%E2%80%9Clevels-of-driving-automation%E2%80%9D-standard-for-self-driving-vehicles>

Highway Traffic Safety Administration (NHTSA²) should be interpreted, which is structured as follows:

- **Level 0: “No Automation”:** Conventional way of using a vehicle without any automation.
- **Level 1: “Driver Assistance”:** Only the human driver controls the vehicle, but there are some supporting functions (e.g., cruise control).
- **Level 2: “Partial Automation”:** The human driver controls the vehicle, but advanced driving assistance systems (ADAS) (e.g., lane-centering, IPAS³) are available.
- **Level 3: “Conditional Automation”:** The human driver is still responsible for controlling the vehicle, but the continuous monitoring of the environment is no longer required; artificial intelligence (AI) performs all driving operations. On the other hand, in the case of special traffic situations, human drivers must take back control over the machine. Currently, the most advanced vehicles achieve this level of automation (Honda company's new development – Sensing Elite Traffic Jam Pilot⁴).
- **Level 4: “High Automation”:** The vehicle manages all driving functions and controls itself under certain conditions (e.g., adequate 5G coverage of the operating zone).
- **Level 5: “Full Automation”:** The vehicle possesses and maintains all driving functions completely (without zone restrictions).

GENERAL FORECASTS AND SOCIO-ECONOMIC IMPACTS OF AUTOMATION

The impacts of AVs from different aspects have been addressed by several researchers in recent years. Researchers primarily examine how the spread of AVs changes the *mobility patterns and space utilization in urban environment* (Bagloee et al., 2016; Madigan et al., 2017; Tokody & Mezey, 2017), the *role of car use in the future of passenger transport* (Zmud et al., 2013; Arbib & Seba, 2017; Lagadic, Verloes, & Louvet, 2019) and the *travel experience* (Prisecaru, 2016; Clements & Kockelman, 2017; Marletto, 2019; Syahrivar et al., 2021).

² <https://www.nhtsa.gov/>

³ Intelligent Parking Assist System.

⁴ <https://hondanews.com/en-US/honda-corporate/releases/release-e86048ba0d6e80b260e72d443f0e4d47-honda-launches-next-generation-honda-sensing-elite-safety-system-with-level-3-automated-driving-features-in-japan>

Altering mobility patterns

As technology evolves, travellers' mobility habits could change significantly. Studies addressed some remarkable benefits of automation like the increased usefulness of travel time (e.g., decreasing traveling time and widening of activities during mobility – Kyriakidis et al., 2015; Platt, 2017) and the environmental and economic benefits of automation (e.g., less energy consumption, lower travel costs – Bagloee, 2016). Research on urban and transport development (Freudental-Pedersen et al., 2019; Schipper, 2020) emphasizes that, with the widespread use of AVs, urban traffic flows could improve, fewer parking spaces will be needed, thus reducing the environmental impact of the sector.

Research also suggests that the emergence of AVs may also widen the range of people who were previously unable to travel alone (e.g., without a driving licence, due to health problems, etc.). Sivak and Schoettle (2015) surveyed 1,500 people in the UK, Australia, and the United States. The most important findings are that 60% of the people involved in the research had a positive attitude towards technology (high willingness to try AVs). Platt's (2017) research in Canada examined different aspects of AVs. Results proved that frequent travelers are more receptive and families with young children are the most distrustful (they consider it too risky to hand over the driving tasks to the machine). The analysis of the general impacts, such as socio-economic externalities (e.g., altering of consumer preferences, labor market reorganization), are currently the most important and unanswered issues around the technology.

Altering car usage and perception of the machine

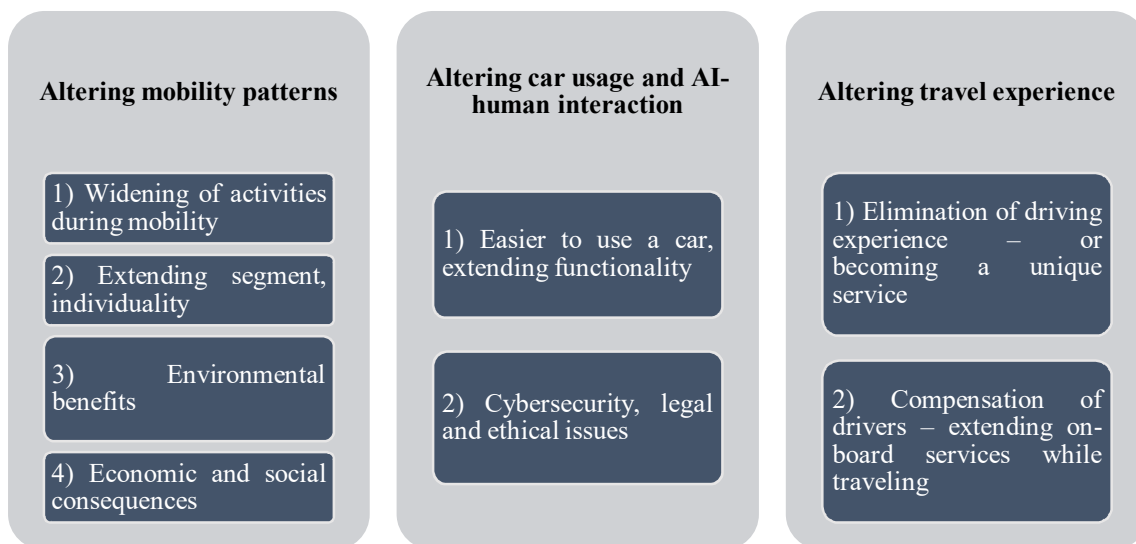
Research on travel psychology and behavior suggest that driving a car represents the dominance of the person in a certain micro-community (e.g., family, friends) and enhances confidence (Urry, 2004). In contrast, at the level of full automation, these psychological benefits (e.g., driving experience, enjoying gear shifting, control the vehicle, etc.) might disappear. At SAE level 4-5, there will be no need for a driver's license, which could also weaken the prestige of automobiles. Research highlights that constantly evolving automation makes car use simpler and more comfortable, which can guide travelers to this means of transport, i.e., the importance of other environment-conscious modes (e.g., public transport) might be decreased in the long run (Currie, 2018). One of the most important issues regarding AVs is road safety and data security. Although increased road safety is one of the major benefits of automation, research has shown (Xu et al., 2018; Liljamo et al., 2018) that there is noteworthy mistrust in fully

automated vehicles, primarily due to uncertainty and the lack of in-depth knowledge about the machine.

Altering travel experience

Another significant influencing factor can be the novelty of the driving experience. Pitcher (2011) highlights that the usage of AVs seems to be easy to learn, easy to operate, and does not require meaningful efforts. Other research stresses the negative impacts of self-driving cars on driver experience. It has been revealed that individuals who seek complex and intense sensory experiences, tend to drive at a higher average speed (Becker & Axhausen, 2017) and keep shorter tracking distance (Payre et al., 2014). Obviously, this cannot be provided by the usage of self-driving cars; the human driver becomes a passive observer at higher levels of automation (SAE Level 4-5). Individuals who are stick to intense driving experiences would be less likely to prefer a complete handover of driver’s responsibilities, as this would reduce the intense sensory experience they require (Gardner & Abraham, 2007). It is also worth pointing out that a self-driving car may enhance the sense of freedom by serving special mobility needs as a “moving living room, or office” and new activities on board.

Table 1. General issues regarding autonomous vehicles (SAE Level 4-5)



Source: Authors’ own editing based on the literature review

Impacts of AVs on tourism services

Although previous research analysing the impacts of AVs in tourism is limited, several possible consequences can be identified. During the transition period (on a lower level of automation – SAE Level 2-3), mobility opportunities may change (e.g., easier approaching of a more distant

destination with a car equipped with ADAS), but more radical tourism-related alterations can be predicted on the full level of automation. Based on this, we focus on exploring the potential effects of SAE level 4-5 automation.

The possible changes in the field of tourism are interpreted along with three main topics: *tourism alterations that can be associated with the handover of driving tasks, the increasing accessibility, and the new (possible) applications of vehicles for tourism purposes.*

Handover of driving tasks during tourism-related travel

At the level of full automation, the lack of the need for a driver's license poses barriers for travellers who, due to their age or health constraints, would not be able to travel alone for tourism (Anderson et al., 2014). This consumer group becomes more independent and flexible in their mobility and could reduce their social isolation (IFMO, 2016; Koul & Eydgahi, 2018). Based on forecasts, the spread of AVs could increase travel demand by about 11% in the next decade (Sivak & Schoettle, 2015). Research also emphasize (Cohen & Hopkins, 2019) that passengers can embark on *new activities while traveling* (e.g., relaxation, admiring the environment) instead of driving. Decreasing travel time can also change travel mode preferences, making AVs more attractive than other modes of transport, such as rail transport or aviation. Door-to-door mobility can also reduce travel time compared to public transport, which may lead to a reduction in the use of public transport (IFMO, 2016). The use of AVs also offers an additional option for people who have a driving licence but are reluctant to drive to a foreign destination. When sitting in an AV, it is not necessary to be aware of the driving rules of the destination (e.g., left- and right-hand traffic), thus, the *unknown environment will no longer be a limiting factor* (Cohen & Hopkins, 2019).

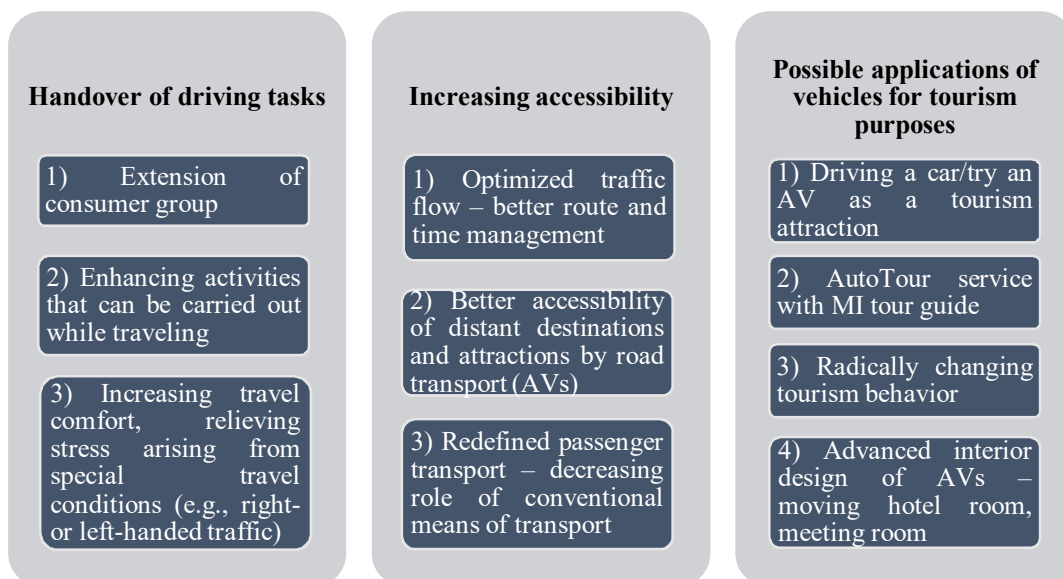
Increasing accessibility of destinations and attractions

As a result of the optimized traffic realized by AVs, travel speed increases and travel time decreases, allowing tourists to travel longer distances in the same time interval (Bagloee et al., 2016). Due to the constant travel speed, route and travel time planning is more reliable and predictable (Kim et al., 2015). Tourists will also be able to *reach more distant and previously little-visited attractions*, giving AVs the opportunity to reach new destinations and attractions (Cohen & Hopkins, 2019). In the light of the expected changes, AVs can replace the role of conventional shuttle buses and taxi services, thus, completely repositioning the importance of the means of passenger transport (Bainbridge, 2018).

New (possible) applications of AVs for tourism purposes

With the spread of automation, new AV-based services might also emerge in tourism. There may be a need for using conventional vehicles (human-driven) if this is no longer possible in the destination visited. On the other hand, testing self-driving cars on SAE Level 4-5 in places where technology is not yet widespread can also appear as travel motivation (Ásványi et al., 2020). With the application of AVs, a *new way of sightseeing (AutoTour)* could be created (Bainbridge, 2018). This would work on a similar principle to hop on – hop off bus tours in cities but could also replace walking tours. AutoTour services might be more flexible since the route can be easily configured in real-time, along with tourists' preferences. At the same time, the service raises sustainability issues. Tourism habits, the behavior of tourists might be radically changed due to the emergence of AVs. Tourists – who were previously responsible for driving and monitoring the environment – can drink alcohol since they are released from the obligations. Evening tours and parties might become more attractive in urban spaces and decrease the responsible attitude of visitors (Bainbridge, 2018). In the early stages of diffusion, there may also be an increasing demand for *test (experience) “driving” of AVs*. Since the *interior design of AVs can be modified*, vehicles can offer new (tourism-related) services that might affect MICE⁵ tourism, hospitality, and hotel industry. Passengers in specially designed AVs can *sleep while travelling*, so passengers may not need to book accommodation as they might not have to stop for a rest during a long-distance trip (Cohen & Hopkins, 2019).

Table 2 Impacts of AVs on tourism



Source: Authors' own editing based on the literature review.

⁵ The umbrella term for business tourism: Meetings, Incentives, Conferences & Exhibitions.

Research gaps identified by the literature review

Based on the literature review, the following key findings and research gaps have been identified that determine the empirical phase of our research. The literature on the diffusion of AVs is extensive, based on which we have synthesized the general impacts into three main categories: Altering mobility patterns (1), Altering car usage and perception of the machine (2), and Altering travel experience (3). Nevertheless, sector-specific analyses are limited, especially the literature on tourism impacts. Based on the journal articles identified, a new framework of expected tourism impacts has been developed (see Table 2). No empirical research on the impact of self-driving cars on tourism has been found, nor did any other research consider factors other than traditional sociodemographic variables. This confirmed the relevance of our study and the application of the Big Five Personality Trait to extend the segmentation of tourists who are open to using AVs.

In the light of these, the empirical research investigates attitudes towards possible tourism-related AV applications identified in the literature: namely, *the willingness to hand over the driving tasks in foreign environment to better observe the surrounding, the openness to use AVs for sightseeing, the intention to use AI-based tour guiding (AutoTour service), AVs for experience driving, and the openness to do new activities while travelling (instead of driving – relaxation, conduct meetings, etc.)*.

DATA AND METHODS

Data collection has been carried out online, between October-December 2020, and resulted in 671 responses. The number of subjects involved in the survey exceeds the expected size of exploratory marketing research (Malhotra, 2009) and so the outcomes can be approved and utilized for further analysis.

Based on the literature review, we have formulated three research questions (RQs):

- **RQ1:** *How do tourists relate to the use of AVs at the level of full automation?*
- **RQ2:** *Which of the AV-based tourism services identified in the literature are attractive among tourists?*
- **RQ3:** *What personality types are open to AV-based tourism services?*

Respondents from Hungary who regularly takes part in trips for tourism purposes were included in the analysis. Respondents had to associate with the pre-COVID19 period during the completion of the survey.

With our questions, the tourism and mobility habits, the personality type of the subjects based on the Big Five Personality Traits (Table 3) framework have been identified. The Big Five is one of the most important personality models in psychology, according to which subjects can be classified into five factor groups (Cobb-Clark & Schurer, 2012).

Extraversion (1) involves the free expression of impulses, and subjects in this category are characterized by assertiveness and dominance in social behaviour (Cobb-Clark & Schurer, 2012). The Conscientiousness (2) group includes those who are organized, self-disciplined and duty conscious. Agreeableness (3) is usually referred to as the ability to maintain relationships. Subjects of this category have high empathy and trust.

People in the Neuroticism (4) category are prone to unrealistic thinking, and less able to control their impulses (Komarraju et al., 2011). Based on this, they might experience a lot of stress, are anxious and more vulnerable. Subjects of the last category, the Openness to Experience (5) are characterised by creativity, out of box thinking, and openness to new ideas (De Raad, 2000).

Table 3. Main characteristics of Big Five Personalities based on Gosling et al. (2003) and Komarraju et al. (2011)

Category	Main characteristics
Extraversion	sociable, energized by social interactions, outgoing
Conscientiousness	organized, self-disciplined, duty conscious
Agreeableness	high empathy, altruist, high trust
Neuroticism	experience a lot of stress, anxious, vulnerable
Openness to Experience	curious, creative, out of the box behaviour

Source: Authors' own editing.

A Likert scale ranging from 1 to 7 has been applied to explore attitudes towards AV-based tourism services. During the analysis, mean values above 4 were considered positive (i.e., represents openness to tourism-based services). In addition to the basic descriptive statistics (e.g., mean, standard deviation, mode, median), the Kruskal-Wallis test has been employed to identify significant differences among variables. The strength of the test was assessed based on Eta-squared test suggested by Tomczak and Tomczak (2014).

RESULTS

Sociodemographic characteristics of the sample

By gender, the sample is relatively balanced: of the 671 people surveyed, 56.3% are women and 43.3% are men. The sample consists of subjects of all age groups. The largest proportion (27%) is in the 18-29 age group, followed by the over-60 age group (25%). The 30-39 age group has a slightly lower proportion (21%), while the 40-49 age group is represented by 15% and the 50-59 age group by 12%. Most of the respondents live in the capital (40.2%) of Hungary, 29.4% in other cities, 17.4% in county seats, and 12.7% in villages.

Tourism-related consumer and mobility habits

Subjects' tourism-related consumer habits have been analyzed in terms of travel frequency (1), way of organizing travel (individual travel or package tour) (2), travel motivations (most preferred tourism product) (3) and means of transport used to travel to (4) and from the destination (5).

- 1 Based on the results, 6.5% of the total sample make several trips a month or more per year. 27.6–27.6% of respondents travel for tourism purposes every six months or every year. In addition, a further 24.8% travel every few months.
- 2 Majority of respondents (80.2% of the total sample) organize their trips individually; package tours are not common among subjects.
- 3 In terms of motivation, the most popular tourism activities are recreation (26%), urban and cultural tourism (17%), wellness (15%) and VFR⁶ (visiting friends and relatives) (13%). The share of other tourism products (e.g., MICE, active tourism, festival tourism, niche elements) is below 10%.
- 4 Majority of tourists use their cars (68.2%), but airplanes (44.2%), trains (32.8%), and buses (27.7%) are also common ways to reach the destinations. A negligible proportion of tourists rent a car (6.2%) or use carpooling services (1.7%).
- 5 At the destination, the vast majority of subjects travel by car (64.9%), use public transport (50.9%) or approach attractions on foot (53.8%). Relatively few people rent a car (17.4%) or decide to use shared mobility services (e.g., carsharing) (2.3%), or micro-mobility vehicles (2.9%).

⁶ Visiting Friends and Relatives.

Attitudes towards tourism alterations based on AV use

Based on the attitudes towards AV-based tourism services, the following findings have been revealed:

Respondents were asked how much they would prefer to use self-driving cars to pay attention to the environment rather than driving. Based on the responses, there is a high openness towards AVs in this context (Mean: 4.45; Median: 5). Tourists also stated that they would be willing to give up control to the machine in a foreign environment (Mean: 4.52, Median: 6). However, there is also a sense of caution among tourists, as they are less open to leisure activities (e.g., sleeping, reading, etc.) while traveling in an AV (Mean: 3.55, Median: 3).

When asked whether tourists would use AVs for sightseeing, there was also a high proportion of positive responses (Mean: 4.51, Median: 5). The willingness to visit more distant destinations and to use AVs in a foreign environment also scores above 4.

Tourists would be open to a tourist service in which the machine (AI) would be the tour guide (AutoTour) (Mean: 4.64, Median: 5). The openness towards experience driving with AVs responses are particularly positive (Mean: 4.77, Median: 5).

The intention to use extended AV-based services (e.g., mobile meeting room – Mean: 4.21, Median: 5; interior for sleeping – Mean: 4.05, Median: 4) is slightly lower but above 4. Standard deviation values are below 2 in every cases. The most frequent element in every case is 5, which also indicates a high degree of openness.

Table 4 Correlation between travel frequency and possible application of AVs for tourism purposes

Item	Monthly or often	A few times a year	Twice a year	Annually	Less frequently	H statistics	Eta ²
Openness to do sightseeing conducted by an AI-based tour guide (<i>AutoTour</i>).	4.73 (1.84)	4.83 (1.81)	4.49 (1.82)	4.57 (1.86)	3.55 (1.90)	22.787***	0.03
Openness to use Avs that are suitable to conduct meetings.	4.21 (1.85)	3.69 (1.91)	3.42 (1.86)	3.44 (1.94)	3.06 (1.85)	16.429**	0.02
Openness to use AVs which have an interior design for sleeping.	4.14 (1.96)	3.84 (1.98)	3.67 (1.88)	3.57 (2.12)	3.25 (2.03)	9.466*	0.01
Openness towards tourism services that include “driving” experience (<i>test driving</i>) with AVs.	5.04 (1.75)	4.98 (1.82)	4.79 (1.68)	4.74 (1.82)	3.91 (1.91)	19.531**	0.03

Note: ***: $p < 0.001$; **: $p < 0.01$; *: $p < 0.05$

Source: Authors' own editing based on empirical research.

Based on Kruskal-Wallis-test, significant correlations between travel frequency and the attitude towards AV-based tourism services have been revealed (Table 4). Among those who travel more frequently for tourism purposes, the openness to use AVs is significantly higher. The effect size based on η^2 is low (below 0.06) in all cases.

Big-Five personality traits and tourism preferences

Respondents were classified into the personality types based on their self-assessment. The self-assessment was based on answering standard questions⁷ suggested by the Big Five Personality Test. Based on the results, respondents of “*Extraversion*” category typically stay more than 3 nights in the destination visited. No significant differences by gender compared to the total sample have been detected. By age, the 18–29 age group is found in higher proportion in this category (40%). A significantly higher proportion of subjects belong to this category who are interested in urban and cultural tourism.

The segment of “*Agreeableness*” has a higher share of longer trips (7-8 days), during which the demand for VFR tourism and active tourism products dominates. No significant difference by gender is observed compared to the overall sample. The proportion of age group 30–39 is slightly higher here (42%) than in the total sample.

The group of “*Conscientiousness*” is also made up of subjects who prefer shorter trips of 1–3 nights. By gender, men are in a higher proportion in this category. By age, no significant difference has been found. Among respondents of the category “*Neuroticism*”, trips of 3–4 days are the most common. In addition to VFR tourism, MICE tourism is also a popular travel motivation among them. No significant differences have been revealed by age and gender.

The highest proportion of subjects belonging to the “*Openness to Experiences*” prefer long trips (7–8 days). Female respondents make up a larger proportion of this group (66.6%). Among them, urban tourism, active tourism and visiting festivals are the most popular reasons for travelling.

Correlations between personality traits and attitude towards AV use for tourism purposes have been found (Table 5). Based on the test statistics, the attitudes of subjects within the category of “*Extraversion*” (A) are significantly more positive towards each alternative of tourism related AV usage. Results revealed that there is also a significant correlation between “*Neuroticism*” (D) personality and lower attractiveness of tourism related AV services.

⁷ <https://bigfive-test.com/>

Among respondents of “*Extraversion*” (A) and “*Agreeableness*” (B) categories, the idea of experience driving is the most attractive, whereas the same service is the least attractive among subjects who belong to the “*Neuroticism*” (D) category. It can be concluded that respondents of the “*Conscientiousness*” (C) category seems to be less open to using AVs for tourism purposes. Among tourists of “*Openness to Experiences*” category (E), the evaluation of each tourism-based alternative is significantly positive. In this category, the most attractive services are also the idea of test driving as well as sightseeing with AVs.

Table 5. Correlations between the attitude towards AV use for tourism purposes and personality traits based on Big Five theory

Item	A	B	C	D	E
Openness to use AVs to pay more attention to the surroundings.	0.090*				0.258***
Openness to carry out additional activities (<i>reading, entertainment, etc.</i>) during traveling by AVs.	0.094*	0.090*	-0.095*	-0.107*	0.241***
Openness to use AVs in special traffic situations (<i>e.g., right- or left-hand traffic</i>).					0.191***
Intention to use AVs while sightseeing.					0.273***
Willingness to visit more distant destinations when using AVs.				-0.098*	0.208***
Openness to AV use in unfamiliar environments.	0.083*				0.213***
Openness to do sightseeing conducted by an AI-based tour guide (<i>AutoTour</i>).	0.198***				0.243***
Openness to use AVs that are suitable to conduct meetings.	0.137***			-0.089*	0.232***
Openness to use AVs which have an interior design for sleeping.	0.133***				0.188***
Openness towards tourism services that include “driving” experience (<i>test driving</i>) with AVs.	0.228***	-0.120**		-0.118**	0.279***

Notes: ***: $p < 0.001$; **: $p < 0.01$; *: $p < 0.05$. Abbreviation to the table: A – *Extraversion*, B – *Agreeableness*, C – *Conscientiousness*, D – *Neuroticism*, E – *Openness to Experiences*

Source: Authors’ own editing based on empirical research.

DISCUSSION AND CONCLUSION

This research aimed to explore the potential impacts of SAE Level 4–5 autonomous vehicles in the field of tourism. As a result of the literature review, we have created three categories (*handover of driving tasks, increasing accessibility of destinations, new (possible) applications of AVs for tourism purposes*) that synthesize the potential tourism alterations resulting from the use of AVs. Empirical research has revealed the attitudes of 671 respondents towards AVs for tourism purposes.

Based on the results and in relation to the research questions (RQs), the following conclusions have been drawn:

RQ1: *How do tourists relate to the use of AVs at the level of full automation?*

Based on respondents' attitudes towards services, there is a generally positive (all mean values above 4) attitude towards the analysed applications of AVs in tourism.

RQ2: *Which of the AV-based tourism services identified in the literature are attractive among tourists?*

Based on the evaluations, the openness to use AVs for sightseeing and AI-based guided tours (AutoTour service) is particularly noteworthy. Tourists would also be open to use AVs while staying at the destination (e.g., for sightseeing). Subjects see an opportunity to use AVs to better observe the environment and to immerse themselves in the tourist experience instead of driving.

RQ3: *What personality types are open to AV-based tourism services?*

Higher openness can be detected among the 18-29 age group, who are taking longer trips (3–7 nights), and in the “*Extraversion*” and “*Openness to Experiences*” segment. This segment of tourists especially prefers urban and cultural tourism. It should be noted that the results show lower openness among subjects with other personality types (e.g., “*Neuroticism*”).

The main added value of our research is that we have explored the potential impacts of AVs on tourism, on which very few empirical studies and international publications have been done before. In addition to the demographic data, we also specified the attitudes of the respondents based on different personality types, which is also a unique approach in the social studies of AVs and can be useful for a better market segmentation in the tourism sector. Although our empirical research is not based on a representative sample, it proposes relevant inputs for further research on tourism development, as a significant proportion of

respondents regularly participate in tourism trips and mainly organize their trips individually, thus we have explored the view of an important consumer segment.

The attitude analysis concerning AVs provides a basis for further empirical research in social sciences (e.g., modeling the technology acceptance of AVs in tourism, more detailed elaboration of AV-based tourism service elements) and help to prepare for the technology revolution for practitioners in tourism.

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SMALL TOWN DEVELOPMENT IN PERIPHERAL AREAS

Réka HORECZKI^a, Ildikó EGYED^b

^a Institute for Regional Studies, Centre for Economic and Regional Studies; Papnövelde u. 22., H-7621 Pécs, Hungary; horeczki.reka@krtk.hu

^b Institute for Regional Studies, Centre for Economic and Regional Studies; Papnövelde u. 22., H-7621 Pécs, Hungary; egyed.ildiko@krtk.hu

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Abstract

The objective of the study is to examine the correspondence between city status and city identity and the factors explaining the spectacularly large number of small cities in Hungary. A further aim is to explore the positive or negative impacts of the acquisition of city status on the development of the urban network. The study, using a historical approach, aimed to identify the key enabling factors of the transformation of small towns into cities. This was achieved through the qualitative assessment of specific properties of the urban micro space, the presentation of various life stories and a review of the main milestones of the development path. The elements of local government capacities of peripheral small towns in the region are assessed on the basis of operational and efficiency aspects. The lack or reduced mobility of these elements has negative implications on local government functions, the delivery of public services, the availability of local resources and the vitality of the local economy.

The recently launched Hungarian Village Program categorizing small towns with less than 5,000 inhabitants as villages may fuel further reflections on the development policy and governance relevance of the research. The analysis of developments planned and undertaken in the framework of the project and the monitoring of the implementation of the Modern Villages and Small Towns Programme will constitute the tasks of the next phase of the research.

Keywords: urban development, small town, Modern Villages Programme, settlement network

INTRODUCTION

The analysis of the rural-urban dichotomy, the diverging social characteristics of these distinct types of spatial organization have long attracted academic interest. Imbalances in national urban systems have been widely discussed in regional scientific researches (for example, ESPON, 2005a, 2005b; Gorzelak, 2019; Mezei, 2019). Settlement network analyses have put the urban-rural dichotomy at centre-stage in descriptive and model studies alike (e.g., Kresl, 2012; Woods & Heley, 2017). The settlement network is characterized by relative stability and long-term evolution, which allows for the conceptualisation of the totality of settlements as the ensemble of spatially differentiated social groups. The role of cities in social reproduction, the

dissemination of high culture and economic growth is a unique manifestation of the allocation of political power.

Over three-quarters of the European population and two-thirds of the Hungarian population reside in urban areas, while 21% live in small towns, defined as settlements with a population of 5,000–50,000 inhabitants (Atkinson, 2019). Hungary, alongside Ireland, Lithuania, Luxembourg, Norway and Slovakia belongs to the group of European countries with an overrepresentation of the population living in smaller settlements. The number of cities and the proportion of the urban population have shown an upward trend since 1950. In 1950, the number of settlements with urban status in Hungary was 54, with 36% of the population living in urban settlements (Hajdú & Rácz, 2020). The population and number of cities rose significantly between 1988–1990 and 2000–2006, respectively. The breakdown of urban growth across European regions is likely to follow a core-periphery pattern in the future, with peripheral regions facing decline and capital regions seeing an increase in their urban population. All this underlines the importance of the wider regional context that shapes the decline or development of small towns.

URBAN DEVELOPMENT IN EUROPE

The settlement structure of Central and Eastern European countries has strong historical roots, revealing similar urban development pathways albeit with country-specific factors (Hajdú, Horeczki, & Rácz, 2017; Enyedi, 2011; Rechnitzer, 2013). These countries with a relatively dense urban network dispose of cca. 5,000 towns with a population of 5,000-50,000 inhabitants that act as economic, social and cultural centres to their region.

Europe has only two global cities (London, Paris) and is distinguished among other continents by its dense network of small towns that play an important role in the urban fabric and contribute to preserving the ‘uniqueness’ of urban life in Europe (Servillo et al., 2017). An ESPON-research (Servillo et al., 2014) reviewing the role of small towns in Europe pointed to a significant divergence of the performance of regions dominated by smaller settlements in remote areas and in metropolitan areas/urban regions, with the latter recording better performances. The devitalisation of small and medium-sized towns outside major metropolitan areas, aggravated by the reduction of public services is presented as a serious threat to territorial cohesion (Barca, 2012; Demazière & Sykes, 2021). In a few countries, small and medium-sized towns have become privileged subjects of national urban policies in the post-2010 era. In France, a long-standing preoccupation with territorial equality justified growing government

interventionism targeting this category of settlements. In Germany, the desertification of towns due to the migration of young people from east to west has put the problem of urban shrinkage into the focus of national-level urban policies from the early 2000s (Heinelt & Zimmermann, 2021). In the UK, the Government has proposed a new deal for 'left behind towns' as a part of its levelling-up agenda dedicated to rebalancing the UK economy from the Southeast and London (UK2070 Commission, 2020; Tallon, 2021). Barca et al. (2012) emphasized the important contribution of small-and medium-sized towns to balanced spatial development in Europe, increasingly challenged by regional economic differences within and not among countries (Bachtler et al., 2019). More recently, the decoupling of major metropolises and peripheral areas has generated a new geography of discontent, with inner peripheries or 'left-behind places' demanding increasing policy attention and a reorientation of metropolitan-biased government funding to non-metropolitan areas. The concentration of investments and business activities in major urban centres has eroded the position of small-and mid-sized cities in underdeveloped regions, undermining the EU's polycentric vision of urban development (Egyed & Rácz, 2020). On the other hand, the literature underlines the role of technology diffusion and urban sprawl as important drivers of deconcentration, decreasing the agglomeration advantages of large cities whilst raising the attractiveness of 'rurbanised' residential zones at the edge of metropolitan regions, i.e. small towns capable of reinventing themselves through residential urbanism.

Eastern European urban systems have been heavily shaped by the shifting of state borders in the past century and the legacy of socialist urban and spatial planning experiences. A review of the status and role of small towns within the settlement network of Poland, the Czech Republic, Slovakia and Romania demonstrates the following country-specific features: in the case of the Czech Republic, peripheral small towns located remotely from big cities perform the function of de facto administrative centres but their economic role is negligible. Small towns in the vicinity of large cities have become integrated into suburbia in the form of sleeping towns. Forecasts concerning the future development of small towns along the River Moravia are largely aligned to macro-regional trends. A demographic transition is underway in the study countries, manifest in the declining proportion of younger population groups, an ageing population, and a reduced size but growing number of individual households. Regional and national development documents for 2014–2020 mention three types of small towns: developing (dynamic), balanced (rather stagnating) and peripheral. The polarization issue in Poland was recently addressed by administrative reforms seeking to bolster the role of small and medium-sized towns facing population decline due to migration targeting large

agglomerations. Despite the rising level of socio-economic disparities over the last 20 years, Poland has a balanced spatial structure comprising 944 settlements with city/town status, its development is exemplary among Central and Eastern European countries. The economic and social power of large cities (Łódź, Wrocław, Poznań, Gdańsk, Szczecin, Bydgoszcz, Lublin, Białystok, Katowice, etc.) has been consolidated over the past 25 years, infrastructural centers (Warsaw and Katowice, etc.) strived to exploit their locational advantages. As a result of the above reform, in Mazovia, for instance, the massive agglomeration of small towns facilitated their better connection to mainstream economic processes. The restructuring of their economic base has generated opportunities for a large number of small towns to embark on successful development paths, such as Garwolin where the industrial and commercial center provides engineering and transportation services in addition to food processing, clothing and leather industries and the manufacture of furniture and cosmetic products. A peculiar feature of the settlement network in Romania is the massive conversion of rural municipalities into towns under the Communist regime, accounting for cca. a third of the total number of urban settlements (Megyesi & Péti, 2019; Rácz, 2014; Stănuș et al., 2021). Urban development in Romania is marked by underdevelopment combined with peripherality as the underlying cause of the failure of peripheral local societies to meet the challenges of modernization, and a prevalence of small-town culture and society presenting a unique mixture of traditional and modern elements. The primary goal of small towns is to avoid uniformization and preserve their local assets and traditions. Among the neighbouring countries, in the Transylvanian parts of Romania – extending between the border and the Royal Pass – small town development is a major shaping force on the functioning of society and the economy, apparent in the prevalence of conservative values, the importance of small-town mentality, and economic and political flexibility. The settlement network of Transylvania and Székely Land – similarly to Hungary – contains a variety of small towns, e.g. spa towns, sleeping towns, micro-regional towns, etc. In Slovakia, the network of small and medium-sized towns is overshadowed by the Bratislava-Košice duality. Urbanization processes in Slovakia point to the strengthening of cities with regional significance and the declining status of small towns (Hajdú, Horeczki, & Rácz, 2017; Novotný et al., 2019). While the number of small towns with a population below 20,000 increased from 65 to 97 during the decade preceding the regime change, nearly one-third of the population of small towns moved to large cities due to internal migration trends.

URBAN DEVELOPMENT IN HUNGARY

The Hungarian urban network showed a marked differentiation between settlements with urban status and urban functions in the pre-World War I era. Based on their number, economic structure, administrative institutions and population, a further 250 settlements – functioning as bottom level urban centres – were added to the list of 131 settlements with urban status registered at the turn of the century. Excessive capital city-centricity and the incompleteness of the network of small and medium-sized towns are persistent features of the contemporary settlement network. As a result of the changes brought about by the Treaty of Trianon the monocephalic pattern of the urban system increased, and regional centres were eliminated as a counterweight to the excessive growth of the capital. The changes equally affected the stock and the network of settlements, the number of settlements with city status shrank from 139 in 1918 to 47 by 1920. The reorganization of borders modified the structure of the national economy, the transport network and catchment areas as well. The urban network was significantly downsized and showed a lack of catchment areas and a spatially uneven distribution of cities. While no significant changes were detected in the proportion of the urban population, Budapest recorded the most spectacular population growth, and the settlements belonging to the Budapest agglomeration also showed rising population numbers (Enyedi, 2012; Hajdú & Rácz, 2020). The development of agricultural towns of the Great Plain was stifled during this period, in contrast to industrial cities located in the northern part of the country. The economic potential of agricultural towns was largely exhausted in the post-war years, and as a result of continuous population growth and their failure to undergo economic restructuring, these towns were experiencing growing socio-economic inequalities alongside structural deficiencies (Beluszky & Sikos, 2020).

Despite the significant territorial losses, the development of the national urban network followed a largely similar trajectory to the pre-war period. Deeply entrenched structural deficiencies and regional inequalities continued to pose a serious challenge, vast territories of the country were still lacking urban clusters. The bottom level of the urban hierarchy comprising of structurally diverse small towns remained under-developed. A defining feature of small town economies was their monofunctionality (transport hub, marketplace, educational center, etc.).

Post-1920, the legal framework of the local government system was fundamentally transformed, virilism began to thrive within legislative authorities (Act XXX of 1929). The term 'town with organized council' was replaced by 'county town' following the abolition of

town councils, the law lists ten towns with legislative authority; in the meantime, the trend of centralization, i.e. administrative guardianship over the local government system was intensifying (Kajtár, 2016).

In terms of settlement network development, 1950 represents a similar watershed to the Compromise, marking the entry into force of the administrative reform. In tandem with the transformation of the county system, this period saw the beginning of the expansion of the urban network with the numerical rise of cities.

The majority of newly declared towns were service providers to the industrial core, largely impervious to residential needs (Germuska, 2002). The country's small and medium-sized urban network included 106 municipalities at the time. Large municipalities performed largely similar functions to contemporary small towns, and cca. half of the 106 settlements with urban functions were legally categorized as towns. This period is referred to as the *cycle of relative deconcentration* (Enyedi, 2012) marked by the twin processes of economic recovery and industrial restructuring. Against the backdrop of the general slowdown of urban growth, the expansion of small towns discussed earlier led to rapid population growth boosted by government interventions. The National Concept for Settlement Network Development of 1971 (hereinafter: NCSND) introduced a rigid settlement categorization distinguishing nine categories of settlements. The small towns presented in our study fell into the following three categories: secondary centre, partial secondary centre, lower priority level centre. The urban network perspective of NCSND promoted the development of towns with higher order central functions (Bibó, 1975). By 1980, 18 new towns had emerged in this category of settlements in line with the objectives of NCSND. The population growth of small towns was slow-paced, their institutional network was upgraded as a result of industrial developments, and their regional functions were also strengthened (Kovács, 1980).

By the mid-1980s, the number of settlements converted into towns had reached 50. The majority of these settlements were developed and well endowed in terms of central institutions. The number of settlements with urban functions and settlements with urban status was largely even. During these years, 60% of the country's population lived in urban agglomerations. As a distinctive feature of urban development in Hungary the current urban population shows a sevenfold increase compared to the Second World War. However, the contemporary state of Hungarian cities raises a number of questions: do they develop at an adequate speed, are socio-economic factors the exclusive drivers of urban development, on what basis are city title and city ranking distinguished?

Table 1 Criteria and regulation of city status in the 20th century

Historical Overview	Criteria for city status
Ereky, I. 1932-36	<ul style="list-style-type: none"> • the competences and organization of the local government are developed • above average population density and size • quality economic and cultural life • greater political significance
Egyed, I. 1938	<ul style="list-style-type: none"> • larger population size – congestion • economic and cultural hub • central role – attractivity • recognition by the state
Magyary, Z. 1940	<ul style="list-style-type: none"> • large population size • vibrant city life • heterogenous occupational structure • morphological attributes distinguishable from villages • intellectual freedom – individuality
Csizmadia, A. et al. 1941	<ul style="list-style-type: none"> • autonomous area • autonomous population • advanced legal organization
Hajdú, Z. 1993	<ul style="list-style-type: none"> • normativity • individual assessment
Statutory decree No. 9 of 1954 of the Council of Presidents	<ul style="list-style-type: none"> • towns with district status
Declaration No. 23/1974. of the Ministry of Housing and Urban Development – Office of Councils	<ul style="list-style-type: none"> • large village • secondary or partial secondary centre pursuant to Government Decree No. 1007/1971. (III.16.) • catchment area with a population of 30,000
Directive 7010/1983. of the Ministry of Housing and Urban Development	<ul style="list-style-type: none"> • in view of regional endowments • individual evaluation
Government Decree No. 321/2012. (XI. 16.) on the spatial planning procedure	<ul style="list-style-type: none"> • population above 10,000 and showing a steady rise over the previous five years, • population coverage by sewage services min. 60% • level of public utilities at least 60% • min. 90% share of inland paved roads
Government Decree No. 61/2015. (III. 25.)	<ul style="list-style-type: none"> • No. 321/2012. complemented by a quantitative assessment of regional functions • min. 20% of local employees commute from another settlement • min. 20% of municipal budgetary revenues originate from local business taxes

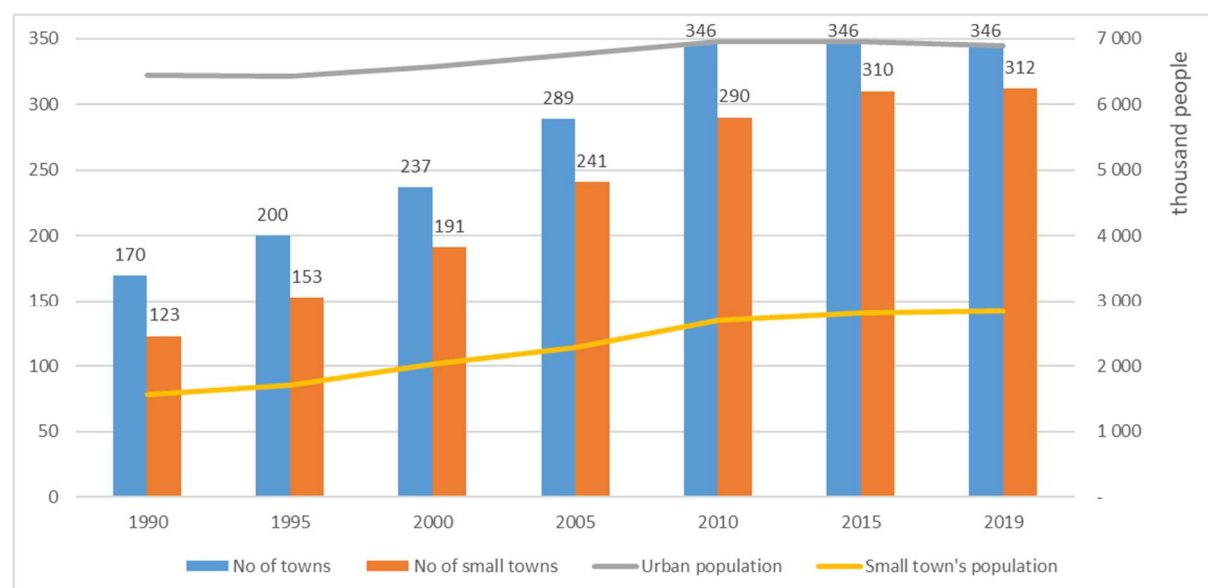
Source: own compilation based on Kiss, 1998, 457-459 and the regulations cited above.

The multidimensional definition of cities in Hungary has implications on small towns as well. Although the range of settlements obtaining city status post-1990 has generated much criticism, it has enabled the identification of small towns for which the acquisition of the title represented a breakout opportunity (Gyüre, 2010); in addition, it was intended to reflect the actual development of the settlements. A review of the changing criteria for city status demonstrates the dominance of subjective factors and concepts in the pre-2012 period. The

precise content of regional functions was not fully clarified, neither were elementary or intermediate functions of settlements delineated, nor the concept of high quality cultural life defined, etc. (see Tab. 1).

As a result of the rate of newly declared towns and decentralized development policy, the density of the Hungarian urban network has increased and significant shifts have occurred in the settlement hierarchy in the Socialist era. Over the past thirty years, the Hungarian network of small towns and settlements with a population below 10,000 in particular have shown a dynamic growth, whereas in the rest of the countries of the region growth was more characteristic to large cities that increased in number and size (Horeczki, 2020, Rechnitzer et al. 2014). By the change of regime, the number of settlements with city rights had risen to 166, and despite the high proportion of predominantly rural areas, settlements with city rights acted as economic, social, cultural and administrative centres to their respective regions. Currently, 24.4% of the population resides in cities with less than 20,000 inhabitants and 48.1% in larger cities.

Figure 1 Proportion of the population of small towns in Hungary, 1990–2019



Source: Authors' construction based on CSO data series.

Governance challenges of small towns

Hungarian small towns present a heterogeneous picture both in terms of their development pathways and their current level of development, underlining the significance of the regional context but also their varying degree of autonomy, i.e. capacity to develop their own socio-spatial trajectory (Servillo et al., 2017). The definitional ambiguity surrounding small towns

has also generated controversies in academic circles. Hence, the harmonization of the system of the allocation of development resources faces serious hurdles. In 2015, the Government launched the Modern Cities Programme with the aim of providing development resources for cities with county rights. According to Viktor Orbán: 'In 2018, it is imperative that we launch the Modern Villages Programme to safeguard the rural way of life and to reverse the migration trend of the population toward big cities.' The pace and absorption of funds shows that following the allocation of development aids to county towns and villages, as of 2020, small towns with a population between 5,000–20,000 are also eligible to apply for funding from the central budget, focusing on competitiveness and job opportunities. However, questions may arise over the issue of settlements with city status and a population below 5,000. What development resources are available for non-county status towns with a population over 20,000? Negative trends such as the steady decline and ageing of their population, outmigration due to economic restructuring and a hollowing-out of their centres (offering a limited range of services) have significantly eroded the capacity of small towns to retain their population. This problem should be addressed through targeted support that takes into account the diversity of development trajectories and their variable outcomes. Currently, Hungary has 2,700 settlements with less than 5,000 inhabitants covering approx. three-quarters of its territory. Within the urban network 29.8% settlements (104) are categorized as small towns with less than 5,000 permanent residents, concentrating 354,030 inhabitants. These elements of the urban network are identified as village towns or titular towns (Beluszky & Sikos, 2020) devoid of urban character or performing only partial urban functions. The evolution of transport, the level of motorization and consumer demands have boosted the attractiveness of bigger cities offering cultural, commercial or other services for rural consumers at the expense of small settlements.

The objective of the Hungarian Villages Programme is to restore the image of the prosperous countryside; aiming to mitigate the negative effects of urbanization. Relying on economic development tools (training and employment support) it emphasizes the protection of cultural heritage and the improvement of the settlement image, it prioritizes social cohesion (through improved security and supporting local communities), furthermore, it promotes the use of digital solutions and technologies with an emphasis on renewable energy sources and e-government. The development funds will be available for a min. ten-year period, which supposes the urgent launching of more complex, income-generating investments as stated by the president of TÖÖSZ.

Table 2 Settlement network of Hungary (excluding the capital), 2019

Population	Village	Large village/ „Nagyközség”	Town	County right city	Total
– 100	136				136
101 – 500	943				943
501 – 1,000	670				670
1,001 – 2,000	597	12	8		617
2,001 – 5,000	351	72	94		517
5,001 – 10,000	8	17	100		125
10,001 – 20,000		1	87		88
20,001 – 50,000			33	5	38
50,001 – 100,000				11	11
100,001 – 300,000				7	7

Source: Own construction.

Due to the spatial extension of the Hungarian Villages Programme (HVP) to all settlements with less than 5,000 inhabitants, the 104 small towns are currently also eligible to apply for funding. The vast majority of small town residents (94% of respondents) are well aware that their village is among the potential beneficiaries of HVP funds. The majority of respondents familiar with this fundraising opportunity are employed in the local government sector. 56% of respondents are women, the majority of whom (67%) believe that the inclusion of their settlement in the program will entail a loss of their urban status. In their view, the signpost at the outskirts of their settlement indicating their participation in the Hungarian Villages Programme deprives them psychologically of their urban status. As underlined by the responses, the respective small towns left a lot to be desired in terms of their urban functions, physiognomy and service supply, and given their declining and ageing population, their residents consider their future to be very bleak. Local government staff consider the Hungarian Village Program as an opportunity for the revitalization of town centres, construction of sports centres, asphalt works, strengthening the community, etc. The subsidies are destined to improve the population-retention capacity of small settlements, however, no visible economic benefits have been detected so far.

Our review of the first results of the programme clearly indicates that the distribution of resources in the initial period was largely a reflection of the strength of political links. By 2020, the HVP had already started to include applications to support civil society, but this could not compensate for the unevenness of the centralised distribution of resources (Finta, 2020). Based

on the lists available on the government portal¹, we found that municipalities with a larger population were better able to take advantage of the programme's support. 259 municipalities with more than 1000 inhabitants won HUF 3,513 million, while 202 municipalities with less than 1000 inhabitants won HUF 2,486 million support. Taking also the beneficiary classification into account, there are 17 municipalities with the most disadvantaged classification, but the number of municipalities receiving aid is zero. The available analysis (Finta, 2019; kormany.hu) report that far fewer applications were received from disadvantaged areas than from their larger (more successful?) counterparts; and that these applications were of much lower quality and rather poorly elaborated. However, these findings are certainly at odds with the underlying objectives of the programme.

CONCLUSION

Small towns in Europe present a highly heterogeneous picture: their settlement image, physiognomy, social structure, and settlement functions are far from uniform. There are three underlying causes for the existence of 70,000 small towns (with a population below 10,000) in present-day Europe. First, an endogenous driver related to historical factors, i.e. their former market town status. Second, their non-compliance with external requirements: a large number of towns have been declassified due to depopulation, outmigration or functional hollowing-out. The third exogeneous factor is the global urbanization boom triggering successive waves of urbanization post-1990 and post-2000. Small towns play a quintessential role in the European settlement network, concentrating a dominant share of the urban population and settlements. In overall, one-third of the urban population resides in small towns. In many respects, the classification of small towns with a population below 5,000 inhabitants as urban settlements is a mere formality that is justified neither by their urban functions nor their regional role. This is clearly demonstrated by the development funds of the Hungarian Villages Programme that have put these small towns on equal footing with the rest of the settlements with a population below 5,000 inhabitants.

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¹ https://www.kormany.hu/onkori_dontes.pdf

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Annexes

Questions included in telephone survey by questionnaire conducted between 15 September and 5 October 2020:

1. Are you aware of the eligibility of your town for funding from the Hungarian Villages Programme?
2. What is your opinion about the grants of the Hungarian Villages Programme? Reply in your own words.
 - 2a. In case the responses included the term „opportunity”: In what respects do you consider the programme an opportunity? Reply in your own words.
 - 2b. In case the responses included „deprivation”, „loss” or other negative terms: What makes you think that the programme will entail a loss of city status for your settlement? Reply in your own words.

Gender of respondent: male/female

Employed in a Local Government institution? yes/no

Age: Below 50/ above 50 years of age

COHESION POLICY CHALLENGES AND DISCOVERY IN 2021–2027 THE CASE OF HUNGARY

Pál SZABÓ^a, Viktória JÓZSA^b, Tamás GORDOS^c

^a ELTE Eötvös Loránd University, Institute of Geography and Earth Sciences, Department of Regional Science, pal.szabo@ttk.elte.hu

^b Nord Consult Ltd., viktorija.jozsa@gmail.com

^c ELTE Eötvös Loránd University, Institute of Geography and Earth Sciences, Department of Regional Science, gordos.tamas@ttk.elte.hu

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Abstract

With the political agreement by the European Parliament and the Council on the Commission's proposal for 2021–2027 on the European Regional Development Fund (ERDF), the Cohesion Fund (CF) and the European Territorial Cooperation Programmes („Interreg”), and all the other instruments related to cohesion policy, we have entered the final stage of the provisions for the new EU programming period: the final approval of the legal texts (EC, 2020a).

Thus, the main objective of our study is to present the most important challenges at the Member State level (Hungary) with a bottom-up and practice-oriented perspective. Methodologically, three specific factors were identified and studied in the paper that constitute significant challenge for national level policymaking, as follows: (1) as regards the soci(et)al aspect, the questions of the new “regions” (Central Hungary vs Budapest and Pest region); (2) regarding the economic aspect, the newly created territorial “units” (Economic Development Zones); and lastly (3) as a nature-focused aspect, the management of surface water.

These factors are directly connected to the five investment priorities of the EU for 2021–2027 i.e. Smarter, Greener and carbon free, Connected, and Social Europe that is Closer to its citizens (EC, 2018) and represent criteria that reflect the reality on the ground. These factors were examined in specific case studies exploring their relations to national and interregional policymaking and EU level policies also, together with their presence in the planned programming documents, e.g. the Operational Programmes and Partnership Agreement. As a result, we aim to identify some direct causal relations between policy and practice, highlight some synergies (or their absence) between national and interregional level sectoral (horizontal) and EU-Member State level (vertical) processes, and additionally, shed some light on the possible future scenarios in these specific and important areas. Through these outcomes, our research could contribute to a more tailored approach to regional development, that is a major objective of the New Cohesion Policy.

Keywords: EU Cohesion Policy, 2021–2027, territorial development, Hungary

INTRODUCTION

The EU Member States face various environmental, social and economic challenges, some of which are common and important at European level, while others are specific and limited to a few countries. Therefore, Member States face a dual challenge during their strategic

programming activities: to comply with the general and overall EU priorities on the one hand, and to represent their country-specific interests on the other. Thus, it is a serious task for a country to coordinate its policies or to subordinate them to the plans and objectives of the European Union. In addition, unique interactions can also be observed, either a substantial change in policies of the countries as adaptation to the EU level, or parallels, sometimes even contradictions between the policies of the EU and the Member States. As a summary, several case studies can be observed and analyzed at national (Member State) and sub-national (for example regional) levels also. We can experience a growing self-confidence of the Member States (especially in case of Central and Eastern European countries, including Hungary) in parallel with the time spent as part of the European Union, so national governments are becoming more and more experienced and innovative in their strategic programming activities. This is especially true for cohesion policy, which is where both the geographic characteristics and the socio-economic structure of the country play an important role.

Our aim is to present how national (and/or sub-national?) level policies can answer different types of challenges in the EU programming period between 2021 and 2027 (geographical, soci(et)al-economical, and territorial). After more than 15 years as a Member State of the European Union, in our fourth programming period (2004–2006, 2007–2013, 2014–2020 and the current 2021–2027), how can different challenges be addressed and what could be learned from the strategic programming exercises of the last decades? Just to raise a basic question: in the current era of Green Deal, a competitive, green and digital Europe, sectoral, territorial, or integrated policies should deal with surface water, as a geographical factor, or it should be integrated to all of them, as a potential threat and opportunity at the same time? Or: which is the ‘optimal’ territorial scope (if there is such) to address the territorial, soci(et)al and economic questions, especially inequalities, and could the re-designing of a NUTS2 region or the formulation of a ‘functional region’ have any effect on these (as in case of Central Hungary: Budapest vs Pest County or the newly established economic zones)? Should these policies be elaborated with a top-down or bottom-up approach?

Thus, in the following, a geographically directly determined, nature-focused aspect and a societal-economic aspect will be analysed, both from the perspective of their policy relevance. The nature-focused aspect will be analysed through the management of surface water, while the soci(et)al-economic aspect will be analysed through two specific territorial-regulatory examples, namely the separation of Budapest from Pest County (as a former NUTS2 region) and the formation of the new, functional (?) economic zones (including the so-called Creative region initiative).

The main research problems addressed are the followings:

- RP1: In Hungary the management of surface water is not handled in an integrated way, so surface water objectives are set in parallel from both sectoral and territorial perspectives, in different territorial frameworks, partly similarly to the European Union.
- RP2: The territorial inequalities within the country, especially as regards Budapest and the other parts of the country, have not decreased significantly despite more than 15 years of Cohesion Policy interventions and co-financing.

The main research questions are:

- RQ1: To what extent are the objective systems of sectoral and territorial policies similar and in which territorial framework are these planned?
- RQ2: Could the re-designing of regional (not administrative) borders and the creation of new functional territorial formations contribute significantly to reduced territorial inequalities?

These two main research topics were selected for two reasons: firstly, they represent the most important territorial characteristics of the country, and secondly, they represent the two main types of actual policy challenges, one geographical and one soci(et)al-economic. Thus, based on these typical challenges, possible policy answers could be analysed to them, for example their focus, approach, territorial level, funding, synergies and maturity.

Our paper has both theoretical and practical relevance as it studies the main spatial structure characteristics of Hungary, focusing on large territorial areas, social and economic concentrations and “fractures” of geographical space, and the question addressed is: if and how Member States can represent their specific issues and interests in the EU programming period between 2021 and 2027 through strategic programming activities.

THEORETICAL BACKGROUND AND METHODS

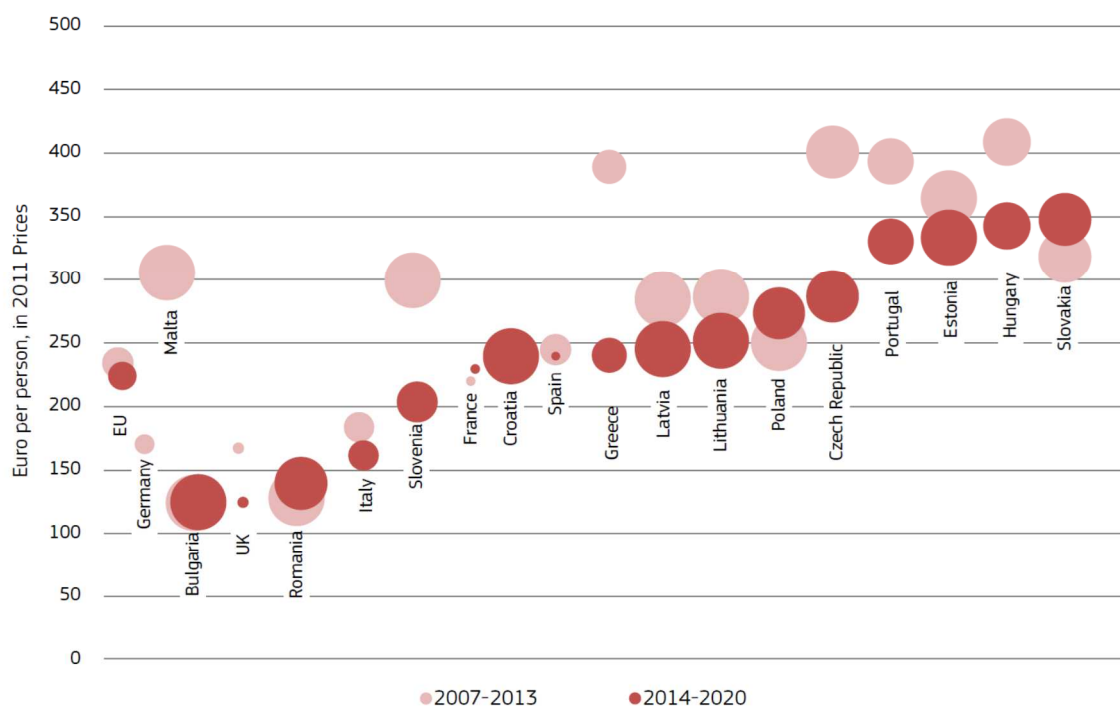
As our paper is very actual and has a strong policy-relevance, our empirical research relied mainly on the analysis of strategic programming and policy documents, development concepts and the connected national and EU level regulations from the near past and designed for the next EU programming period between 2021 and 2027. As regulations and tools concerning the ‘new’ programming period have not been covered with sufficient scientific outputs yet, a relatively limited scientific literature could be analysed and referenced in the paper. Based on the above, scientific and policy documents will be both analysed in this chapter.

Starting with the relevant *scientific outputs*, as it is clearly stated by Bachtler et al. (2019, 2) in Towards Cohesion Policy 4.0, “The challenge for EU and Member State policymakers is to develop or adapt policy frameworks and strategies that will stimulate sustainable growth, in a manner that ensures greater inclusiveness, especially in access to employment and capacity for entrepreneurship. This demands a more granular approach to structural policy, tailored better to the specific conditions of the different types of regions and communities across the EU. Different strategies are needed for frontier regions, intermediate regions (some catching up but others only keeping pace) and lagging regions.”

Now, we arrive to the next question posed by Crescenzi, Fratesi and Monastiriotis (2020): “How important are local- and national-level characteristics and policy choices in shaping the benefits produced by the policy and their distribution?” They also provide the answer: “As Cohesion Policy can only deliver as a three-layered system (EU–member states–regions). If member states are punching below their weight, the entire architecture is weaker and less politically sustainable.” Contrary to the “blame Brussels” strategy they urge a shifted focus by the “new member states in Central and Eastern Europe (CEE)” from concentrating their efforts (and resources) on capital cities and their regions, and at the same time to achieve ‘unity with diversity’ in Cohesion Policy, they call for a process of ‘policy discovery’ to be initiated and directed at the national level in order to lead a reflection on the spatial development model of each member state (and its regions) within the framework of a strong EU-wide Cohesion Policy (Crescenzi et al., 2020).

And lastly: has European Cohesion Policy undergone a learning process in the last decades? According to some authors and recent works, the answer is yes (Rodríguez-Pose & Novak, 2013; Fiaschi et al., 2018; Rodríguez-Pose, 2021). As it can be seen on *Figure 1* Hungary is clearly one of the main beneficiaries of Cohesion Funds (with investment intensity around €400 per capita on an annual basis between 2007 and 2013), the effective use of these funds is of outstanding importance in 2021–2027 also. Recent research also emphasises the need for carefully-targeted, place-sensitive intervention in areas that are often perceived – even by themselves – as “places that don’t matter” (Rodríguez-Pose, 2021).

Have Member States also undergone a learning process in the last decades? This is the main question to which our paper seeks the answer through studying the case of Hungary from the perspective of a typical geographical and a soci(et)al-economic challenge also.

Figure 1 Annual investment intensity in less developed regions, 2007–2020

Aid intensity include ESF, ERDF and Cohesion Fund. Cohesion Fund aid intensity was assumed to be the same in all regions of a Member State receiving support.

Source: DG BUDG, SFC and DG REGIO calculations

Source: DG BUDG, SFC and DG REGIO calculations in Rodríguez-Pose, 2020.

Moving on to *policy documents*, it must be emphasized that EU priorities are changing from one programming (budgetary) period to the other, for example Europe 2020 has set 11 thematic objectives for the period of 2014–2020, EU cohesion policy has set a shorter, modern menu of 5 policy objectives supporting growth for the period 2021–2027 (EC, 2020b). On the other hand, the Hungarian Partnership Agreement for 2014–2020 has set out 5 national development priorities (PA, 2014), while in the Partnership Agreement for 2021–2027 more than 10 policy objectives have been identified (PA, 2021). Thus, controversial processes could be observed at the EU and national level in the specification of the main targets (development and/or policy objectives and/or priorities).

Regarding the planned policy answers at the national level, the Hungarian Partnership Agreement for 2021–2027, the National Development Plan and the Operational Programmes are the most relevant documents to be analysed.¹ Starting with the main aims of the Hungarian Partnership Agreement, the relatively small-scale and open economy of the country generates

¹ At this point, it should also be mentioned that the European Commission is providing specific guidance and expectations to the Member States during the preparation and finalisation of the Partnership Agreements regarding both its structure and content, that can also influence the final document.

both opportunities and challenges. Financial stability is present, and several structural reforms have been completed in the last decades. Additionally, the macroeconomic conditions are favourable for the absorption of Community funds in the next EU programming period between 2021–2027. The main focus point of the national development objectives for 2030 is the increasing of economic and soci(et)al competitiveness in parallel to the catching up of disadvantaged areas. The most important financial means are provided by the Multiannual Financial Framework (MFF), the Next Generation EU (NGEU) and the Recovery and Resilience Facility (RRF). Additionally, other programs financed from the Hungarian national budget also contribute to the achievement of these objectives, not exclusively the Modern Cities Program, the Hungarian Village Program, the Kisfaludy Program on Tourism, the “Catching-up Settlements” Program, and the National Environmental Remediation Program (PA, 2021).

In the followings, the most important elements of the national policy-level are summarized before the presentation of the specific case studies.

The most important *policy-level and legal documents* of territorial (regional) development in Hungary were the National Settlement Network Development Concept in 1971 [Government Decree 1007/1971. (III. 16.)], the National Spatial Development Concept in 1998 [Government Decree 35/1998. (III. 20.)], and 2005 [97/2005. (XII.25.)]. The Parliament Resolution No. 1/2014. (I. 3.) OGY National Development 2030 – National Development and Territorial Development Concept (OFTK), and the Act XXI of 1996 on Regional Development and Regional Planning (IV.5.) and its amendments are the decisive policy papers of today. From the viewpoint of our current paper, the new approaches of the National Development 2030 to territorial development should be emphasized, as follows (OFTK, 2014):

3.1.2.1 Mapping of macro-regional territorial connections

3.1.2.2 Multi-centred development

3.1.2.3 Urban-rural cooperation

3.1.2.4 Spatial structure protecting our natural resources

3.1.2.5 A spatial structure promoting investments

3.1.2.6 Connecting peripheral territories to the country’s social and economic “blood flow”

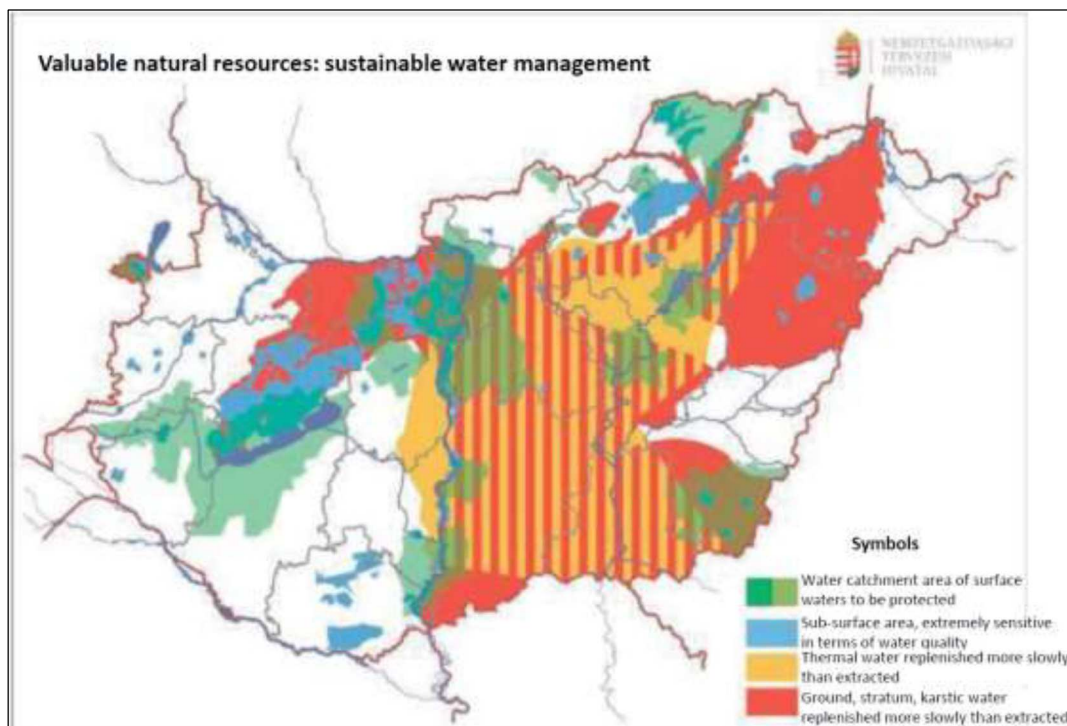
3.1.2.7 Autonomous territories

3.1.2.8 The new medium level: a county’s new roles

3.1.2.9 A city and its catchment area – the basic functional unit

In the list above, the three most important aspects connected to our research are highlighted in bold. The visualization of goals is a widely used method in development policy, as an efficient tool to present both the current situation and specific objectives. In the following, two maps are presented in relation to the two main research strands of our paper: the management of surface waters as a geographically determined issue; and the territorial inequalities as a soci(et)al-economic issue. As regards the water catchment area, the visualization in the OFTK is referred, as indicated on Figure 2.

Figure 2 Water management



Source: National Development and Territorial Development Concept (OFTK), 2014.

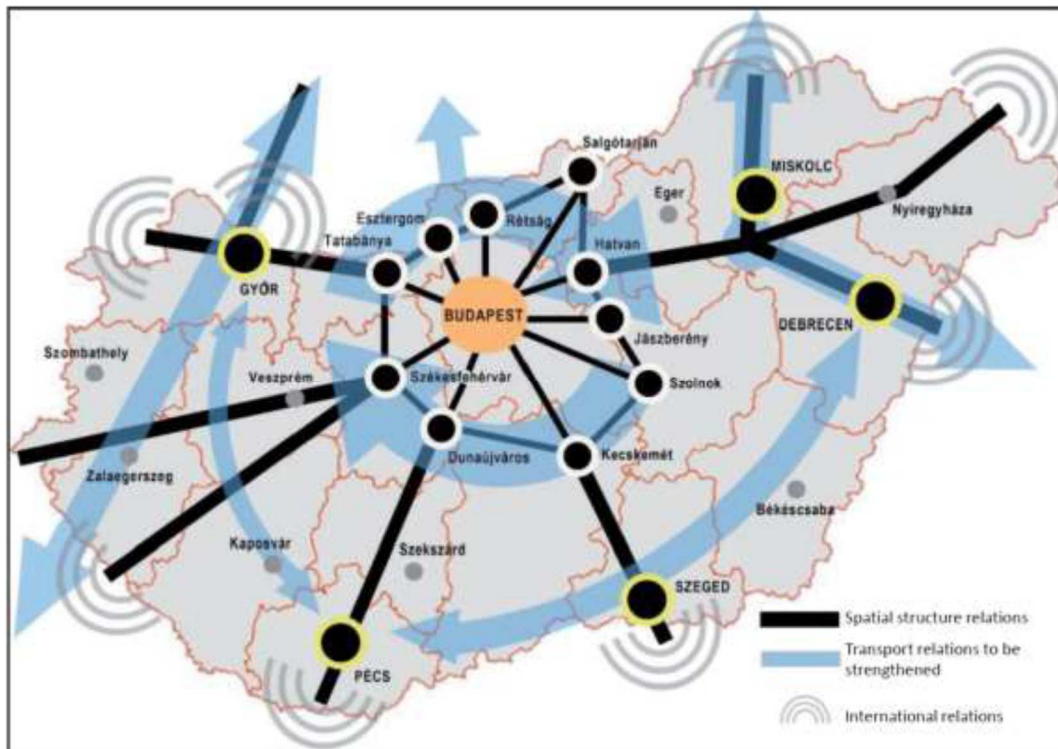
As regards the predominance of Budapest and the connected peripheral territories in relation to the country’s social and economic “blood flow”, it is well-visualised on *Figure 3* about the structure of strategic relations.

As referred above in the most important national level strategic policies and legal regulations, the Hungarian Government has declared several times that the reduction of territorial inequalities is a prioritized national objective. Additionally to these documents, the draft Partnership Agreement of Hungary with the European Commission for 2021–2027, and the following recent regulations also underline this intention (Evaluation report, 2020):

- Government Decree 1743/2018. (XII. 20.) on the specific tasks connected to the reduction of economic inequalities between the different areas of Hungary,

- Government Decree 1206/2019. (IV. 18.) on the elaboration of the development programme necessary for the reduction of economic inequalities between the different areas of Hungary.

Figure 3 The structure of strategic relations in Hungary



Source: National Development and Territorial Development Concept (OFTK), 2014.

Based on all the above, making Europe greener and more carbon-free together with the reduction of territorial inequalities will be a prioritized objective at both EU and Member State (Hungary) level in 2021–2027, so our research question is whether the strategic level objectives can be observed “in the field” also at Member State level through the studying of specific case studies.

Regarding the data and methods used in our research, our research mainly relied on the analysis of the existing (still relatively limited) scientific literature and the relevant EU and national level policy documents (as presented above). Additionally, in the next chapter (Results) the current standing point and conceptual system is presented in detail, connected to our main research questions. The overall objective of our research is to raise some relevant questions and generate research interest on this very actual and relevant issue, by shedding light on the Hungarian example through document analysis and secondary research. An in-depth analysis supported with statistical data and interviews could be completed in the future only,

when some preliminary (mid-term) results and specific, measurable indicators will be already available, so this constitutes a possible future research direction.

In connection to our first research question (RQ1: To what extent do sectoral and territorial policies define the same objectives for surface waters?), the current status will be analysed in detail, based on the textual and conceptual analyses of the relevant EU and national level policies.

In connection to our second research question (RQ2: Could the re-designing of regional (not administrative) borders and the creation of new functional territorial formations contribute significantly to reduced territorial inequalities?), two recent initiatives will be presented as “case studies” and some relevant aspects will be analysed based on the information available so far.

In relation to *surface waters*, different policy papers of the European Union and Hungary can be examined, and this issue can be explored from two perspectives and in two territorial dimensions. On the one hand, it is possible to analyse how water management objectives are present at the level of the European Union and, within the same framework, how surface waters are reflected in the general system of regional policy. On the other hand, the water side and its territorial characteristics can be taken into account in Hungary, as well as the role of waters in regional development. In relation to the *Metropolitan region of Budapest*, our paper focuses on how national government level and local /county level actors react on the new administrative setting. The “divorce” of Budapest and the neighbouring Pest County has raised several technical, administrative, and practical questions for regional development policy actors. In relation to the *economic aspect*, the evolution process of the recently established new “economic zones” can be examined at the national level, together with some future plans and strategic programmes.

In the following, an analysis of the current policy documents was completed in connection to the first research topic (surface water management), while in connection to the second research topic (territorial inequalities), two case studies were presented and analysed (the Metropolitan region of Budapest and the new “economic zones”), as innovative territorial development interventions. The basic difference between them is that the former required a legislative change both at Member State and EU level, namely the modification of a NUTS2 region, while the latter is based on a functional redesign (regrouping) of the existing administrative and planning-statistical territorial units.

RESULTS

Analysis of the Situation

The geographical, natural, social and economic characteristics of a country present challenges and opportunities for the country's territorial policy at the same time. As regards Hungary, the country has several distinct territorial elements that require (preferably) focused and integrated development policy in a top-down or bottom-up manner.

Starting from the *complexity of the geographical* space, the physical geographical, geomorphological picture is the first determining feature. Due to its location in the Carpathian Basin, Hungary has predominantly lowland and hilly landscapes, with a small number of low mountains, which are not obstacles to the territorial processes of society and the economy. Hungary is isolated from the seas; it has land borders. A more decisive factor – and most important from the perspective of our paper – is the issue of surface water and groundwater. In Hungary there is relatively dense river network, with opportunities and threats (flooding limited crossing possibilities, different economic functions etc.). There are also plenty of stagnant waters in Hungary, of which Lake Balaton is the largest lake in Central Europe. In addition to the possibilities (mainly tourism), there are also problems (for example drying up of lakes, high water level, the quality of the water). The wildlife of wetlands is also of paramount importance in Hungary (the Carpathian Basin is a separate biogeographical region in Europe), including the maintenance of biodiversity. Hungary is rich in groundwater, the utilization of which is most pronounced in the supply of drinking water, medicinal waters for bathing and industrial water. However, the threat to water quality (e.g. fertilizers) and the lack of water in some places are serious challenges. Due to these, water management and planning have played an extremely important role in Hungary's territorial, economic and environmental policy for centuries, and currently several policies include references to these waters, but an integrated approach is not present.

In *social and economic terms*, an important spatial structural feature is the dominance of Budapest and Central Hungary. Currently the capital city concentrates 18% of the population, while 37% of the national GDP is produced here, while the Central regions (Budapest and Pest County) figures are 31, and 48% respectively (2019). The lack of big cities is a prominent feature of the Hungarian spatial structure; the second-tier cities (8) have only 100–200 thousand inhabitants each. Slow agglomeration processes can be detected around some of them, but the Budapest agglomeration alone is of such a size compared to the country (2.5 million people with the capital) that it can be treated as a key spatial structural element. (According to Eurostat,

it is one of the 20 largest urban regions in the EU, and the only one from the cities of the Eastern Member States.) The situation is similar in terms of economic role and relations: even regional centers (5 large cities) do not show a prominent economic zone (Berkes, 2020). On the other hand, it is important to emphasize that the Budapest metropolitan area is not a homogenous and highly developed space, with 21st century services available everywhere at low cost. Even the Capital city has internal structural problems (for example lacking infrastructure elements, overburdened and underutilized areas, extensive brownfields), while there are lagging micro-regions in Pest County's fringe also, and internal peripheries outside the agglomeration settlements' ring adjacent to the capital. Farther we go from Budapest, more similarity can be detected to the neighbouring counties. In a historic context it becomes obvious that after World War I. – with the formation of new countries and the drawing of new national borders – all counter-pole cities have become parts of sovereign neighbouring countries (Zagreb, Bratislava, Kosice, Cluj etc.). Several *regional development policy actions* have been carried out in the last 70 years to slow down the pace of agglomeration and suburbanization processes in and around Budapest. They have had limited results, presumably because of Budapest's long-lasting central role and population weight.

Regarding *territorial development* in the country, it can be said that on regional level it is characterised by a developed North-Western and Central Region and an underdeveloped Southern Transdanubia and Eastern Hungary (Pénzes, 2014), and on micro-regional level there are 31 beneficiary districts (járás) formed from 174 districts, as identified by Government Decree 290/2014. The development of the lagging behind areas of Hungary has been a priority since the change of regime (1990s), and all national governments have been continuously trying to achieve the development of these disadvantaged areas with various means. Since its accession to the European Union in 2004, several Cohesion Policy funds and the connected programmes, institutions and instruments have been introduced and set up in the country with mixed experience (Nyikos & Soós, 2020).

For the sake of complexity, it has to be mentioned that Hungary also has a *distinctive political geographical feature*: it is neighbouring seven countries, five of which are EU Member States and three are members of the Schengen Zone. In our era, with special respect to international migration processes, this aspect is gaining more and more importance (in line with highlighted EU priorities on border management and security, for example). In connection with the border issue, it is also important that about 2 million Hungarians live outside the borders of Hungary (Megyesi & Péti, 2019), in the Carpathians and the Carpathian Basin, and a significant part of them on the immediate other side of the borders. For these reasons, the Hungarian

government has always paid special attention to the border zone and the Hungarians living abroad.

Overall, the spatial structure of Hungary is not complicated, but it has some striking elements: the quantity (and quality) of the surface waters, the weight and internal division of the capital region, the differences in territorial development and the state borders of the country. Dealing with these issues has long required an appropriate policy in Hungary. The question arises: which of these fit into the new objectives of the EU for the next programming period (2021–2027). In this paper three of the four main phenomena are highlighted, the role of country borders and cross-border relations that go beyond the scope and limitations of the current paper, so this specific feature of the country is not analysed further. (In the European Union, the Interreg program is specifically aimed at the development of the border areas, and although the financial means of this policy are not outstanding, they have an increasing tendency in volume and importance both, that is favorable for Hungary.)

Water Management and Regional Policy

Surface waters have always played an important role in the development of settlements and areas, but over the centuries their roles and functions have changed, and the surface waters can be both an opportunity and a risk. Currently there is social, economic need and political expectation to deal with them. However, even in this case, both sectoral and territorial policy is interested in it, so territorial issues in water policy and water issues in territorial policy can be found.

As regards the European Union, from the sectoral point of view, the following can be stated. The definition of surface water can be found in the EU Water Framework Directive (WFD, the “Directive 2000/60 / EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy”): it means a discrete and significant element of surface water such as a lake, reservoir, a stream, river or canal, part of a stream, river or canal, a transitional water or a stretch of coastal water (EC, 2020c).

With the entry into force of the Water Framework Directive in the European Union, the European Union's water policy was born, which is an important part of its environment policy (Szilágyi, 2019). In the EU multiannual environmental action programmes set the framework for future action in all areas of environment policy. They are embedded in horizontal strategies and taken into account in international environmental negotiations. Environment policy has recently been moved to centre stage in EU policy making, with the European Commission launching the European Green Deal as the main driver of its economic growth strategy (EC,

2021a). Some parts of this are water-related, but the focus is more on the atmosphere: reducing greenhouse gases. Surface waters are more likely to be affected by climate change, with some estimates that 80 percent of the effects of climate change affect waters. As a result, the potential for development of surface waters is less pronounced, because the emphasis in development policy is not on repairing damage but on preventing it.

The issue of quantity, quality and biodiversity can be observed in the European Union's water policy and in the WDF. The policy encompasses an integrative approach, many elements of the hydrological cycle as well as different types of water use, which should be taken into account in the planning and operation of other EU policies. In addition, including a combined approach, its control methods include both the regulatory model for individual emissions and the (immission) regulatory model for water quality standards, as well as quantitative water protection, recognizing that there are close correlations between these sides (Szilágyi, 2018). Here, the essence of territoriality is that regulation is based on river basin districts and is not based on the classical administrative units (NUTS) of the Member States. From a sectoral point of view maritime policy plays an important role in the EU, but Hungary does not have contact with the sea, so it will not be addressed.

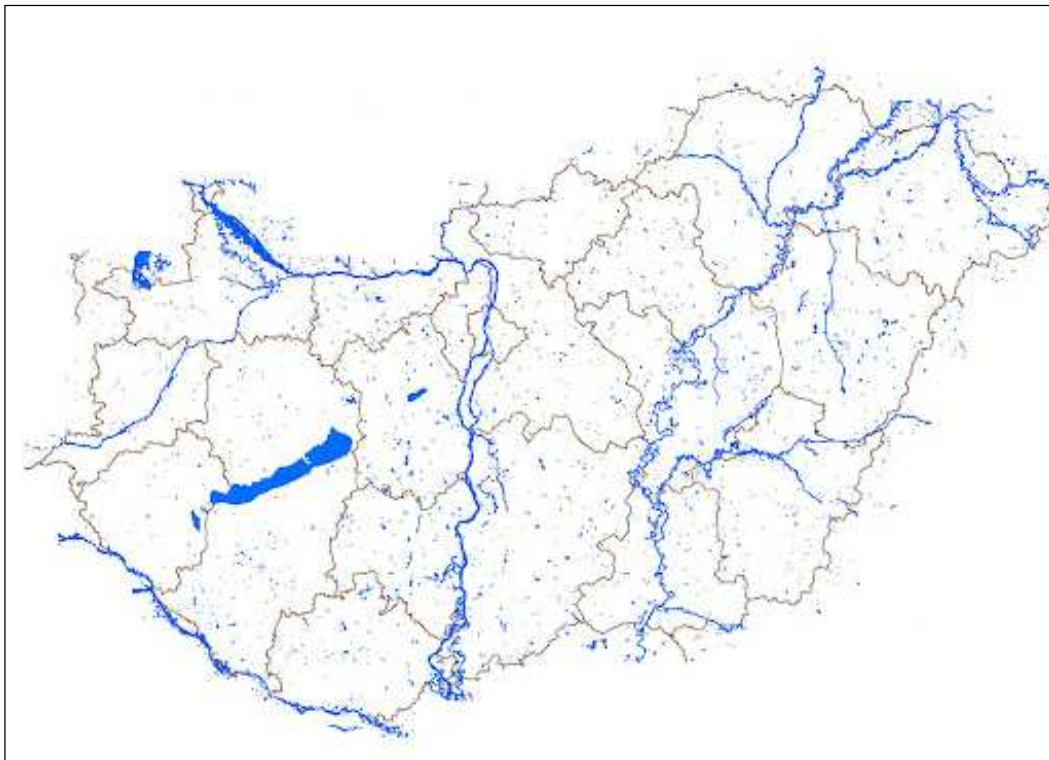
It can be emphasized that the European Union is in line with the UN recommendations. In 2015, the Seventh UN World Forum adopted 17 Sustainable Development Goals, including: “By 2030, achieve universal and equitable access to safe and affordable drinking water for all” (UN, 2015). It contains quantitative issues (sustainable withdrawals and supply of freshwater), quality issues (improving water quality), and biological issues (protecting and restoring water-related ecosystems). In addition, territorial objectives can also be found here, both at international (expanding cooperation and capacity-building), regional (implementing integrated water resources management) and local level (supporting and strengthening the participation of local communities in water management).

From a territorial point of view, in the new cohesion policy of the European Union the water issue is not dominant, whereas cohesion policy is also in line with the EU's overall objectives. The role of waters can be investigated in the case of the official macro-regional strategies in EU. [A macroregional strategy is an integrated framework endorsed by the European Council, which may be supported by the European Structural and Investment Funds among others, to address common challenges faced by a defined geographical area relating to Member States and third countries located in the same geographical area which thereby benefit from strengthened cooperation contributing to the achievement of economic, social and territorial cohesion (EC, 2021b).] Three of the four EU transnational strategies are related to water: the

Baltic Sea, the Adriatic-Ionian and the Danubian cooperations. Here, however, in contrast to water policy, administrative units (countries, NUTS regions) form and delimit macro-regions. These are bottom-up initiatives, and the community of participating countries and regions is based on the principle of common waters and their use (Szabó, 2017).

As for Hungary, its hydrography is basically determined by the fact that it is located in the middle of the Carpathian Basin, surrounded by the Carpathian Mountains. In Hungary, there are 9,800 watercourses in the water register, and surface water gravitates towards the southern center, and from there it flows into the Black Sea via the Danube. The whole area belongs to the Danube catchment area. This feature of the basin also points out why this phenomenon is so important in the life of Hungary. Due to the continental climate, the water regime fluctuates: both flood (and inland water) and low water levels are present, and only 28% of watercourses are permanent. The average water flow of 29 rivers exceeds 1 cubic meter/second, the Danube (6500 m³) and the Tisza (820) and Drava (670) stand out. There are about 3,500 lakes in Hungary, of which 25% are natural and 75% artificial. Of these, Lake Balaton stands out, which is the largest lake in Central Europe (592 km²). Other larger lakes include Lake Tisza (121), Lake Fertő (315, but 75 km² is in Hungary), Lake Balaton II. reservoir (52) and Lake Velence (26) [BM 2017 (Kvassay plan)] (Figure 4).

Figure 4 Hydrography of Hungary (rivers and lakes)



Source: <https://tudasbazis.sulinet.hu/hu/>

The role of water as a natural resource has changed in Hungary, it has been relegated in several respects, but at the same time its new functions have been strengthened. On the one hand, drinking water from surface watercourses is approx. only 12% and 88% is coastal filtered water. Residential water consumption has changed, the consumption of bottled (groundwater) mineral water has increased. On the other hand, in 2016, commercial fishing officially ceased in Hungary, but the role of fish farming increased (regarding the size of the area used and the amount of fish). The role of shipping is significant only in the case of the Danube and Lake Balaton (in the case of other surface waters only local tourism and recreation are significant), and in recent years the role of domestic passenger and freight transport has decreased. Agricultural water use for irrigation has substantially decreased in the last few decades (90% of the used water is surface water), however, due to climate change, this trend may be reversed. The major user of water is industry (e.g. industrial cooling water, food industry), but due to industrial restructuring, some water-intensive industries (e.g. metallurgy, sugar industry) have been pushed back, while battery manufacturing is emerging as a new, water-intensive industry. The energy utilization of surface waters is negligible in Hungary (it accounts for 0.7% of electricity production), there are only small hydropower plants with local significance.

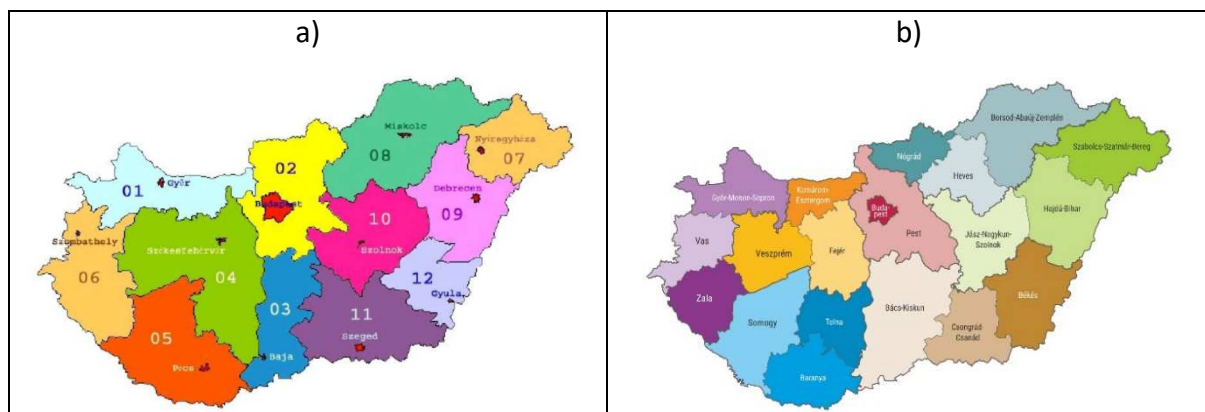
In addition to the declining economic role, the demand of society for the utilization of surface waters is strengthening. This is basically related to recreation and tourism. It includes bathing tourism, water sports, ecotourism, and fishing, which is especially popular in Hungary. (700,000 registered anglers were registered in 2020, which is more than 7% of the population (mohosz.hu).) Domestic tourism stagnated in the 2010s, about 14 M trips were recorded in 2019 (about 60 M days). Although the number of domestic tourists has decreased due to the epidemic situation, similar values can be expected after the situation improves (in 2020 summer). The main destinations of domestic tourism are directly or partly surface waters, and Lake Balaton is the second most visited destination after the capital. Their weight is increasing due to the epidemic. Regarding the environment, the wetlands and their wildlife, and biodiversity have also played an increasingly important role (Hungary signed the Ramsar Convention). The role of related ecotourism has also increased. Overall, the role of surface waters in Hungary has changed, but has remained important, so it is present as a key development policy goal in Hungarian policies, but its weight and forms have changed from policy to policy.

From the sectoral point of view, the National Water Strategy, the so-called Jenő Kvassay's plan (2017) (prepared by the National Directorate General for Water Management (NDGFM) under the Ministry of the Interior (BM)) can be highlighted, the task of which is to set goals related to water management and status, to identify the measures and tasks required to achieve

them, and to determine the conditions and method of implementation. The scope of the plan is all water-related activities throughout the country. In order to achieve the objectives set out in the Water Framework Directive, Hungary had to prepare a strategic plan and a program of measures. Within this framework, after the first (2010), the second (2016) river basin management plan, the third river basin management plan (2021) is now being prepared by NDGWM (which institution is part of the state administration). The objective of this plan is to reconcile measures to ensure the achievement and maintenance of the environmental objectives of the WFD with the needs of agriculture, energy production, shipping, tourism, climate adaptation, sustainable water management and rural and regional development.

Water management operates at the regional and municipal level in Hungary. In the first case the deconcentrated units of water management (12 offices, subordinate to NDGWM) belong mainly to the catchment areas, crossing the administrative borders of counties (Budapest and 19 counties are in Hungary) (Figure 5). Its tasks are multifaceted, including flood protection, water management, river, lake and inland water management, regional water distribution, protection of wetlands, etc. At the level of settlements, drinking water supply, water base protection, wastewater treatment, rainwater management etc. are the main tasks of the local self-governments.

Figure 5 Areas of the regional water directorates (a) and the counties (b) in Hungary



Source: Hungarian Central Statistical Office, National Directorate General for Water Management.

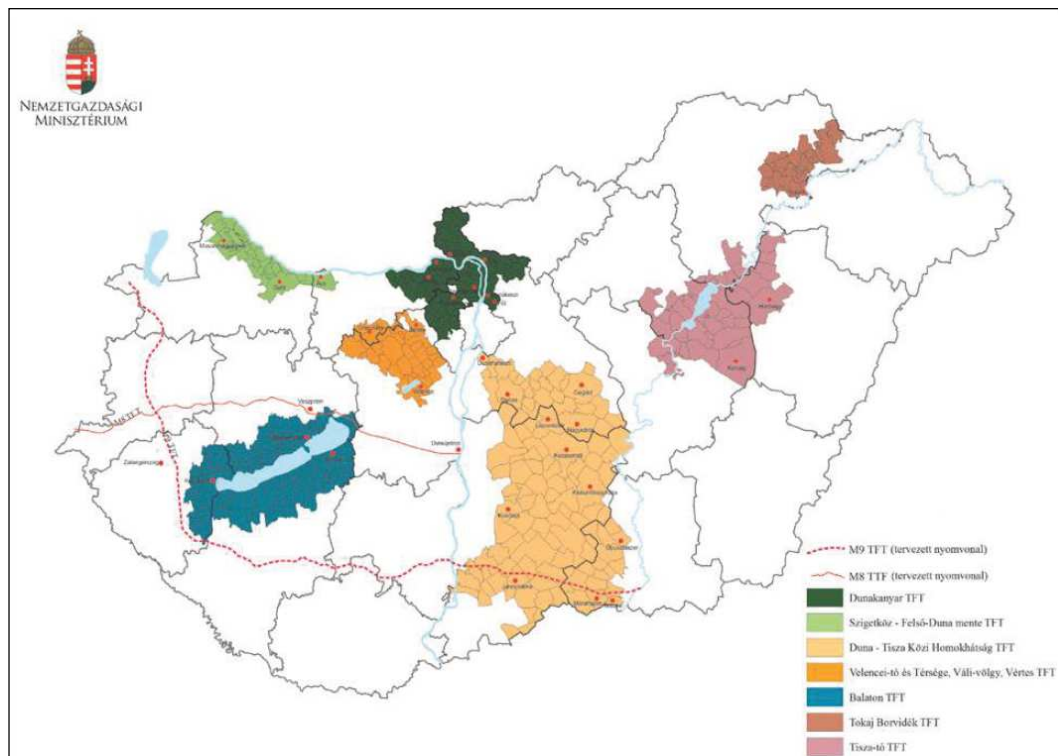
As it is transparent, a variety of tasks appear at different territorial levels, some of which appear in the state administration (planning built on WFD and implementations) and the other part in the case of local governments (mandatory tasks). In the second case, because the surface water is managed by the state water management, the settlements are limited actors. (County governments can plan with it, because the developments depend on the state water management.)

Approached from the point of view of territoriality, firstly it can be stated that the XXI. Act on Spatial Development and Spatial Planning does not deal with surface waters, but its first version (in 1996) highlighted and treated Lake Balaton separately, as a special area of regional development, which has been the case ever since. A Government Decree (218/2009) on the content requirements of the regional development concept, the regional development program and the spatial planning plan takes into account many factors when recording the analysis of the area's endowments and internal resources, and water management appears as a separate point, but is not detailed in the text. As stated in the Kvassay plan, it would be expedient to make specific content requirements for the water management chapter of the regional development plans. This reflection is an indication that documents and actors in the two policies are not completely isolated.

The current National Development and Territorial Development Concept (OFTK, 2014) deals with surface waters. In the situation analysis, the issue of surface waters is emphasized in the environmental block (but it is also present in several economic sectors), and in the end formulating medium-term goals such as water protection, integrated, sustainable water management, and a longer-term change in water management. The long-term goals set out in the points do not include surface water, only the sustainable use of our natural resources and healthy drinking water supply, and these appear in the detailed objectives of the 13 specific objectives, complemented by the protection of drinking water bases, the improvement of water quality and the management of water in line with the landscape. On the other hand, the development of the Balaton area, as one of the areas of outstanding landscape value, appears separately, detailing the development policy tasks. Among the five-point medium-term development priorities, under the aim of increasing resource and energy efficiency it is mentioned that the role of sustainable resource use and water management in preserving the quantity and quality of natural resources must be given priority. Among the target groups further detailed for the period 2014–2020, water management will appear separately in the chapter on the protection of our natural resources. Among the target groups further detailed for the period 2014–2020, a separate chapter deals with the effects of climate change and water management among the policy tasks of conservation and sustainable use of strategic resources. The following appear as development policy tasks: sustainable water resources management, quantitative and qualitative protection, application of drinking water-saving technologies, wastewater treatment and utilization, mitigation of the effects of floods, droughts (water retention), etc. These are accompanied by territorial priorities: Lake Balaton, Danube Valley, Tisza Valley, Homokhátság (sand ridges).

In Hungary, on the one hand, regional development plans are being prepared for the counties, and on the other hand, plans can be prepared for specially designated areas. In the case of the former, different formations of surface waters appear with different weights in the documents, as the administrative boundaries of the counties do not coincide with the boundaries of river basin districts, rivers separate the counties only in some cases. The Danube itself affects seven counties and the capital, while Lake Balaton covers three counties. In the case of special areas of development, however, five of the current ten Territorial Development Councils (bottom-up organizations) are linked to surface water (Lake Balaton, Lake Tisza, Lake Velence and Lake Danube Bend, Upper Danube and Szigetköz) and one area of traditional water scarcity (Homokhátság) (Figure 6). Of these, the Balaton Development Council is the oldest and appears separately in the Regional Development Act, since 1996. However, these bottom-up organizations do not have adequate financial resources, the counties are the priority units of regional development. However, there are different government territorial designations (such as tourist areas) through which some areas receive public funding.

Figure 6 Territorial Development Councils



Source: Ministry of Economy.

In Hungary, as a response to climate change, the national climate strategy has been completed, and the preparation of counties' and municipalities' climate strategies has started in recent years, through various content guidelines. This is related to the Green Deal, also in that the role of waters is subordinated to the atmosphere, as in EU documents (see there for reasons).

Hungary is a member of the Danube Macro-Region (macro-regional strategy) (Figure 7). A paper by Gál, Lux and Illés (2013) provides a comprehensive analysis of the Region. The strategy, which brings together 14 countries, aims to coordinate development policies in 11 areas to improve the region's connectivity, promote environmental protection, increase prosperity and strengthen the region. Hungary has taken on a coordinating role in three key areas: promoting sustainable energy with the Czech Republic, restoring and conserving water quality with Slovakia, and managing environmental risks with Romania. The participation provides an opportunity for the development of the Danube and its region.

Figure 7 Danube Macro-Region



Source: <https://danube-region.eu/about/>

For the next EU period, the partnership agreement (draft) and the operational programs can be studied on the one hand, and the recovery plan on the other. These have not been finalized at the time of the current study, so minor changes may still occur.

Water has an appropriate role in the Hungarian Partnership Agreement, it appears in several parts and forms. Of the five policy objectives, a greener Europe appears, such as the

development of infrastructure for water management that addresses both water abundance and drought; in the field of disaster management, the development of disaster resilience is needed. In addition, it is related to surface waters that the efficiency and development of public utilities providing drinking water and wastewater treatment still need to be developed. Related to this are the goals of protecting the aquatic ecosystem, increasing the number of native fish stocks in the waters, and protecting water quality. Overall, integrated water management is the goal. In the case of delimitation agreements and issues between each operational program (water management and disaster management, climate adaptation part), it is emphasized that: disaster management and regional, large-scale water management developments and stormwater management, as well as stormwater management related to major water utility developments, can also be supported only in the KEHOP (Environmental and Energy Efficiency Operational Program). TOP plus supports local, settlement-level stormwater management (e.g. stormwater reservoirs) and small-scale water management.

The Summary of Hungary's Recovery and Adaptation Plan (draft) emphasizes that water management is a key area for the future of Hungary and Europe, where it is essential to develop and strengthen an optimal and sustainable system in line with the country's natural conditions. In the draft, component D is about water management itself, although its essence is limited to irrigation and abstraction: the proportion of irrigable agricultural land must be increased, and farmers must have legal access to water resources. In component G, which deals with the transition to a circular economy, wastewater treatment appears in smaller settlements: they are connected to a sewerage agglomeration or a sewage treatment plant, several small settlements may decide to build a common sewerage network and sewage treatment plant.

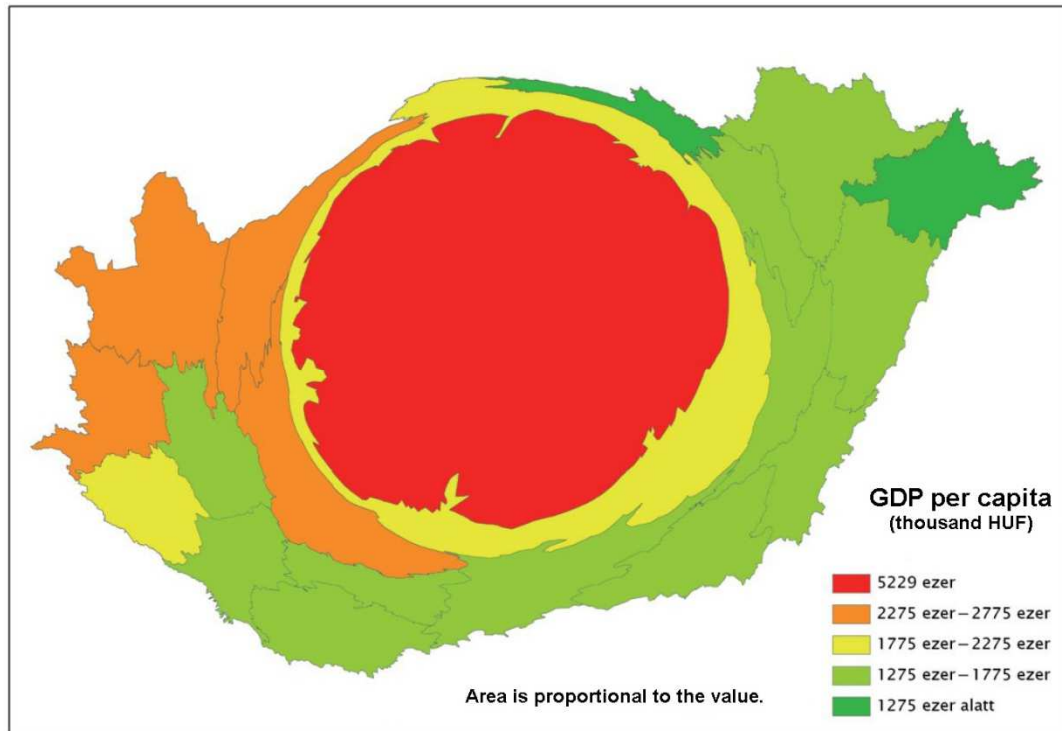
The Question of the Metropolitan Region of Budapest in Regional Policy

Regarding *multi-centred development*, the research of Nemes-Nagy and Tagai (2009) is referred mainly, that analysed in detail the GDP/capita volume in connection to regional inequalities (centre – periphery).

Figure 8 quite clearly visualises the *inequalities of the economic structure* and highlights the difference between Budapest and the other NUTS3 level areas (counties). The Capital city can be characterized with above average GDP/capita figures, followed by the North-Western counties, that are situated much closer to the core areas of the EU than to Budapest. Even Pest County is losing pace compared to the latter. At this point it should be emphasised also that Budapest's outstanding numbers are to be dealt with due methodical carefulness, as GDP over-

measures the City’s real output and distorts the aggregated figures (since nationally active companies’ output is booked at Budapest).

Figure 8 The dominance of Budapest and the dissected development of Hungary



Source: Nemes Nagy & Tagai, 2009.

In the last decade the basic pattern has not changed substantially: Budapest’s economic output is still ahead of the national average, the North-Western part of Hungary is catching up, and partly some Southern-Eastern counties have started to catch up. However, Pest County’s economic development has slowed down, partly because of global economic backward effects, and partly because of the adverse effects of its “developed” status in the former Central Hungary Region (NUTS2). Resident companies could not have been able to embark upon the state subsidies leveraging the development of the Convergence regions’ companies. Pest County’s economy could have relied – until the new 2021–2027 programming period – on its own and Budapest’s financial resources.

According to the OFTK (2014) Budapest metropolitan region needs special attention as it is the most competitive and service-oriented area of the country. Development policy should utilise its resources to keep its growth potential and enhance the competitiveness of its economic actors. It can be achieved partly by ‘traditional’ infrastructure development tools (encompassing linear as well as human infrastructure elements), and partly by economic incentives for companies. Special attention should be given to R&D and human resources

development. The complex and heterogenous composition of the Metropolitan area needs special attention and territorially focused development interventions.

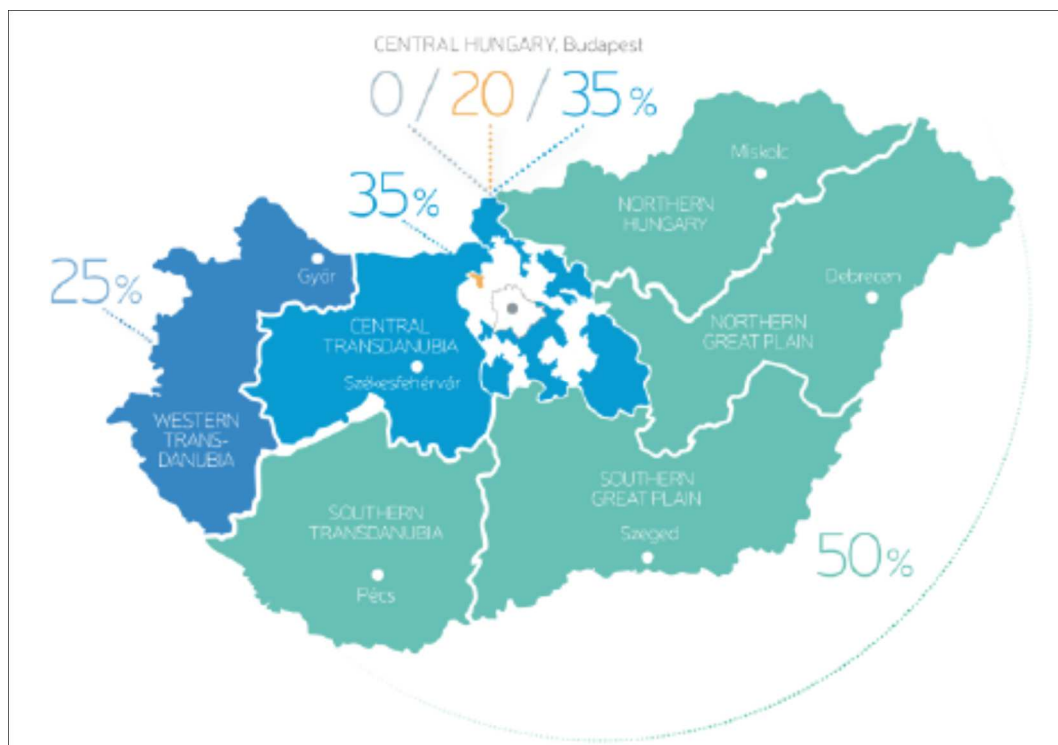
In 2020 Central Hungary Region (NUTS2 level) was split into two parts: Budapest Region and Pest County Region. Thus, the latter has become eligible under Convergence regions category for the least developed areas of EU Cohesion Policy. However, the new administrative and development policy settings have not been created yet: no new coordination forums have been set up and no reconciliation ways outlined until now. Until 2013, the Central Hungary Regional Development Council was to undertake the above tasks at NUTS2 level. After its withdrawal the Regional Reconciliation Forum has been set up, as in all other NUTS2 regions, containing the representatives of Pest County Municipality and Budapest Municipality. After 2020 both entities have become separate NUTS2 level organisation, thus the Forum has been dissolved. Formally, no new institutions or delegate bodies have been set up to substitute the above organisations. Informally, the two entities are free to establish any type of negotiation forums, however it will not solve the legislation ‘gap’ raised by the split of former Central Hungary Region. We presume that this will not hamper substantially the socio-economic development of the Metropolitan region, since it is well embedded in the world economy, however, the lack of coordination might entail a loss of resources, and it may lead sub-optimal solutions in problem areas affecting both entities. An in-depth analysis and future scenarios can be found in the recently revised version of Pest County’s Development Concept 2030 (Pest County Development Concept, 2030, 2021).

In the 2021–2027 programming period EU Cohesion policy aims to concentrate more on the disadvantaged regions. Pest County, as new region, is in-between the developed and lagging behind areas, however its’ peripheral micro-regions are not different from the neighbouring counties or their settlements. The inner circle agglomeration settlements are more like the Capital cities’ outer districts, they are suburban spaces under transformation. Regional development policy and development tools must address well this heterogeneity. It has a crucial role in creating missing infrastructure elements (suburban railway links, P+R and workplaces locally, while keeping pace with the human infrastructure in the fast-growing suburban settlements.

The Metropolitan region’s economic background is quite robust in comparison to the other regions of the country. Many national company headquarters are located in the agglomeration area, and several sub-centres of multinational companies are seated here as well, in many cases they have management role on CEE and SE European level. The same issues and the relationship of globalisation and metropolization in other capitals in Central and Southeast

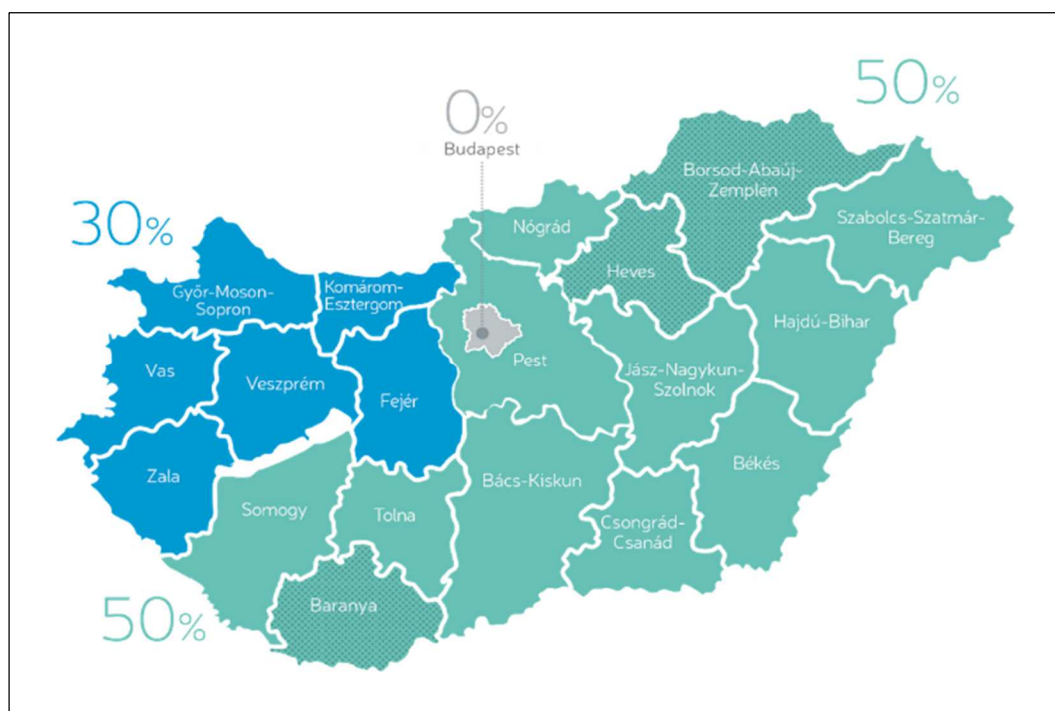
Europe have been recently examined by Rácz (2019). Many companies in Budapest have local suppliers and most of them have lively local linkages with each other. Thus, it can be inferred that the vast majority of the region's economy is not dependent on EU Structural and Innovation Funds, however, they may have a beneficial effect on their operation. On the other hand, there are micro-regions where the availability of non-repayable funds is the prerequisite of balanced and steady growth. In non-agglomeration areas of Pest County/Region the absence of state subsidies would hamper the development of small and medium-sized enterprises. Missing linkages and non-adapted administrative structures on metropolitan level may cause suboptimal utilisation of development resources and may result in lower economic growth in total, while preserving the structural problems of inner peripheries (even in the Budapest itself) and reproducing the poor integration of outer micro-regions. Based on the above, Figure 9 and 10 illustrate the regional aid maps of Hungary for 2014–2020 (extended until 31 December 2021 by C(2020) 6769 Decision of the European Commission on 7 October 2020) and 2022–2027 (approved on 16 September 2021 by the European Commission). The Hungarian regional aid map was among the first maps approved by the European Commission within the framework of the revised Regional Aid Guidelines (RAG) and introduces a significant difference: the 50% maximum state aid ratio for Pest County.

Figure 9 Regional Aid Map of Hungary for 2014–2020 (extended until 31 December 2021)



Source: Hungarian Investment Promotion Agency (HIPA), 2021.

Figure 10 Regional Aid Map of Hungary for 2022–2027



Source: Hungarian Investment Promotion Agency (HIPA), 2021.

This is the maximum available state aid ratio within the European Union for the investment activities of large companies, and it could generate a positive impact on the processes and challenges analysed formerly.

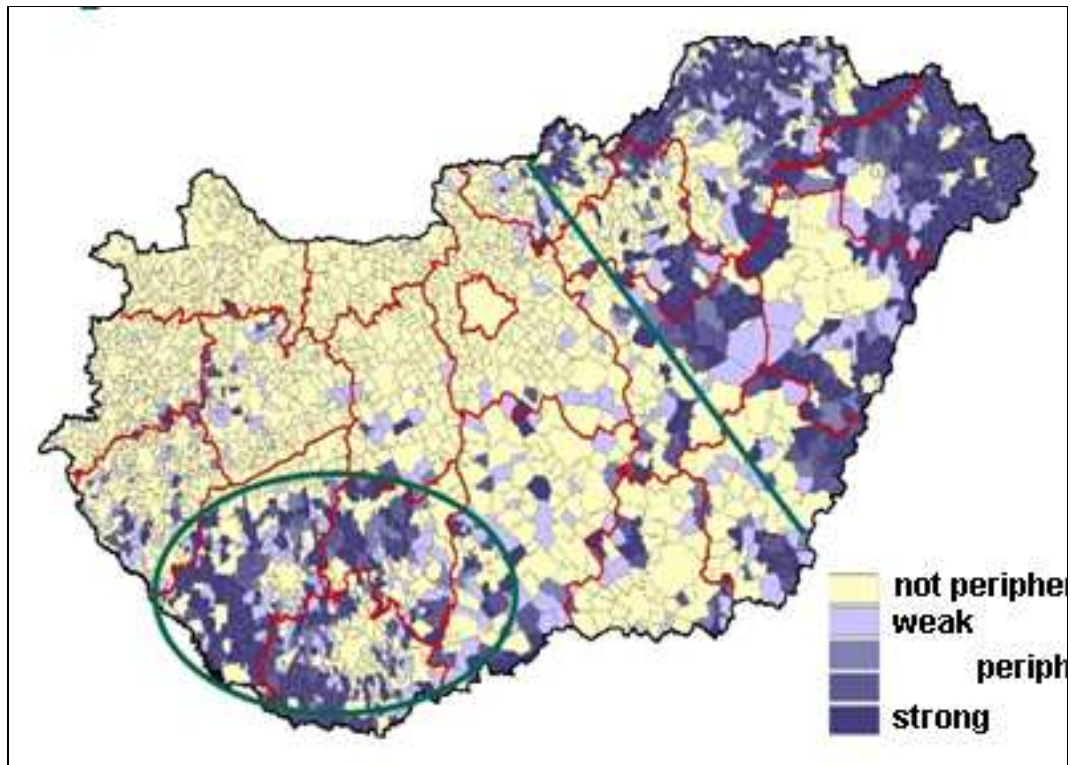
The Economic Aspect and the Newly Created Zones versus Regional Policy

As described above, the areas of Eastern Hungary and South Transdanubia are economically backward in Hungary, but the territorial picture can be further refined to the district level (31 underdeveloped districts in Hungary, Government Decree 290/2014) and to the settlement level (Figure 11). The latter, while showing the macro-regional differences, also shows that the picture is mosaic in places (Pénzes, 2014). Thus, by drawing boundaries that do not consider the existing administrative (county, district) boundaries, but focus rather on functional characteristics, new, more suitable development areas can be demarcated. Such areas could be designed with a top-down and bottom-up approach also. Typical top-down areas are the Lake Balaton, Tokaj Region, and the Middle Danube Region. These are direct beneficiaries of national and EU state aids, while the ones generated with a bottom-up approach are normally less prioritised by non-refundable cash subsidy schemes.

The national vision stated in the OFTK (2014) is the following: “In 2030, Hungary will be a leading economic and intellectual centre in Central and East Europe, ensuring that its residents

can make a stable living, with a competitive economy based on the sustainable usage of resources and, in connection with that, an increasing population, strengthened communities, rising living standards, and an improving environment.”

Figure 11 The peripheral areas in Hungary



Source: Péntzes, 2014.

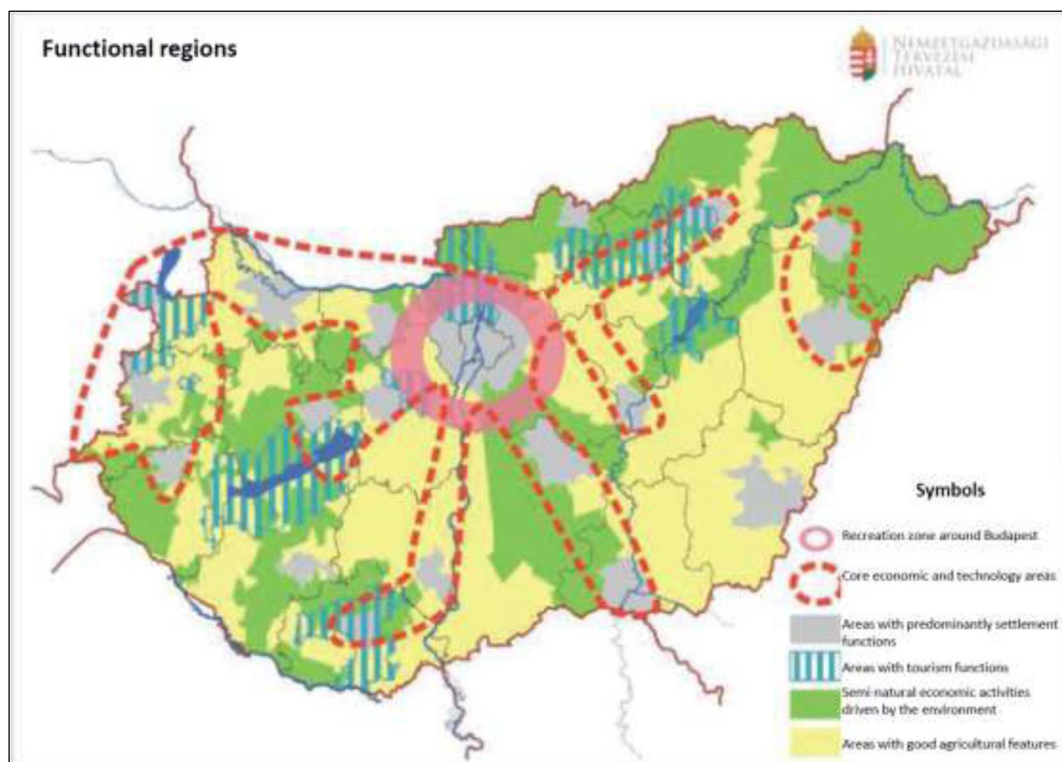
On the other hand, Hungary’s urban development issues have been gaining increasing attention recently, as since the democratic transition in 1989– 1990, different development directions were assigned to major cities in short cycles. It can be concluded that the directions and institutional frameworks of regional policies are in a constant change (Rechnitzer, Berkes, & Filep 2019). The initiative introduced in the followings (‘Special Economic Zones’) is a relevant example of such a new direction and the connected institutional and regulatory framework.

The OFTK also introduced the future spatial structure that formed the basis of the Creative Region development programme. The spatial structure vision forms the so-called functional areas where specific zones of national importance could be developed for economic, social and/or environmental functions/tasks (Figure 12).

The OFTK also identifies the territorial strategy tasks for medium and long term. The medium-term territorial strategy tasks are:

- addressing the issues of regions lagging behind, rural areas, internal and external peripheries, employment and social issues
- improving the accessibility of the border areas and strengthening their cross-border relations.
- The territorial strategy tasks laying the bases of long-term development are:
 - decisive macro-regional and space organising role of Hungary
 - leading role of Budapest in the macro-region
 - urban network and urban policy, cities ensuring modern and quality life
 - comprehensive development of cities and urban areas based on urban network cooperation
 - renewal of our rural areas on economic and cultural bases, and reform of the town-country relations
 - development of the talent support networks in the countryside areas.

Figure 12 Functional territories in Hungary



Source: National Development and Territorial Development Concept (OFTK), 2014

Under sub-section 3.1.7.2, the OFTK also described the Development of special economic zones, as a necessary action to be taken. In the OFTK concept, the necessity of new aspects, such as investment stimulating spatial structure (especially the establishment of attractive locational conditions) are also specified, additionally to the reduction of territorial imbalances and inequalities in social and economic development.

“The whole national economy cannot be competitive if economic activity is almost “paralysed” in disadvantaged regions, which represent a considerable portion of the territory of the country. Apart from support policy, other economic incentives are also required for a territorially more balanced development of the economy. In order to facilitate economic development in the whole country, those growth and cohesion regions need to be identified where relevant territorial and economic development can be achieved with the help of targeted and integrated regional interventions. The former could be regions that already function as dynamic zones of the economy in the Hungarian structure of agglomeration with their outstanding potential sites, actual and potential investors and enterprises, while the latter category includes regions that face severe employment problems and may be (re)connected to the economic circulation of the country only with a complex development policy approach.” (OFTK, 2014, p. 164).

According to the document, a *special economic zone* could serve as a tool of territorially selective economy stimulation, because it is a production and service providing territorial unit where the established enterprises are eligible for preferences under various conditions in order to boost economic developments in the region, for example through providing an enterprise friendly environment in line with the local specificities and available resources, to encourage investments and to enhance employment options. Additionally, it specifies cities as the urban territories of the external ring and possible counter-poles, or development poles in the countryside to be prioritized through focused investments. Under sub-section 3.1.4.6, city territories of (potential) national significance are listed, and this category includes Miskolc, Debrecen, Szeged, Pécs and Győr, as well as Székesfehérvár due to its economic power and historical role, and the catchment areas of these cities. “These cities can constitute a partly independent territorial level next to / below the capital, thus decreasing the Budapest-centred nature of the country.”

Very specific examples are the relocation of national public authorities (ministries) to cities outside the capital, as shown by the case of Debrecen, among others.

These cities can provide the necessary critical mass where special cultural and economic niche needs may arise and can be satisfied over a long period of time, and their task is to channel

and radiate innovative, technological, economic and cultural development towards their own territories in the wider sense (across several counties) and towards other cities. Additionally, the higher education and health care functions of these cities are also important, and as potential alternative centres of intellectual life outside the capital, the number of innovation scenes can be increased also, so the social elite does not depend on a single centre, thus can exhibit higher and more stable performance.

This intention could be observed also in the next part, through the presented case study, where the evolution process of these newly established economic zones in Hungary is presented. One of the cities included in the case study is Miskolc, a typical example of a Central and Eastern European city that has experienced through its history all global tendencies and major shocks starting from an oppidum, through the privileged free royal city status to municipal law rights, prioritized beneficiary of socialist industrialisation and soon after one of the main industrial crisis zones of the county to depression, pathfinding, slow recovery and repositioning in our days (Józsa, 2020).

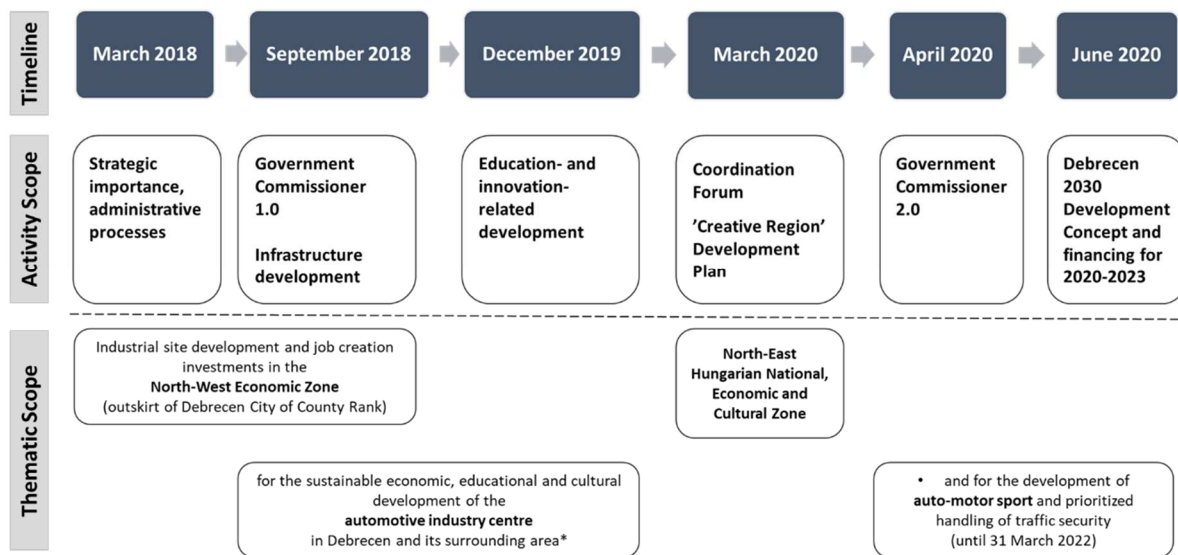
The process of the case study began with the establishment of the so-called *Creative Region*, with the subtitle: Development without Borders in Northeast Hungary National, Economic and Cultural Zone. The aim of the „Creative Region – Development without borders” program is to create a single economic, educational, and cultural zone of Northeast Hungary (the counties of Borsod-Abaúj-Zemplén, Hajdú-Bihar, Jász-Nagykun-Szolnok and Szabolcs-Szatmár-Bereg) and of the cross-border areas. Here, the cross-border linkages can be observed, as identified also in the OFTK, and as a theoretical-policy level basis. Thematic working groups were formed in the fields of social innovation, infrastructure, competitiveness, the development of county seats and the involvement of the cross-border areas concerned. The Debrecen-Miskolc-Nyíregyháza network and the cross-border relations of the three cities are clearly the bases of strategic economic development. In order to establish an ideal investment-friendly environment it is indispensable to create (1) special development zones that offer attractive investment environment and the conditions of further growth potential together with (2) the availability of appropriate infrastructural, institutional and service background.

Here Miskolc and Debrecen can be both identified, as cities listed in the OFTK, as potential counter-poles to the capital and at the same time, cities of (potential) national significance. The Creative Region Development Zone is also connected to sub-national (regional/local) level policy documents, as follows: Borsod-Abaúj-Zemplén County Mid-term Economic Programme 2020–2024: The Creative Region Development Zone is also included in the mid-term economic programme of Borsod-Abaúj-Zemplén County. Based on governmental request, Bora 94

Nonprofit Ltd. participates in the preparation of the work of the Coordination Forum², and in case of further governmental decisions, in strategic programming and implementation. *Debrecen 2030 program*: ‘Debrecen 2030’ (We are together, Debrecen!) is the urban and economic development program of Debrecen City, with the aim to develop the county capital to a business-, innovation-, transport-, educational-, cultural- and health centre with a cross-border impact.

In Figure 13, the main milestones of the creation process of the newly established development zones are identified, focusing on the Creative Region initiative.

Figure 13 Milestones of the Creative Region Initiative



Source: own editing based on public information, 2021.

The process started in March 2018, when in connection to the launching of the BMW investment in Debrecen, the industrial site development and job creation investments in the North-West Economic Zone have received the label “issue of strategic importance for the national economy”. This was an important yet relatively formal decision, but after 6 months, the nomination of the responsible government commissioner and the decision on launching the infrastructure development were already direct steps towards the operationalisation of the

² In March 2020, the mayors of the concerned cities (Miskolc: Pál Veres, Debrecen: László Papp, Nyíregyháza: Menyhért Jászai, Szolnok: Ferenc Szalay) agreed on a workshop (moderated by László Palkovics) on the common goals of increased attractiveness for citizens and competitiveness for businesses, together with infrastructural, economic, and cultural development. The mayors emphasized that they plan to implement synergetic and cross-border development projects in the next EU programming period (2021–2027). Thematic working groups have been established in the framework of the Coordination Forum, as follows: (1) social innovation, (2) infrastructure, (3) competitiveness, (4) development of the cities of county rank, (5) involvement of the cross-border areas

investment decision and the connected bilateral agreement between the investor and the host country. A full year passed until the next governmental decision, the education- and innovation-related development in connection to the automotive industry centre in Debrecen, which action is fully in line with the re-positioning and strengthening of the role of “soft” factors in the corporate embedding process observed from about 2010. At that time, the thematic scope of the decision was the “automotive industry centre in Debrecen”, a new industry sector in a traditionally agricultural area (similarly to the case of Kecskemét and Mercedes-Benz). The ‘Creative Region’ title appeared only in 2020, when a Coordination Forum was also established and both the thematic and the geographical scope of the initiative were significantly widened. When examining the list of the forum members on the other hand, it can be concluded that no local/county level representative is included, but the highest-level representatives of the sectoral ministries (Figure 14). On the same day, the decision about the development plan of the initiative was also launched, so the decision-making (institutional) and the strategic programming background have both been generated. Soon after, the focus has been shifted back to the City of Debrecen, with some funding also: the allocation of state aids for the implementation of the short-term activities in the approved Development Concept and the necessary preparations for the medium-term actions. No other development program of the other cities of the Creative Region has been accepted outside the Development Concept of Debrecen 2030, while the initiative (in 2021) includes five counties in North-East Hungary, such as Hajdú-Bihar, Borsod-Abaúj-Zemplén, Szabolcs-Szatmár-Bereg, Jász-Nagykun-Szolnok and Heves (while in July 2020 only the mayors of 4 cities of county rank have signed the Cooperation Agreement, Debrecen, Miskolc, Nyíregyháza and Szolnok). Thus, the geographical scope of the initiative seems to be changing from year to year... Finally, in September 2020, the Hungarian Government launched the establishment of four economic development zones in order to enhance coordinated and harmonised territorial developments led by government commissioners also, but no specific activities or development programmes of these newly established zones have been revealed so far.

Table 1 Policy Actions in connection to Creative Region National, Economic & Cultural Zone

2018/03/26	58/2018. (III. 26.)	Government Decree about the declaration of administrative official procedures in connection to the industrial site development and job creation investments in the North-West Economic Zone (outskirt of Debrecen City of County Rank) as matter of strategic importance for the national economy
2018/09/25	1464/2018. (IX. 25.)	Government Decree about infrastructure development in connection to the formation of North-West Economic Zone in Debrecen
2018/09/25	1465/2018. (IX. 25.)	Government Decree about the nomination and tasks of a Government Commissioner for the sustainable economic, educational and cultural development of the automotive industry centre in Debrecen and its surrounding area
2019/12/05	1680/2019. (XII. 05.)	Government Decree about education- and innovation-related development in connection to the automotive industry centre in Debrecen
2020/03/05	1072/2020. (III. 5.)	Government Decree about the Coordination Forum of the North-East Hungarian National, Economic and Cultural Zone ...Chair: the Government Commissioner for the sustainable economic, educational and cultural development of the automotive industry centre in Debrecen and its surrounding area ... Participates in the work of the Forum as member: a) general deputy of the Prime Minister, (Zolt Semjén) b) Minister of Interior, (Sándor Pintér) c) Minister of Foreign Affairs and Trade, (Péter Szijjártó) d) Minister of Agriculture, (Dr. István Nagy) e) Minister of Finance, (Mihály Varga) f) Minister of Human Capacities, (Dr. Miklós Kásler) g) Minister of Prime Minister's Office. (Gergely Gulyás)
2020/03/05	1073/2020. (III. 5.)	Government Decree about the development plan of the 'Creative Region' – Development without Borders in Northeast Hungary National, Economic and Cultural Zone ... the complex development of the zone should be prioritised during the strategic planning of the Operational Programmes for 2021–2027, and specific policy measures should be elaborated for this purpose, umbrella projects should be developed based on individual government decision, as: a) Complex territorial programme for reducing inequalities b) Complex territorial infrastructure development programme c) Complex development programme for competitiveness and employment generation d) Complex development programme for 2030 about the cross-border relations and cities of county rank of the economic zone
2020/04/03	1137/2020. (IV. 3.)	Government decree about the nomination and tasks of a Government Commissioner for the sustainable economic, educational and cultural development of the automotive industry centre in Debrecen and its surrounding area, and for the development of auto-motor sport and prioritized handling of traffic security (until 31 March 2022)
2020/06/10	1292/2020. (VI. 10.)	Government Decree about ensuring the financial support in the period 2020–2023 for the implementation of the Development Concept of Debrecen 2030 ... allocation of HUF 29 124 200 000 for the elaboration and implementation of development projects in several sectors until 2023 the Minister for Innovation and Technology should make the necessary measures to elaborate the proposal for the government about the development projects in the next 4 years (2024–2027) programming period

Source: own edition.

CONCLUSION

Economy is one of (if not the) most important forces shaping space. Administrative borders and planning-statistical territorial units (national level, or EU level NUTS or LAU classifications) are rarely considered by economic actors, even if we refer to recruitment areas, logistic or other service centres for example.

The creation of Budapest Region and Pest (County) Region in 2020 on NUTS2 level can be seen as an interesting development policy experiment: how economic actors will react on the new possibilities raised by the *birth of a new Convergence region* and how they can exploit the better availability of EU Structural and Investment Funds. The changes happened so quickly that even the administrative background, reconciliation methods and forums have not been adapted and established yet. Though the former Central Hungary Region remained a functional Metropolitan Region, with many internal and international linkages, the internal structural problems and development inequalities have not disappeared with the split of the former NUTS2 region. It is quite clear that they can be addressed with a holistic approach and targeted development measures. The need for balanced growth and the economic catching up of disadvantaged regions is not only the problem of the Metropolitan space, but it is the long-lasting task of all national development policy documents.

Though the notion and necessity of economic zones has been outlined formerly in the main policy-level document of Hungary (OFTK, 2014), the circumstances and method of their establishment both raise basic questions on transparency, rationale, timeliness, approach (top-down vs bottom-up), synergies and subsidiarity – without being extensive. When examining the current strategic programming processes, it can be declared that at the EU level the number of objectives has been significantly decreased with a stronger focus on a few strategic aims, while in Hungary, at a Member State level, the number of objectives has been significantly increased, with a widened thematic focus. When comparing 2014–2020 with 2021–2027, an evolution (and not a revolution) can be experienced in the programming documents, that can ensure a continuity – a possibly positive feature in our challenging era full of disruptive processes and global level vis majors. On the other hand, territoriality and regionalism (even regionalisation) are further retarded by the fact that Hungary still does not plan to use either the Integrated Territorial Initiatives (ITI) or the Community-Led Local Development (CLLD) opportunities, among others. Thus, it is strongly questionable if the creation (and operation?) of the new special economic zones could have a significant and measurable impact on the reduction of territorial inequalities, mentioning only one aspect...

The case of surface waters is an example of how a geographical phenomenon can be addressed by both sectoral and territorial policies, and the existence of a link between them is not predetermined (territorial dimensions can be found in the former, while sectoral characteristics in the latter). The phenomenon of surface waters is a well-managed field in the EU through environmental policy, however, it is currently less emphasized due to the centrality of atmosphere in the Green Deal. The surface areas are very important in Hungary's environmental system, social and economic life, and policies. From a sectoral point of view, integrated water management is emphasized, in which quantity, quality issues and ecosystems appear regularly. Here, the territorial dimension brings forth river basin districts where international cooperation, crossing national and regional borders appear, and local communities are important, where local water management is emphasized. From the point of view of territorial policy, although its weight and detail vary from document to document, the main sectoral objectives are present and major surface waters have become an important element of national development goals, within which special attention is paid to flood management, mitigation of droughts related to climate change. However, the documents examined show a mixed picture about the coherence of relevant policies: interconnection appears in relation to national level plan(s), but at the regional level, there are separate planning paths for different territorial units (in addition to mutual commenting on each other's documents).

The current European environmental policy, reinforced with the Water Framework Directive, favours Hungary. Beyond that, although water issues are represented in the Green Deal, the atmosphere is more critical, as for example the greenhouse effects receive much more attention than water management. However, the effects of climate change are water-related, so it is Hungary's strong interest to emphasize this and further strengthen the role of the country's surface waters in EU policies.

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PRACTICAL EXPERIENCES, REGULATORY PRINCIPLES AND ISSUES OF THE TERRITORIAL DELIMITATION OF DEVELOPMENT POLICY IN HUNGARY

István FINTA^a, Péter DOMBI^b

^a Institute for Regional Studies, Centre for Economic and Regional Studies; Papnövelde u. 22., H-7621 Pécs, Hungary; finta.istvan@krtk.hu

^b Institute for Regional Studies, Centre for Economic and Regional Studies; Papnövelde u. 22., H-7621 Pécs, Hungary; dombi.peter@krtk.hu

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Abstract

Both at national and EU level, the differentiation of specific territorial units is a key issue in development policy. The objective of the delimitation at the highest legal level is to mitigate territorial differences; it is intended to provide support for the delimited (beneficiary) territorial units. Benefits (e.g. the rate and intensity of support) are fundamentally influenced by development and growth opportunities, so the methods and the results of delimitation are both politically and professionally sensitive. This is particularly important for rural areas and rural development, because the beneficiaries' delimitation – or lack thereof – is most affected by these regions. Hungary has been operating and developing a delimitation system since the '90s, the elements of which are at community level can serve as a model, and can be well-utilized. For this purpose, the paper presents the regulatory starting points and principles of spatial delimitation, the statistical methods used so far, the range of data used, and the problems that can be associated with the methods and data used so far. The authors propose a data set and a calculation method that more faithfully reflects the real situation of territorial development, which would enable development resources to better contribute to reducing territorial disparities.

Keywords: territorial-rural development, development policy, delimitation, beneficiary areas, development, backwardness

INTRODUCTION

The purpose of the study is to examine and evaluate the Hungarian legal regulation and practice of the delimitation of beneficiary areas, which is based on the Hungarian National Development and Regional Development Concept (OFTK), being in relation with the European Union's cohesion policy and the principles and objectives of the Hungarian National Development and Regional Development Concept (OFTK). In the case of Hungary, the establishment of the legal classification system cannot be regarded as something being without past precedence; the

establishment of prior classification systems is based on the interpretations of several excellent papers (see: Faluvégi & Tipold, 2009, 2012). Current investigations primarily focus on fixed principles in the sense that

- to what extent they can be considered complete or complementary (supplementary)
- whether the demands and requirements during the practical application fully cover the legislator's requirements,
- are there any proposals that could contribute to making legislation more consistent in order to ensure long-term stability of regulation (avoiding frequent modification) and to take greater account of underlying living conditions (adaptation to facts, actual situations, realities, demands).

The article focuses not on delimitation itself but rather on beneficiary rating, which defines *the scope of the study and the content of this paper*. The literature approaches different regional delimitations with different purposes and by different analysis methods. A number of synthetic works or even regional classifications have been developed over the last decades, where, for example, the authors dealt with the poverty, the underdevelopment or the peripheral status of various territorial units, where the status of regional development beneficiary played more or less important role.

The methods used also fit into the objectives of the study, such as the detailed presentation of statistical analyses, but the investigations were not aimed at the revolutionary modification of rounded-up calculations having been revised many times and in many ways.

Of the factors frequently mentioned in literature (territorial level, timeliness, development, backwardness indicators, the “complex methods of the production” of complex indicators Pénzes, 2014, p. 7), this article intends to focus on none; the issues of territorial level are dealt with only partially, primarily in the context of rural specificities.

The methods used in the study – in line with the goals of territorial and rural development – are multidisciplinary. On the one hand, they rely on the methodology of legal analysis (since territorial delimitation is a matter of legal regulation in both Community and Hungarian legislation) and, on the other hand, on the theory and practice based on decades of statistical analyses and methods that are targeted at the geographical delimitation of disadvantaged areas in Hungary. In line with the EU development policy principle of geographical concentration, the aim of the study is to develop a methodology that (better) guarantees the identification of lagging regions so that development resources aimed at reducing disparities can actually help these regions to develop. This will be facilitated by the practical experience gained in

implementing the LEADER programme, which covers the whole of Hungary's rural areas and includes the entire territory of disadvantaged areas.

MAJOR FINDINGS IN INTERNATIONAL LITERATURE

'Regional development' has always been one of the central concepts of human geography. In economic-related definitions, the common feature is to emphasize higher productivity, higher levels of employment and consumer spending, and shifting the economy to the third sector, while broader social aspects include the education, health and safety of population, as well as the role of environmental resources (Bossel, 1996, 1999).

The degree of the expansion of the concept of 'regional development' is presented by Mabogunje (1980), who defined the following time steps for interpreting the term: (1) economic growth, (2) modernization, (3) distribution justice, and (4) socio-economic transformation.

Extending the range of ingredients naturally makes the measurement difficult (Booyen, 2002; Saisana et al., 2005; OECD, 2008). There have already been numerous objections to GDP expressing economic development (see Lepenies, 2016; Stiglitz & Walsh, 2006; Davies, 2014; Widuto, 2016). One of the most striking opposites is that the main problem of standard economic indicators (GDP, unemployment) is that they measure rather the consequences than the causes (Lipshitz, 1993). Apart from the general problems of GDP well known in the economy, GDP data on a regional or even a smaller administrative unit are difficult to be traced because they are largely based on estimates and can therefore seriously distort the data in the absence of accurate site data. For example, in the metropolitan agglomeration, due to inflowing commuters, the RGDP per capita calculation can be overestimated by up to 20% (Boldrin & Canova, 2001).

There are many aspects to the selection of the indicators of development measurement in the literature. Hagerty et al (2001) lists 14 criteria on which the suitability and usefulness of the indicators included in the index can be judged. Among the criteria, one of the most controversial issues considered by the authors, the principle that the index should reflect the multi-dimensional phenomenon to be measured in the form of a single number is worth emphasizing. On the one hand, there is a need for a "unique scale" for the sake of clear comparability, however, because combining the components immediately creates a kind of weighting, any arbitrary one-dimensional projection in the evaluation can result not only in a loss of information but also in an undesirable distortion. If we add that the construction is intended to be used indirectly – or just like in Hungarian practice – politically, it is immediately apparent

that by over-emphasizing certain constituents, the development index may become manipulable.

With regard to the composition of the complex indicator, it is usually characteristic that for its generation sub indicators are selected in thematic groups. The most fundamental setting defines three thematic pillars, including the indices describing social, economic and physical-environmental conditions (Copust & Crabtree, 1996; Vrtenová et al., 2009; Kutscherauer et al., 2010). The emphasis of this triple division may sometimes be easily communicated by the People, Prosperity, Planet motto (Hák & Janoušková, 2013). The triple division is close to the system used in Hungarian practice, with four development blocks, socio-demographic, economic, housing and living conditions, and infrastructure development. However, several studies have been carried out with a more detailed, 7–10 component dimension (Ferrara & Nistico, 2015; Salvatia et al., 2016; De Smedt, 2013). Of these, perhaps the best known is the so-called “Stiglitz report”. In their paper, eight dimensions have been identified, whose inclusion is considered unavoidable when generating the ideal composite well-being indicator (Stiglitz et al., 2009).

Another important point to consider is the selection of the spatial scale for the development index. There are indicators that cannot be reliably formatted in certain size categories. In the case of small population, this is besides the already mentioned RGDP indicator, the indicator of the life expectancy of the population (Scherbov & Ediev, 2011) or the number of enterprises per capita. It may also be that some factors favour certain economic activities, in other cases they may be irrelevant or potentially inhibiting (Wishlade & Yuill, 1997).

There are countries (e.g. Croatia) where the legal regulation of spatial development confines itself to delimiting only a few special conditioned areas. This is not sufficient in itself, as regional policy can only be effective if it is applied in the same way in areas of homogeneous development (Bakaric et al., 2005). In countries where there are significant territorial differences between regions, e.g. Germany between the eastern and western parts or Italy, north and south of Italy, it occurs that regional policy includes regulations to be applied differently in the different parts of the country (Wishlade & Yuill, 1997).

The presentation of the most important findings and research directions of international literature highlights those – significant – differences that characterize the different approaches of Hungarian practice, and possibly the internationally usable elements of sample value. Such differences are as follows:

- territorial scale (according to international practice regional level while – according to our experience – smaller territorial units can better express territorial differences and the direction of change);
- the range of data used (preferring basic data and original sources that are most resistant to distortions rather than using derivative data, secondary resources, and multiple computed values);
- a model applicable only in theory or a model applicable in practice as well (besides the usefulness of the theoretical models, the Hungarian solution – or the study – focuses on practically operational / operable solutions in the area of rural development);

THE RELATIONSHIP BETWEEN DEVELOPMENT POLICY AND TERRITORIAL DELIMITATION AT EUROPEAN UNION LEVEL

Within the European Union's development policy, spatial focus has played a prominent role in every programming period. The definition of the territorial units of different scales, the coherence of territorial units and development policy goals, the adaptation of development resources to territorial units with different abilities, and their fundamental modification or even fine-tuning, are all evergreen issues in Community development policy.

During the definition of any territorial unit, area in any aspect, the first fundamental question is the purpose of delimitation and classification. The legal basis of the European Union or of any EU spatial development intervention is Article 174 of the Treaty on the Functioning of the European Union (TFEU), which aims at reducing disparities between territorial units with varying degrees of development. In order to achieve this fundamental objective in the best possible way within the cohesion policy that serves this purpose, a number of solutions and principles have been developed at Community level (Farkas, 2018). One such principle was concentration, which is closely related to the question of territorial delimitation.

It is well known that the concept of concentration is essentially composed of three elements, thematic, financial and territorial concentration. Some aspects of territorial units can be taken into account even on all three elements, but territorial and financial concentration, in the areas where cohesion policy is to focus, are present in any case. In order to ensure that the most disadvantaged areas have a chance to catch up, they should be raised and differentiated, and – if possible – subsidized differently, from the average. The positive discrimination, *or more precisely the geographical delimitation*, means territorial concentration, and discriminatory subsidization means the enforcement of financial concentration. (In the case where certain

programmes may only be implemented in the beneficiary areas – or in their further differentiated units – the thematic concentration, as one of the means of achieving the objective of cohesion policy, is also linked to the classification system, or more specifically, to the system of criteria that may influence or determine the elements of the targeted correct classification process). The beneficiary classification of each territorial unit is thus a focus which, in line with the principle of concentration, ensures the relevance of the area and rural development of this particular region type.

The 2014–2020 programming period – at Community and national level – has brought about changes in the fact that territorial cohesion objective set out in Article 174 TFEU should contribute not only to cohesion policy instruments (the individual funds) but also to the Common Agricultural Policy Funds¹ as well.

The emphasis on Community legislation was important not only because the development potential of our country is determined by the goals and resources set at Community level but also because there is no perceptible difference between the classification of beneficiaries in the National Development and Regional Development Concept and the objectives set at Community level:

“bg) the resources available for the most disadvantaged districts and settlements from the point of regional development, should be utilised on the basis of specific rules of subsidization, bh) the applications of the most disadvantaged districts and municipalities submitted for regional development should be given preference during the evaluation of tenders in order to facilitate their catching-up” (Decision No 1/2014 (I. 3.) OGY).

In delimiting and classifying each territorial unit, the first and fundamental goal is to define its underdeveloped – or its inverse – developed status.

¹ Article 174 of the Treaty on the Functioning of the European Union (TFEU) provides that the Union shall aim to strengthen economic, social and territorial cohesion in order to reduce disparities between the levels of development of the various regions and the backwardness of the less favoured regions or islands and pay particular attention to rural areas, regions affected by industrial transformation and regions with severe and persistent natural or demographic handicaps. Article 175 of the TFEU provides for the Union to support the achievement of these objectives through the action of the Guidance Section of the European Agricultural Guidance and Guarantee Fund, the European Social Fund, the European Regional Development Fund, the European Investment Bank and other instruments.

PROBLEMS WITH THE FULFILLMENT OF THE REQUIREMENTS OF HUNGARIAN REGULATION, THE COMPLEMENTARITY OF REQUIREMENTS (PRINCIPLES)

In the majority of the principles enshrined in Hungarian legislation, it is possible to collect problems and solutions related to the classification of beneficiary areas around these fundamental principles. However, surveys have also pointed out that there may be some requirements (principles) which, at present, are not part of the existing legislation.

Hungarian legislation defines a number of – otherwise explicitly acceptable – requirements for statistical indicators that can be applied in the development level classification for territorial delimitation. However, the currently used range of indicators points to a problem that the literature relates to the requirement of *independence*. This means that the data / indicators chosen must be relatively independent of each other in order not to intensify their mutual effect for generating values that are far greater than the actual one and by this distorting the final result. This danger is highlighted in the literature as well (Pénczes, 2014, p. 41) and current experiences show that in the so-called infrastructure index group we may encounter such undesirable effects.

Regarding the indicators used in statistical calculations, the basic requirement of independence can be formulated as a regulatory requirement.

In the following, we are looking for the answers to the questions of their practical application and the questions related to the application of the Hungarian regulations (National Development and Regional Development Concept – NDRDC) in order to formulate proposals for legislation. The document – the NDRDC – is all the more significant since it provides the conceptual framework for the allocation of EU development funds to day (Somlyódy Péter, 2017).

PRINCIPLE 1: According to the Decision, only the use of indicators that can be measured, verifiable, publicly available, accessible to all concerned and dynamic comparisons are acceptable.

As regards the indicators used, there are more than one that is not included in the publicly available TStar database published by the Central Statistical Office (life expectancy at birth, housing price, car-age). Some indicators are not known at settlement level, they are only known on district scale, and the access to, and the subsequent calculation of settlement data are unknown or unavailable. In Budapest, there may be a problem with sub-settlement level, i.e. the availability of district-level data in Budapest. In order that the data could be measurable,

verifiable and accessible, it is necessary for them to comply with the requirement that they *should be set up at settlement level* and be included in the public databases.

The requirement against the coherence of the classification system may also mean that the data used *during the different programming periods should be identical*, otherwise the results cannot be compared and it is not possible to determine whether the differences in development between the different territorial units have decreased or increased. Unfortunately, this requirement has not been fulfilled in the last decade (Table 1). In each index group labelled as Group Indicator in the calculation formula, grey shaded cells were used to highlight the indicators belonging to a group with the same content, but indicated under different set of indicators during different time periods. (In the case of consistently designed and applied indexing systems, only a certain decrease or increase or minimal deviation would be observed, but in the present case, coincidences are rather a rarity.)

Table 1 Identities and differences between indicators used between 2007–2013 and 2014–2020

2. Indicators and sets of indicators used for beneficiary classification between 2014–2021	Data range for the calculation of the complex indicator measuring the socio-economic and infrastructural backwardness / development of micro-regions and settlements between 2007–2013
Set of indicators No. 1: Social and demographic situation	I. Economic indicators:
Urbanity / rurality index (what proportion of the population in the given district lives in a population density of more than 120 inhabitants / km ²), %	The number of active economic organizations per 1000 inhabitants
Mortality rate (number of deaths per thousand inhabitants) (average of the last five years), ‰	The number of guest nights in private and commercial accommodation per 1000 inhabitants
Migration difference per thousand inhabitants (average of the last five years), heads	The number of retail stores per 1000 inhabitants
The number of nursery and family day-care facilities per ten thousand 0–2 years per capita	The proportion of employed persons in agriculture from all employees, %
The rate of regular child protection benefit from the permanent population aged 0–24, %	The number of employees in the service of all employees, %
The number of people living in active age (regular subsidies for social assistance and employment)	Changes in the number of operating companies, %
Set of indicators No. 2: Housing and living conditions indicators:	Local tax revenue of local governments, HUF
The average price of used flats, HUF	The number of scientific researchers and developers per 1000 inhabitants
The proportion of housing built during the last five years from housing stock at end of period, %	II. Infrastructure indicators:
The percentage of (residential) homes without comfort, %	The proportion of apartments connected to the public water supply system, %
Per capita income per inhabitant as personal income tax base, HUF	The length of sealed canal network per 1 km of water mains, meter
The number of passenger cars by persons, per age-weighted thousand population	Households consuming fixed gas as a percentage of housing stock, %

Set of indicators No. 3: Local economy and labour market	The proportion of homes involved in regular waste collection,%
The percentage of people aged 18 years and over, with at least high school graduates,%	An index of everyday access
The ratio of registered jobseekers to working age population, % 2006 average	Number of telephone headquarters (ISDN) per 1000 inhabitants
The proportion of permanent jobseekers registered for a continuous period of at least 12 months from the working population,%	The number of cable TV subscribers per 1000 inhabitants
The percentage of registered jobseekers from the working age population (annual average),%	The number of broadband subscribers per 1000 inhabitants, heads
The proportion of permanent jobseekers registered for at least 12 months permanently from the working age population,%	Access point for expressway nodes
The percentage of registered jobseekers with up to primary school grades, %	III. Social indicators:
The number of active enterprises per thousand inhabitants	The proportion of built 3-x-room apartments in the period-end housing stock, %
The number of retail stores per thousand inhabitants	The number of passenger cars per age of 1000 inhabitants
The ratio of local tax revenue to local government revenue from current year revenue, %	Migration margin; average annual population per 1000 people in the period
Set of indicators No. 4: Infrastructure and environmental indicators:	Death rate (number of deaths per 1000 inhabitants)
The proportion of apartments connected to public sewage collection network,%	Per capita income per inhabitant as personal income tax base, HUF
The proportion of homes involved in regular waste collection, %	Urbanity / rurality index (how many percent of the population of the micro-region lives in a population density of more than 120 inhabitants / km ²), %
The number of broadband Internet subscribers per thousand inhabitants	Population density, person / km ²
The ratio of built roads to all municipal roads, %	IV. Indicators of social and demographic situation:
Access indicator to the county seat, in minutes	Youth index (below 15 years of age as a percentage of the 60-x population), %
Access indicator to the nearest express way nodes, in minutes	The proportion of non-employed households, %
	Percentage of 18-year-olds with at least high school graduation, %
	The average annual number of people receiving regular social assistance by municipalities per 1000 inhabitants
	The proportion of people receiving regular child protection support from the 0–24 year old population, %
	V. Employment indicators:
	The ratio of registered jobseekers to working age population, % 2006 average
	The proportion of permanent jobseekers registered for a continuous period of at least 12 months from the working population, %
	Activity rate, %

Source: the author's own edition.

Regardless of the questionable application practice, there are some *timeless indicators* that seem to be able to characterize development after 30 years as well as they did it twenty years ago. When selecting indicators, time-resistance is a very important aspect, since this is a long-term comparability, a basis for coherence between indicator systems. At the same time, it is not uncommon, and even in all classifications, indicators have been identified to reflect actual policy preferences (e.g. telephone, gas supply, tourism). Once the individual factors have become available to the general population or the municipalities as a whole, or their existence can simply be handled as a common feature (e.g. phone), it is left out or may have been left out of the indices. At the same time, there are still indicators that are no longer so closely related to development level indicators as they were in the 90's. Similar findings can be found in the literature (Jakobi, 2004, p. 7), but we cannot really answer the question that even if it is justified to take into account new factors, what proportion of them can be included in the calculations without violating the principle of comparability. It is also difficult to formulate the exact answer for this, but perhaps maximizing the ratio of new indicators up to 25% – and fixing everything at the level of regulation – would still be an acceptable compromise that would not interfere with the need for comparability.

It is also necessary to point out that the indicators currently used are static indicators, i.e., they display a fixed value for a particular time. The literature is not at all uniform in the use of either static or static and dynamic indicators (Money, 2014 vs. Harcsa, 2007). Of course, this question cannot be resolved here, but if we are able to visualize a pace and speed of change, it can provide meaningful information to the decision-maker about the way and direction of possible interventions. (E.g.: If we are able to demonstrate the rapidity of population decline for settlements with a population of less than 500, then it is possible to calculate for how much time there is still room for any meaningful intervention. From this point of view, it is indifferent to the decision-maker that all of this is achieved by using a dynamic indicator, or the static indicators are scanned at appropriate intervals.)

PRINCIPLE 2: The number of indicators used cannot be expanded unlimitedly and only indicators that capture the actual development of settlements and districts and effectively differentiate should be taken into account.

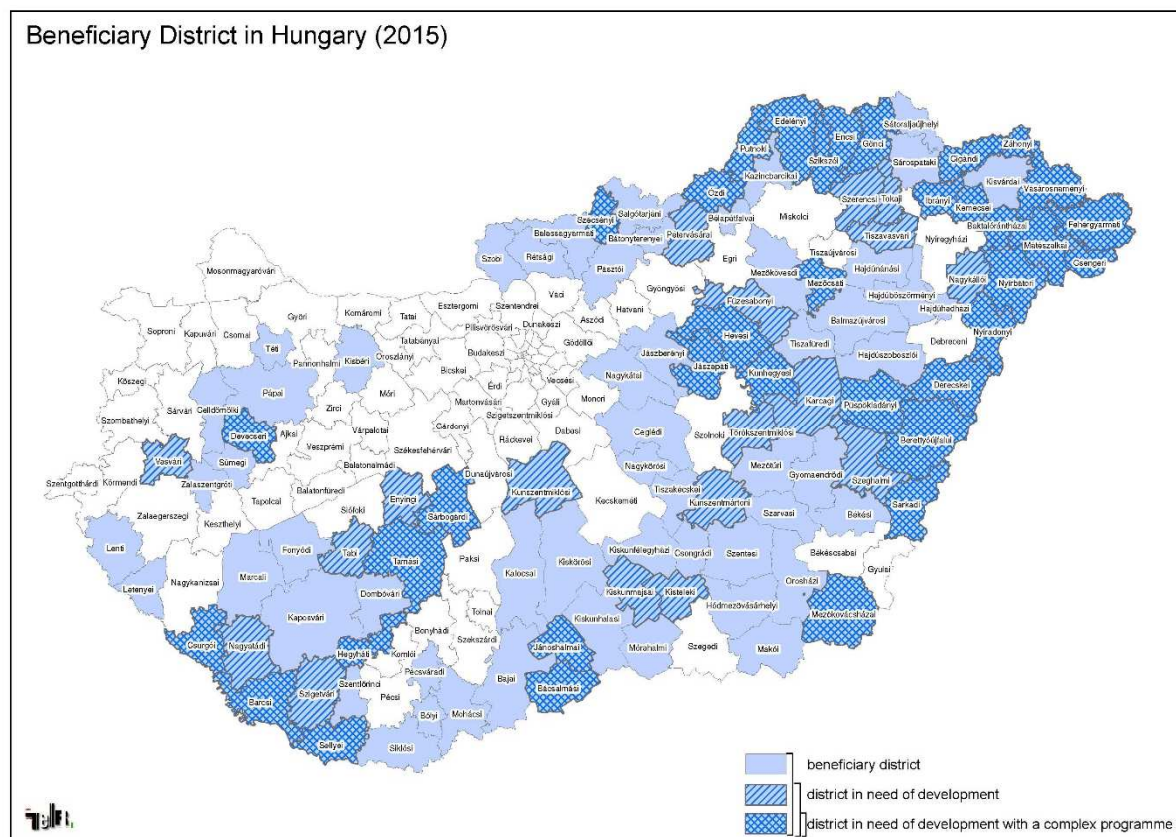
From the regime change up to the present day, in many cases, different number and content indicators and only statistical methods were used for classifying the different territorial units of beneficiaries. These classifications were experiments of different agendas and governments with differing policies (Table 2) to represent the content of development by still complex and often subjective means at territorial level (See Péntzes, 2014, p. 45; Nagy, 2011. p. 3).

Table 2 The regulatory system and results of the classification of beneficiary areas

Parliamentary decisions	Government decree	Number of indicators used	Delimited area types			
84/1993. (XI. 11.) OGY (Repealed by the 1997. XXI. Act on Regional Development and Physical Planning.)	161/1993. (XI. 17.) Govt. Decree	11 indicators	economically-socially backward settlement	settlements of a district with above the national average by 1.5 times unemployment rate		
	61/1995. (V. 30.) Govt. Decree					
	80/1996. (VI. 7.) Govt. Decree					areas hit by severe unemployment
	106/1997. (VI. 18.) Govt. Decree		economically-socially backward areas	industrial restructuring areas	agricultural-rural development areas	areas hit by persistent unemployment
30/1997. (IV. 18.) OGY Decision	19/1998. (II. 4.) Govt. Decree	complex indicator of 28 indices				
24/2001. (IV. 20.) OGY Decision	91/2001. (VI. 15.) Govt. Decree	complex indicator of 19 indices	economically-socially backward areas	industrial restructuring areas	rural development areas	
	64/2004. (IV. 15.) Govt. Decree					
67/2007. (VI. 28.) OGY Decision	311/2007. (XI. 17.) Govt. Decree	complex indicator of 31 indices	disadvantaged micro-region	the most disadvantaged micro-region	the most disadvantaged micro-region to be supported by a complex programme	temporary beneficiary micro-region
56/2011. (VI. 29.) OGY Decision	Chapter 4 of the Parl. Decision is extended by Article 6a. as follows: „6a. The most disadvantaged micro-region can be considered as a region with severe natural or civilizational disaster, in which the elimination of damages and the normal operation of local socio-economic life require a lasting, multi-annual development, where the development potential of the region is severely restricted by the disaster for several years.					
By reference to the Fundamental Law and the Act on Regional Development	290/2014. (XI. 26.) Govt. Decree on the Classification of Beneficiary Districts	complex indicator of 24 indices	beneficiary district	district in need of development	district in need of development with a complex programme	
	106/2015. (IV. 23.) Govt. Decree					

Source: the author's own edition

Map 1: Areas affected by the beneficiary classification having been in force since 2015 in Hungary



Source: TÉRPORT (The Spatial Information Portal System of Hungary): <http://www.terport.hu/tematikus-terkepek/kedvezmenyezett-jarasok-a-2902014-xi-26-korm-rendelet-szerint>

The number of indicators used for the classification of beneficiary regions showed an upward trend (up to 31) by 2014. At the same time, "the methodological aspirations of the recent period indicate that the use of fewer indicators is just as satisfactory to locate disadvantaged settlements with a similar precision as the use of a large number of indicators." (Harcsa, 2014, p. 6). We have also faced such an opinion that "in extreme cases, even a single indicator, the basis of per capita income could be suitable for defining the most disadvantaged micro-regions. For example, out of 94 such micro-regions defined on the basis of 31 indices, 92 could be delimited by this single indicator in 2007." (Harcsa, p. 8), (András Nagy came to a similar conclusion Nagy, 2011 p. 13). It is also to be remembered that Community legislation uses only one indicator, GDP, for the "beneficiary" rating. Of course, this method is still subject to numerous criticisms, especially in terms of how far GDP can act as an indicator of disadvantaged or developed state. It is also a fact that the lowest measurable territorial unit of this single indicator is the county, which in itself confers a great deal on its own, by covering – sometimes very significant – territorial differences within the county.

Territorial delimitation and the definition of the purpose and indicators of territorial delimitation here face the question of an adequate territorial scale, which is a basic requirement of being capable for demonstrating and tracking the evolution of development and territorial processes. The EU's development policy, the scale of which is regional level (NUTS II) larger than county, is far less likely to serve as a suitable territorial unit of development. The institutional system for the 2014–2020 programming period transferred regional development competences to counties, from NUTS 2 to NUTS 3 level (Simó et al., 2018.) Spatial development competences have been transferred to counties from NUTS 2 to NUTS 3 level by the institutional system for the 2014–2020 programming period. Our research experiences show that the *regional scale is totally unsuitable for measuring real territorial differences*, because regional averages confuse and overstate differences within the region, where relevant. (Even a single large city can convey an unrealistic picture of the development of the entire region, where the contribution to GDP, – for example, due to a car industry, a nuclear power plant or other investment less perceptible to any settlement in the region – far exceeds the average of other settlements in the region. *Although 90% of the region is undeveloped, 60% of the population lives in disadvantaged settlements, the regional level statistical “result” does not reflect this.*) *It is also a fact that the scale of spatial unit can particularly be important for rural development policy*, capable of thinking not in a regional level but in a smaller territorial unit where territorial differences and their changes can be traced within the region. Rural development policy at Community level is much more focused on a territorial unit corresponding to the Hungarian micro-regional level (the so-called LAU-1 level in the Community nomenclature).

Based on the above, the question, that at Community level, what can be the obstacle to the assessment of actual territorial processes by introducing a single measurement system based on a number of indicators and data basically available to the Member States on LAU-1 level, may rightly arise.

In addition to the current system for measuring the GDP and using a regional scale, it would be useful to fine-tune the system at Community level, which could be more sensitive to monitoring the evolution of real regional processes. (Hungarian regulation – similarly to the dominant majority of opinions in domestic literature considers the district, micro-level level as evident in the case of the beneficiary classification.)

Fine-tuning can provide a possibility to monitor the effects of rural development policy and interventions promoting the development of rural areas at European level.

Differentiation is necessary because unfortunately, despite all the efforts at Community level, up to now there has not been consistency and cooperation between the various

European development funds to facilitate the harmonious development of rural and urban areas. In practice, the predominance of differentiation and delimitation is much more dominant and as a consequence, particularly in Hungary, urban areas have far greater development resources and development opportunities. At the same time, cohesion policy at Community level provides information on convergence between the regions. This is in fact the result of the previously mentioned point-patterned development, whereby the regions' rural areas are not only unable to catch up, but rather their lagging process is accelerating. (It can be noted that investigation based not only on GDP provides far more details in a European comparison, where only three regions in Hungary are not part of the lagging regions.) (Report on lagging regions, 2017)

After touching on the issues of the adequate territorial unit, returning to the world of indicators, on the question concerning how many and which indicators would be reasonable to select, the literature provides a more general, but forward-looking, statement.

“The ‘formal’ professional opinions on disadvantaged settlements were fundamentally influenced by current policy expectations in the form of parliamentary decisions that have directed methodological development towards specific approaches” (Harcza, 2014, p. 8). “...most often it was the more influential social strata and regions being in dominant position whose interests were determining the classification and measurement of development level...” (Gáspár, 2013, p. 51).

In any case, it is certain that the higher the number of indices assigned to the classification, the easier it is to change the previously formed order by manipulating some indicators. It also serves as an argument for the narrower indicator group that even up to 6 + 1 variables can define the scope of lagging areas with a relatively higher security (MTA RKK, TERRA STÚDIÓ, VÁTI, 1999). As the number of indicators decreases, the room for manoeuvring narrows, which would – unobtrusively – make the change.

It is also important to emphasize that the aggregation of too many unweighted variables of a different nature weakens the distinctive character for simple numerical reasons and tends to equalize. An argument behind the use of less indicators may also be that the coexistence of the indicators used for the present – and the past – decade is more likely to be directed towards balancing rather than differentiating.

In addition to the quantity of indicators chosen, at least as much or more important is how they meet the expectations against the quality of indicators. The expectations – as it is seen from the text of the decision – focus *primarily on the relationship to development*. The extent to which it can be related to the level of development, the degree to which it is able to demonstrate the state of development and the degree of developmental disadvantage, are very

difficult to define objectively and apply equally correctly and well established for more than three thousand settlements of the whole country. The selection of the indicators used therefore has an inevitability with some *subjectivity* (so it is good if *the number of indicators is not too high, because the degree of subjectivity in the system can be proportionally reduced*). At the same time, for some of the indicators – a public agreement – a consensus – has emerged from the point of view that they have always been part of the set of indicators (or in better case of a system) that decision-makers were trying to assign to development level. Most of these indicators are related to income relations (personal income tax), reflecting unemployment i.e. employment situation (with different ratio indicators) or characterising migration processes.

Among the indicators currently used, there are elements where the close relationship to development level is highly questionable. These include the so-called urbanity index. Although districts with a dominant urban centre are most likely to be more developed in urban disadvantaged areas, it is easy to see, for example, by the examples of formerly significant but declining industrial cities that the overweight presence of urban population itself is not fortunate to regard as a development factor. Moreover, other equally, or even more acceptable trial calculation modes² for the urbanity index show that *a slight content-modification of only one of the 24 components of the currently used complex indicator may significantly change the outcome of the district ranking and thus the set of beneficiary districts*.

Another objectionable indicator is the currently used – for the period 2014–2020 – infrastructure-environmental indicator group, which refers to the proportion of homes involved in waste disposal. Because according to the Act on Local Governments in Hungary and sectoral legislation, this public service is obligatory in every settlement, its presence is considered as an incorrect indicator of development. (This is not only justified by the statutory obligation, but also by the fact that the service itself operates under national coverage where the area excluded from this service can be regarded as an exception.)

The above examples, on the one hand, indicate the problems of currently used indicators, the need for revision, on the other hand the consequences of using "multiple indicators", the sensitivity of delimitation results and the possibility of their distortion of reality, which is basically due to the consequences of the index selection. (One of the greatest shortcomings of the present Hungarian practice of delimitation can be mentioned as the declaration of the district of Komló “advanced”, being a former mining zone that still has not recovered from its

² The Hungarian legal regulation only takes into account a simplified population/territory formula for population density at the settlement level. Instead, we used a widely accepted and more appropriate GIS grid-based computation to identify the urban part of a district in the test calculation.

depressed status since the closure of mines. At the same time, its neighbouring districts have received beneficiary status with traditionally favourable economic conditions and significant investments, well-known over Hungary (districts of Bóly and Mohács).

PRINCIPLE 3: The method used to calculate the complex indicator should be simple and transparent so that the classification can be easily checked by the representatives of municipalities and districts

Complying with or even strengthening this principle is reasonable even if professionals, in order to improve the functioning of the system, are committing themselves to more complex solutions (Pénzes, 2014, pp. 72–73). The examination of calculation methods – due to scope constraints – cannot be a part of this study, but it is necessary to draw attention to the necessity of completing the scope of the delimitation calculations in such a way that it could meet the delimitation requirements of any development programme. This need may be barely questionable in the knowledge of the purpose, the function and mission of the Hungarian National Development and Regional Development Concept (OFTK) (Salamin et al., 2014). What makes this issue topical since 2007, it is not the regional development programme but the Rural Development Programme (VP), which is part of the rural development system; it works with such a system which settlements with a population of more than ten thousand inhabitants are not part of. It is not a novelty that such calculations have been made that excluded district seats from the districts (Faluvégi, 1995) and computed development comparisons on such a basis. In case of VP however, not district seats are taken into account as the goal here is to measure the degree of development of rural areas, and not their comparison with or without their district seat. Independent delimitation of the VP seems to be reasonable because the current classification system creates an unfair situation, which means that a particular rural area – only due to having a settlement with a population of over ten thousand inhabitants but not included in the Rural Development Programme – receives low intensity subsidization (e.g. 65%). At the same time, the neighbouring district with no settlements with a large population of over ten thousand inhabitants that would distort the data of the surrounding countryside in the wrong direction may receive up to 95% intensity subsidization. (This is particularly disadvantageous for small settlements with modest capital resources.)

By excluding the settlements with ten thousand inhabitants, as a result of the current classification based on the current calculation method and indicators, we calculated 118 beneficiary districts instead of the original 109.

Based on Table 3 it is possible to compare the mean values and deviations of the components of the complex indicator calculated by excluding cities.

Table 3 The characteristics of the complex indicator and its components by excluding towns with ten thousand inhabitants and bigger cities

	Average		Deviation	
	with the inclusion of cities	with the exclusion of cities with over 10 thousand inhabitants	with the inclusion of cities	with the exclusion of cities with over 10 thousand inhabitants
Social situation	52.0	39.8	19.1	14.4
Housing and living conditions	40.2	34.3	15.8	13.6
Local economy	38.0	32.1	15.8	11.0
Infrastructure	52.2	43.2	18.0	11.4
COMPLEX INDICATOR	45.6	37.3	16.0	11.0

Source: the authors' own edition.

Table 3 clearly shows that as a result of calculation with the exclusion of big cities, not only the average has fallen, but the deviation of the indicator has also decreased considerably. Therefore, the figures indicated on national level for rural population appear to be more homogeneous. This seems to verify the assumption that the countryside alone is by far more homogenous – and at the same time less developed – than calculated with cities with over 10 thousand inhabitants. This confirms the statement that *during the allocation of rural development resources, due to the presence of cities with over ten thousand inhabitants, certain districts are unfairly disadvantaged*. It can also be noted that by the application of settlement level development indicator the spectacular difference on district level can no longer be perceived, as the exclusion of the 143 cities would only make a hardly noticeable change in the average and deviation indicators of the total 3154 settlements.

THE SET OF PROPOSED INDICATORS AND SOME RESULTS OF TEST CALCULATIONS

There are additional arguments that can be formulated for simplifying the calculation based on the current 24 indicators. The first is the difficulty of collecting data, since the component indicators are derived quantities and can only be produced with the help of additional basic data. At present, 60–70 settlement baseline data are needed to prepare the computation, and moreover, several of them are not found in the standard publications of KSH (Central Statistical Office of Hungary). This number is unnecessarily high for defining *the development level of settlements*. With the inclusion of basic dimensions – income, unemployment, education, transport – the top and bottom of the ranking can reliably be selected.

It is well known that, in comparison with the beneficiaries' classification regulated by the current legislation, researchers have tried to rethink, quantify and re-interpret the issue of regional development level with the application of many other indicators and methods (Koós, 2015; Péntzes, 2014). There is no room for evaluating the different methods and results here, but it can be stated that they seem to have limited possibilities to provide a definitive and reassuring solution from a development policy point of view. The following indicators and methodology will not fundamentally change this situation, but they provide some other results proceeding from a different baseline.

Below, compared to the official use, significantly reduced calculations using a nine component set of indicators will be presented. When selecting indicators, we rely on existing sets, but in selecting specific indicators we paid particular attention to aspects such as *time resistance, tight correlation with development, independence, and the ambition to minimizing indicators*. The selection criteria may be less controversial, but there is no doubt that the selected indicators *carry a kind of subjectivity* just as in any other case, which is inevitable. This is a direct consequence of the fact that there is no equally acceptable, perfect solution for everyone.

Recommended indicator sets and indicators

Social situation: (1) Migration difference per thousand (average of the last five years), people; (2) The number of people per 1000 permanent residents of active age receiving social benefits (regular benefits for social assistance and employment), people;

Housing and living conditions: (3) The ratio of homes built during the last five years from housing stock at end of period, %; (4) Personal tax base income per inhabitant, thousand HUF;

Local economy and labour market: (5) Percentage of people aged 18 years and over, with at least high school graduates, %; (6) Number of jobs per thousand permanent residents, pcs; (7) The local governments' ratio of local tax revenue from the year's total revenues, %;

Infrastructure: (8) The average travel time from the district's settlements to the county seat on road, minutes; (9) The ratio of settlements reaching a highway ramp in maximum 15 minutes, %.

The test calculation method was entirely consistent with the method defined by the law currently in force. One of the reasons was that it is not the method but rather the set of indices (indicators) used that seems to be problematic, and the other reason is the necessity to demonstrate that the same method with changed (changeable) indicators could produce closer to reality values. According to the law, evaluation is based on the mean value of the four group indicators shown in Table 1, that is using the following formula:

$$f_i = \frac{1}{m} \sum_{i=1}^m fa_i, \quad \text{where}$$

fa_i : denotes the i -th group indicator ($i=1, \dots, m$)

f_i : denotes the complex index

m : is the number of group indicators, and before averaging all raw indicators are normalized to the $[0,100]$ interval by the linear transformation $y_i = 100(x_i - x_{\min})/(x_{\max} - x_{\min})$.

As a result of test calculations the most important changes were as follows. By applying the new complex indicator the districts of Devecser (183/146)³, Mezőcsát (182/159) and Derecske (178/151), positioned in the close proximity of the most disadvantaged group in need of development by a complex programme, significantly improved their ranking and were eliminated from this group. On the other hand, the districts of Sátoraljaújhely (105/174) and Sárospatak (121/164) were significantly backsliding and thus became members of the most disadvantaged group.

Examining the upper part of the *group in need of development*, the districts of Kiskunmajsa (146/114), Kunszentmiklós (147/123), Füzesabony (152/118), Kistelek (157/106), Enying (159/139) and Tab (161/134) have received a significantly better ranking in the new classification system and thus were eliminated from the group in need of development. At the same time the districts of Rétság (118/148), Balmazújváros (131/153), Tiszafüred (133/154), Kisvárdá (134/157) and Hajdúhadháza (139/162) received much worse evaluation and consequently would become members of the group in need of development.

As regards the districts positioned near the *beneficiary* thresholds, the new calculation with a big difference promoted them into a better position and thus excluded the districts of Bóly (116/68), Hajdúböszörmény (98/73), Jászberény (92/66) and Hajdúszoboszló (91/74) from the beneficiary group. On the other hand, the new indicator ranked much more disadvantageous, and thus put into the circle of beneficiaries the districts of Komló (87/132), Bonyhád (77/108), Nagykanizsa (74/90), Zirc (72/101), Kapuvár (71/92), Tapolca (67/96), Várpalota (65/93) and Ajka (51/80).

What settlements and districts are really interested in, is of course not the name or the result of their statistical delimitation. For them the most important aspect is the accessibility of development resources. The solution is also known from Community legislation that regions that are more developed at European level are eligible for smaller amount of resources and the

³ The two numbers in parentheses refer to the official and the newly calculated ranks of the 198 items, respectively.

intensity of their subsidization is also lower. Hungary – based on its beneficiary delimitation results – added further legal requirements to the territory-based regulations:

- the basic eligibility criteria for certain grants (tenders) is that their application should be submitted from the territory of the beneficiary district;
- the intensities of subsidisation can be differentiated according to the ranking, which may be up to 75%, 85%, 95% or 100% for non-market actors.
- in the case of the LEADER programme, of the organizations organized for one or two districts those seared in beneficiary districts had a larger source of funds;

For local governments, entrepreneurs, but even for the whole population it does really matter, how such a beneficiary status resulting from territorial delimitation progresses and changes during time.

THE BENEFICIARY STATUS IN THE "CAPTURE OF STATISTICS"

Despite the best intention of legislators, the fact that statistics are only a tool that can bring us closer to the goal of characterizing the development of the different territorial units in some way, in pursuit of objectivity, should not be ignored. We must be aware of the constraints of statistics (the reality content, the accessibility of baseline data, distortions caused by calculations, etc.). Statistics alone are not always and not fully able to determine the level of development or of disadvantageous situation. As it has already been said a quarter of a century ago, "... by the 'skilful' choice of methods, for example, by virtue of the same phenomenon, it can be 'demonstrated' that territorial inequalities (differentiation) increase, but also that they decrease (levelling)" (Nemes, 1990, p. 133). Similar sceptical statements can be found in many publications, even in their titles, e.g. in Huff (1954) "How to Lie with Statistics?" and in Deakin et al. (2002) "The Centroid? Where would you like it to be?"

Due to the problems of the basics of the statistical calculations currently applied, it is possible to formulate a requirement to be stated in the resolution of the parliamentary decision that it is necessary to undertake preliminary studies based on empirical tests and methods of other disciplines prior to statistical measurements. In fact, this is not significantly different from the baseline and evaluation activities related to the EU programming period and each operational program, which are called ex-ante, mid-term and possibly ex-post evaluations. These basic and assessment studies – in the form of reality or validity tests – may be able to confront calculation based statistical data with experiential facts.

It can be defined as a basic requirement – at the level of a not yet passed parliamentary decision – that *the developmental classification based on statistical calculations and non-statistical methods should not conflict with each other*. The formulation of a system based on statistical data and models and on empirical, non-statistical methods can be defined as a need that would be desirable in the near future – for preparing for the post-2020 period – with broad professional co-operation and consensus. There is no doubt that statistical methods can have a relatively long history and offer a fairly wide range of solutions in territorial delimitation. At the same time, the validation of statistical results, or the foundation of statistical calculations, is a missing element that is definitely needed to consolidate or to regain the confidence of development actors.

CONCLUSION

The principles that have always been the framework for delimiting the beneficiary regions should be preserved, but at the same time, their expansion seems to be reasonable by elements that ensure the independence of the indicators used and that statistical calculations cannot lead to a situation that is clearly contradictory.

The simplification of the range of indicators used in the delimitation and of the data used (the reduction of their number) is in any case reasonable because it can contribute to objectivity and to reducing the possibility of manipulation. The long-term comparability ensuring the efficiency and measurability of interventions can only become reality if the data used do not differ from each other.

As long as there exists a support system at national level but not for all settlements in the country (e.g. Rural Development Programme), – to avoid unfair and unrealistic situations – the classification of development should be done in these areas as well.

At European level, in addition to the GDP-based and regional-scale delimitation methodology, it would be particularly important to institutionalize the territorial delimitation system focusing on smaller territorial units (LAU 1) and multiple indicators, in order to trace real territorial processes. It is only small territorial units that can be suitable for evaluating socio-economic changes in rural areas.

The efficiency of development policy interventions can only be achieved by territorial delimitation capable of creating territorial focus and concentration matching with the goals. The necessity of testing delimitation methods for this purpose during the programming period should be included in legal regulation as well.

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TACKLING THE MEASUREMENT OF CROSS-BORDER COOPERATION INTENSITY: AN EMPIRICAL EXAMPLE ON THE HUNGARY-CROATIA BORDER

Zoltán PÁMER^a

^aCentre for Economic and Regional Studies, Institute for Regional Studies, H-7621 Pécs, Papnövelde u. 22., pamer.zoltan@krtk.hu

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Abstract

Although cross-border cooperation has traditionally been treated as a research issue of geopolitics and governance, use of data from European Union (EU) funded Interreg programmes opened up opportunities for comparative and in-depth analysis. The importance of Interreg programmes, as instruments of the European Territorial Cooperation goal, has been constantly on the rise since its inception as INTERREG Community Initiative, then becoming part of the cohesion policy mainstream in 2007. In the 2021–2027 programming period, for first time since its setup, Interreg has received lower funding, which requires a higher stress on cooperation and thematic concentration. When defining funding priorities of programmes, besides “general” factors (development needs, stakeholders’ preferences, regulation constraints), the cross-border factor – i.e. how projects contribute to cooperation as such – should be also taken into consideration. Therefore, allocation should prefer thematic areas (priorities) where cooperation is likely to be more intensive. Intensity of cooperation, as a composite indicator, may be generated from various parameters that may be measured in case of implemented projects, on the basis of Interreg programme data.

The paper aims to provide a simple yet transparent methodology on how the intensity of cross-border cooperation may be measured and how different thematic areas may be ranked in terms of their contribution to cooperation. The first part of the study presents an overview of ‘border studies’ from different aspects and the selected target area concerned. It is followed by a summary of the evolution of European Territorial Cooperation, highlighting the main milestones and particularities of the regulation for the 2021–2027 programming period. The following part lays down the applied methodology: composition of cross-border cooperation intensity indicator and the five sub-indicators. The results are presented through the example of projects financed by the Interreg V-A Hungary-Croatia Cooperation Programme 2014–2020. The final part of the paper summarises the lessons learned and their replicability.

Keywords: cohesion policy, cross-border cooperation, cooperation intensity, Hungary, Croatia.

INTRODUCTION OF THE PROBLEM AND THE TARGET AREA

The interpretation of the nature and possible forms of cross-border cooperation has been investigated from several aspects by various scholars. A significant part of the research output focuses on theoretical, conceptual background (Nemes Nagy, 1998; Kolossov, 2015), as well as the geopolitical context (Martinez, 1994; Scott, 2015). Alongside the accelerating European

integration process and the establishment of cross-border institutions governance and public policy issues have also been investigated (Perkmann, 2003; Scott-Liikanen, 2010 etc.). The added value of cross-border cooperation in the case of urban areas has been examined by the Metroborder project (ESPON, 2010), while Uszkai (2015) defined the influencing factors of cross-border integration.

The Hungary-Croatia border – which will be used for the presentation of the method –, as presented by Bali (2012), may be defined as an *independent* border region according to the categorisation of Martinez (1994), however – as Pámer (2019a) noted – there are also remnants of the co-existing past, but also some signs of integration, in particular in areas of some gateway towns. On the other hand, according to Rácz (2019), the Hungary-Croatia border area lacks significant cities and cities with advanced producer service (Döbrönte, 2018). This situation is aggravated by the fact that despite being an internal EU-border, Croatia's Schengen accession has not taken place yet. On the other hand, according to another scholar, the border area's main city, Pécs, by Hungarian standards was found relatively active in various forms of cross-border governance (Fekete, 2020). For the Hungary-Croatia border area, in terms of methodology, geopolitical considerations have been combined with Interreg-data based analysis on cooperation partnerships by Rácz (2017), and a comparative analysis of various levels of territorial governance in a wider territorial coverage has also been performed, also based on Interreg programme data by Pámer (2019b).

In order to further elaborate the practical approach and conceptualise priority setting and decision-making in cross-border cooperation policies, the paper attempts to present a simply applicable methodological tool for the measurement of cooperation intensity in various thematic areas. The main hypothesis of the paper is that dimensions of cooperation may be defined on the basis of cross-border cooperation data, and a composite indicator may also be developed. The method will be tested through the data available for the Interreg V-A Hungary-Croatia Cooperation Programme financed by the EU in the 2014–2020 programming period.

THE EVOLUTION OF INTERREG AND CROSS-BORDER COOPERATION

Border areas are usually considered as peripheral regions isolated from their hinterlands and lagging behind in terms of economic and social development. Europe, with its fragmented structure of nation-states implies that most of Europe's regions are border regions. The European integration process, from its very beginning, triggered the border issue: integration of the European national economies in line with their comparative advantages. The role of

border regions has even been strengthened after the accession of new member states to the EU in 2004 when countries of below-average size and land-locked position have become members.

European cohesion policy from its inception in 1975 has put a clear stress on the catching-up of the regions lagging behind. In 1984 the tool of Community Initiatives was introduced, more specifically, the INTERREG Community Initiative launched in 1998 targeting border regions (Harguindéguy & Bray, 2009). In the first programming period (1990–1993) preference was dominantly on border areas of the Objective 1 cohesion regions (AEBR, 1997). The Maastricht Treaty was an important milestone in the establishment of the legal background of cross-border cooperation, through the promotion of the subsidiarity principle, enabling that designation of development programmes – including cross-border ones – in line with locally defined objectives. The INTERREG II initiative (1994–1999) set up the pillar system of INTERREG, separating cross-border cooperation from wider, transnational cooperation schemes. The pillar system has been more fine-tuned in the 2000–2006 programming period, where cross-border cooperation (pillar A), transnational cooperation (pillar B) and interregional cooperation (pillar C) were distinguished (INTERACT, 2015). In this period the role of the subnational level has been strengthened (Harguindéguy & Bray, 2009): the representatives of border regions have been more operationally involved in programming, project selection and monitoring. In this programming period the 2004 accession new member states were already able to participate, albeit in a limited timeframe and obtaining somewhat limited financing. Since 2007 the European Territorial Cooperation (ETC) has been declared as ‘Objective 3’ of Cohesion Policy, cross-border cooperation – instead of Community Initiative – has become a part of the EU structural policy’s mainstream (Pámer, 2011).

Cross-border cooperation has been an important tool in the Europeanisation of peripheries (Scott & Liikanen, 2010) already prior to the 2004 accession. Interreg Neighbourhood Programmes played a key role along Eastern borders of the EU, as has been revealed by several scholars (see Dołzbłasz, 2018) for Poland-Russia along the Eastern border and Nagy (2020) for the Southern border with Serbia. Euroregions established in the peripheries of the EU (Perkmann, 2007) were a tool practicing multi-level governance, the exchange of practices and the reduction of regional disparities (Popescu, 2008). As highlighted by Scott (2013), cross-border cooperation, in general, is considered as a special tool of the transmission of European values, a part of the progressive identity of the EU, however it might be criticised as cooperation is interest-driven and substitutes other funding sources (Scott, 2013). In the target area of the paper several scholars highlighted the added value of cross-border cooperation programmes,

including Lados (2005) for Austria-Hungary, Csapó et al. (2015) for Hungary-Croatia or Zimmermann, Kubik (2003) for Slovenia-Austria.

EUROPEAN TERRITORIAL COOPERATION AT PRESENT

The funding of Interreg, and hence cross-border cooperation has been on a permanent rise since its very beginning (Table 1). Although Interreg is acknowledged as a distinctive tool of strengthening European integration, and it is important to maintain, two important changes in the approach may be detected. The first is a shift in its focus. The dilemma whether cross-border cooperation should resolve cohesion problems of generally undeveloped border regions through the provision of more funding; or rather stimulate the elimination of various obstacles, thus enhancing the efficiency of cooperation between various actors, seems to be resolved. According to a communication of the European Commission “Interreg is a policy tool to improve the situation and not a mere funding tool for the benefit of local authorities” (Interact, 2019; 10). Accordingly, funding for cross-border cooperation – for the first time since its inception – has been somewhat decreased (Table 1), putting bigger weight on transnational cooperation in line with macroregional strategies, rather than financing projects of bi- or trilateral cross-border programmes.

Table 1 The evolution of Interreg funding

Programming period	No. of member states	Total funding (million EUR)
1990–1993	11	4 875
1994–1999	11,15	3 600
2000–2006	15,25	4 875
2007–2013	27,28	8 700
2014–2020	28	8 900
2021–2027	27	8 050

Source: own edition based on INTERACT (2015; 8) and EC (2021a; 89).

Apart from limited funding the new period brings several further novelties that should be reflected in the new programme. Limited funding requires more accurate thematic concentration. In the new regulation of the European Regional Development Fund and the Cohesion Fund the previously applied 11 thematic objectives have been regrouped into five thematic objectives (PO1 – smart, PO2 – green, PO3 – connected, PO4 – social, PO5 – closer to citizens – EC, 2021b). Besides, the new Interreg regulation has introduced the so-called

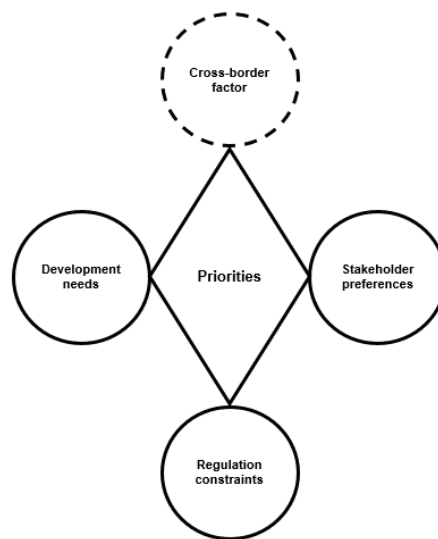
Interreg-specific objectives ('better cooperation governance' and 'a safer and more secure Europe' – EC, 2021c). According to the latest agreed draft, regulations application of PO2 ('a greener low-carbon...') and PO4 ('a more social Europe...') shall be compulsory in each new cross-border programme, further POs may be selected upon availability of funding. However, inside the individual POs there are several specific objectives that may cover a very wide array of activities. The introduction of the approach of functional areas makes territorial allocation of funding more flexible, focusing rather on the impacts of the project on the border area than on the origin of individual beneficiaries. This may enable the more intensive involvement of centrally organised state bodies that located outside the border areas, and also academic institutions carrying out research in the border areas but registered outside their borders.

The allocation of funding between member states has been calculated on the basis of the population living in the NUTS 3 target areas – similarly to previous programmes – however in the 2021–2027 period the calculation method has been changed, as the population living in the 25 km strip of the border has received a greater weight. Therefore, in particular countries with low population density that tend to have even less densely populated border areas, have to face a significant cut in the available funding.

The selection of priorities during the programming phase usually takes place within the triangle of local development needs, stakeholders' preference and regulation constraints (Figure 1). In the programming process development needs should be defined through a detailed and focused situation analysis, which is an important tool to justify the priority choices. Stakeholders' preferences may be channelled through various tools, e.g. open questionnaire surveys, interviews with selected key stakeholders, workshops organised either on territorial or thematic bases. Regulation constraints may vary, depending on European legislation, strategies, policy guidelines, etc. The relationship between the three corners of this triangle depends on the governance approach of the involved countries: their weight may be different even in the single partner countries, which may generate a complicated puzzle to solve.

Cross-border development programmes differ from "mainstream" programmes, as they need to comply with the cross-border factor as well. On one hand, it should be justified that cooperation is possible in the selected priority areas; but the added value of cooperation in the selected priority areas must also be proved. Thus, in order to make proper strategic choices, through taking into consideration the cross-border factor, intensity of cooperation should be somehow tackled: in case of certain development areas or types of projects.

Figure 1 The triangle of priority selection in programming phase



Source: Own edition.

TACKLING COOPERATION INTENSITY: METHODOLOGY AND DATA

The aim of the presented empirical research is to demonstrate how intensity of cooperation may be measured in various thematic areas on a sample of cross-border projects. The analysis has been carried out on the sample of projects contracted and implemented in the Interreg V-A Hungary-Croatia Cooperation Programme 2014–2020. The database has been made available by the Joint Secretariat of the programme, for helping the programming process for the 2021–2027 period, where the author, as a key expert has been part of the programming team of Logframe Consulting Office in Hungary.

For the sake of the analysis projects had to be grouped into different categories, according to thematic areas. As a very segmented thematic grouping of the financed projects would generate a high number of categories with a small number of projects in each category, the analysis has been carried out on the basis of the components financed in the programme. These were the following:

- Tourism infrastructure projects that were further broken down to *a)* cycling infrastructure projects, *b)* other tourism attractions and *c)* thematic routes, which include projects with more sporadic cooperation with smaller budget;
- Nature protection projects aiming at the restoration of ecological diversity;
- SME development projects;
- Cooperation projects for high education institutions;

- Other educational projects (pre-school, primary, secondary and vocational);
- Other various thematic cooperation projects;
- People-to-people cooperation projects.

The investigated cooperation programme, through altogether two “general” calls (multi-thematic for non-profit organisations) financed altogether 105 projects, which have been analysed on basis of the data included in the submitted project proposals. Besides the non-profit projects the altogether 20 selected SME projects (“B Light scheme”) were also analysed, along the same criteria. The database included 125 projects. The so-called strategic projects, which were not selected through open calls but on basis of Monitoring Committee decision in some particular thematic areas, were excluded from the analysis.

Measurement of cooperation intensity has been done through the generation of five parameters measured on a simple scale of 0–2; 0 being the weakest in the category, 1 representing a medium or average intensity of that category, and 2 the highest and most intensive cooperation.

- Physical proximity to the border: how are project partners concentrated in the border area? We assume a more proximate location to the border implies more intensive cooperation and more added value for the border region in question.
- Joint activities: how intensive is the cooperation during project implementation? It is assumed that if more project activities are implemented by partners from each side of the border, the cooperation is more intensive.
- Organisational compatibility: how similar are the partner organisations to each other? It is assumed if cooperating partners are compatible in terms of competences and institutional setting, cooperation is more intensive and partnership may be easier to sustain after project closure.
- Financing balance: how similarly are partners’ budgets composed? It is assumed that a more equal distribution of funding between the two sides of the border means more balanced cooperation and effect on the border region.
- Investment orientation: how similarly are “hard” elements (equipment and works) distributed in the project budget? It is assumed that if composition of the budget is similar between the two sides in terms of investment orientation, interest in a successful project is also similar on the two sides.

The five parameters and the corresponding values are described in detail in Table 2.

Table 2 Composition of cross-border cooperation intensity indicator

Parameter	Measurement	Score
Physical proximity to the border	Distance of partners from the border	0–2
	Close distance (equal or less than 25 km) from border in case of all partners	2
	Medium distance (more than 25 km but less or equal to 40 km) from border in case of any partner	1
	Large distance (more than 40 km) from border in case of any partner	0
Joint activities	Out of the listed project activities, apart from the two compulsory activities (Activity 1: management and coordination; Activity 2: promotion and communication) how many of them are implemented jointly (including at least one partner from Hungary and Croatia)	0–2
	At least 75% of the activities are implemented jointly	2
	Jointly implemented activities at least 50% but less than 75%	1
	Jointly implemented activities below 50%	0
Organisational compatibility	Differences in the types of beneficiaries on the two sides of the border	0–2
	The same types of beneficiaries are represented on each side of the border (all partners belong to the same type or each type appears symmetrically)	2
	On both sides one type appears symmetrically, but further types are also included	1
	The project is implemented through incompatible types of partners on the two sides	0
Financing balance	Similarity in sizes of the project parts on the two sides of the border	0–2
	Share of funding between the two sides 60–40 or more equal	2
	Share of funding between the two sides between 60–40 and 2/3–1/3	1
	Share of funding between the two sides 2/3–1/3 or more	0
Investment orientation	Deviation in the share of investment-related budget lines (costs of thematically relevant equipment and works) compared to the total budget, on the two sides of the border	0–2
	Share of investment-related costs within partners' budget differs with less than 10 percentage-points	2
	Share of investment-related costs differs with 10 to 20 percentage-points	1
	Share of investment-related costs differs with more than 20 percentage-points	0
Total		10

Source: own compilation.

For the definition of organisational compatibility project partners have been grouped into the following categories:

- Public institutions on local level (local governments and their public bodies);
- Public institutions on regional level (local governments and their public bodies);
- Public institutions on national level (governmental bodies);

- Research institutions established by public bodies, dealing with research, development and innovation;
- Universities or other public high education institutions;
- Other education and training institutions, including public pre-school, primary, secondary education and adult education institutions;
- NGOs: non-profit civil organisations (association, foundation) established by non-public actors;
- Private non-profit company: non-profit making companies established by non-public bodies;
- SMEs: private for-profit companies that were eligible for the SME scheme.

In case of the single project categories various application constraints were applied that may affect the scoring of the single projects:

- In case of tourism infrastructure projects partners with investment (in types *a*) and *b*)) should come from the 40 km strip of the border. This results, by default, in overall higher scores in case of these two sub-categories for physical proximity.
- In case of SME development projects applicants could be only SMEs, therefore here organisational similarity is scored obviously as 2.
- In case of education-related projects application was not limited to education institutions, thus scoring rather varies in these categories.

PRESENTATION OF THE RESULTS

Calculation of the composite cross-border cooperation intensity indicator is based on five sub-indicators. Sub-indicators are generated as arithmetic averages of the parameter values given for the projects under the selected thematic area, in the range of 0–2. The composite indicator is the sum of the five sub-indicators, in the range of 0–10 (Table 3).

In terms of physical proximity, as expected, tourism infrastructure projects have been given the highest scores, however nature protection projects have also received rather high scores. This is due to the fact that nature conservation projects rather focused on the protected areas that are dominantly in the direct vicinity of the border (the Mura, Drava and Danube rivers). Surprisingly, SME cooperation projects – where such concentration was not expected – are also significantly concentrated in the close border area. The least physical concentration is seen in the case of education projects. This is caused by the fact that higher education institutions are often located outside the 25 km strip from the border.

Table 3 Values of the sub-indicators and the cross-border cooperation intensity indicator in case of single project types

Project categories (thematic areas)	Sub-indicators					Cross-border cooperation intensity
	Physical proximity to the border	Joint activities	Organisational compatibility	Financing balance	Investment orientation	
Tourism infrastructure a) cycling infrastructure	1.83	0.83	1.50	1.50	2.00	7.67
Tourism infrastructure b) other tourism attraction	1.56	1.00	0.81	1.25	1.56	6.19
Tourism infrastructure c) Thematic routes	0.92	1.25	1.42	1.25	1.92	6.75
Nature protection	1.29	1.43	1.57	0.86	1.43	6.57
SME development	1.20	1.65	2.00	1.30	1.65	7.80
Cooperation of high education institutions	0.83	1.67	1.67	1.33	1.67	7.17
Other educational cooperation (pre-school, primary, secondary and vocational)	0.88	1.36	1.16	1.52	1.72	6.64
Other various thematic cooperation	0.74	1.79	1.21	1.74	1.84	7.32
People-to-people cooperation	1.14	1.86	1.14	1.64	1.43	7.21

Source: own edition.

In terms of the joint implementation of activities – unlike in the case of physical proximity – tourism development projects have performed rather poorly, as in these projects different partners carry out different, usually infrastructure-focused activities that often lack direct cooperation. In this parameter soft cooperation projects performed significantly better. Surprisingly high scores were given to SME cooperation projects proving that SMEs are more interconnected in such projects than tourism development actors.

For organisational compatibility, obviously, SME development projects have been rated the highest, as only SMEs were allowed to apply. Logically, higher education projects have been rated relatively high, just like nature protection projects that concentrated designated public bodies for nature conservation that were sometimes teamed up with NGOs or local governments. The lowest level of compatibility was detected in the case of major tourism (not cycling) infrastructure development projects.

In terms of financing balance, small-scale cooperation projects (thematic and people-to-people cooperation) proved to be the most budget-balanced. On the other hand, nature conservation projects generated a rather unbalanced distribution of funding.

Concerning investment-orientation, cycling infrastructure projects were obviously the most investment-oriented, however smaller scale tourism cooperation projects have shown higher (1.92) spending on supplies and works than the component (b) directly dedicated to major investment projects (1.56). Surprisingly, small thematic cooperation projects proved to be the most investment-oriented. This implies that allowing supply and works spending in soft projects may generate heavily investment-oriented budgets. This may justify the thesis of Scott (2013) that cross-border cooperation is often interest-driven and investment-driven, in order to substitute other funding sources. This issue was also investigated by Pámer (2019a), in order to identify the major investors in cross-border cooperation. The lowest level of investment-orientation is detected, also surprisingly, in case of nature protection projects, where soft elements (such as awareness raising) represented a significant share in the budget.

Concerning the composite indicator, highest values of cooperation intensity have been detected in the case of SME cooperation projects (7.80) and cycling infrastructure projects (7.67). In both of these two categories there are factors that produced outstanding parameter values. In case of cycling infrastructure, development of physical proximity and heavy investment-orientation; in case of SME projects organisational homogeneity and the interconnectivity of activities are worth stressing. The lowest cooperation intensity value has been produced by the “other” tourism attraction development projects that were really a “mixed bag”, with a high level of organisational heterogeneity and lack of connectivity in project activities. Further weaker performing project categories were the “other educational” projects that attracted the most various types of beneficiaries located dispersely in the programme area.

As a conclusion, dimensions of cross-border cooperation and the cross-border cooperation intensity indicator is possible to define with the help of Interreg data. The analysis shows significant differences in the case of the various thematic areas, that are partly caused by particularities of the border area (territorial features, institutional background) and the programme itself the data is taken from (programme rules and funding conditions). Therefore, although the methodology is easily replicable, the results must be interpreted in the context of the programme concerned, as they significantly influence the results.

LESSONS LEARNED AND REPLICABILITY

As the provided methodology is very simple, it provides an easy-to-use template for the measurement of cooperation intensity, which is an important aspect when deciding to which policy areas or project types should be preferred that may best satisfy the cross-border factor,

i.e. provide the biggest benefit from a cooperation point of view. This tool also provides enables the quantification of cooperation as such, which may be used in evaluation and assessment exercises.

The outcome of the analysis, through this one example, shows that thematic concentration does have an added value. Tourism projects are often criticised as serving rather local needs and the activities of partners lack real coherence, the analysis has proven that the introduction of thematic concentration, along with territorial concentration – as was applied in case of cycling tourism projects – may generate higher cooperation intensity. Also, SME development has been for a long time “overlooked” as an odd element in cross-border cooperation, which should not support private interest, but rather serve the public good through non-profit organisations. The analysis has shown that surprisingly SME cooperation generates a high level of intensity, as SMEs were bound together to work on the development of the same product or service, in a rather symmetric cooperation manner. Also, the presented results may underpin or refute certain statements about the effectiveness and efficiency of publicly funded development policies, particularly those concerning direct SME subsidies and infrastructure. Thus, cross-border cooperation is a rather specific element of cohesion policy, where subsidies to certain thematic areas may be effective from a cooperation intensity point of view, while questionable from an economic impact point of view.

Even if the outcome of the analysis should be understood in the context of the investigated programme, the sensitivity of the method may prove the efficiency of certain conditions set by the programme. As the method is replicable, it would have an added value to perform it on a larger project database, including several border regions of a microregion (Central Europe), or for the same border area, overviewing projects of more than one programming period.

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