Volume 16 Issue 3 2024

DETUROPE

Central European Journal of Regional Development and Tourism

Czech Republic ◆ Hungary ◆ Serbia

DETUROPE

THE CENTRAL EUROPEAN JOURNAL OF REGIONAL DEVELOPMENT AND TOURISM

Volume 16, Issue 3

2024

DETUROPE – the Central European Journal of Regional Development and Tourism is an international online open-access scientific journal publishing results of theoretical and applied research in the fields of regional and rural development and tourism. The articles published in this journal pass through a double-blinded peer reviewing process.

DETUROPE is covered by Web of Science Emerging Sources Citation Index and indexed in the Scopus, ERIH plus, DOAJ (Directory of Open Access Journals), MTMT (The Hungarian National Scientific Bibliography), and the KoBSON (Serbian Consortium for Coordinated Acquisition of Electronic Resources) databases.

Published by the Regional Science Association of Subotica, Serbia in co-operation with the University of South Bohemia, Faculty of Economics and University of Pannonia, Georgikon Faculty, Kesthely, Hungary.
Address of the contact information: DETUROPE. Regionális Tudományi Társaság Szabadka/Društvo za Regionalne Nauke, Corvin Mátyás/Matije Korvina 9. 24000 Szabadka/Subotica, Serbia, deturope@gmail.com
ISSN 1821-2506

TABLE OF CONTENTS

EDITORIAL: Central Europe and the Balkans – urban, regional and border issues

Dear Reader,

Welcome to the thematic issue of the international journal DETUROPE. Our publication provides a selection of papers in connection with the 21st Annual Meeting of the Hungarian Regional Science Association (HRSA).

Our thematic issue gives a brief overview of the urban, regional and border studies focusing on this European macro-region, in the contact zone of Central Europe and the Balkans.

The annual conference of the HRSA occurred in Pécs on 2 and 3 November 2023. The event's main topic was the research on the Carpathian-Balkan region. The Faculty of Business and Economics at the University of Pécs served as a co-organiser of the event. The conference included three plenary sessions, one roundtable session, and 34 parallel sessions. The participants gave altogether 220 presentations in 29 thematic sessions over the two days. One plenary and three parallel sessions were English-speaking ones. The number of participants (270 attendees) proved to be a record.

In some disciplines and research topics, Pécs is a centre in the country, such as regional science, the Carpathian Basin and the Balkans. Therefore, the main theme of the meeting was the Carpath-Balkan region, which represents an important link between the Institute of Regional Studies (IRS) and several faculties and departments of the University of Pécs.

The annual meeting also served as a celebration event for several anniversaries. The Hungarian Royal Elisabeth University (the antecedent of the current University of Pécs) started its activities in Pécs 100 years ago. The Transdanubian Research Institute (now HUN-REN CERS IRS Transdanubian Research Department in Pécs), the oldest continuously operating social science research institute in Hungary outside Budapest, celebrated the 80th anniversary of its foundation. The first annual meeting of HRSA was held in Pécs 20 years ago. The first issue of the Balkan Bulletin (published by the University of Pécs) was published 20 years ago. The first book (Szeklerland) of the Regions of the Carpathian Basin Monograph Series (15 volumes, published by the HUN-REN CERS IRS) was published in 2003.

The plenary speakers of the meeting were Andrés Rodríguez-Pose (London School of Economics) and Bolesław Domański (Jagiellonian University), as well as László Faragó (HUN-REN CERS), Réka Horeczki (HUN-REN CERS), Norbert Pap (University of Pécs), János Pénzes (University of Debrecen), Szilárd Rácz (HRSA), László Szerb (University of Pécs), Ferenc Szilágyi (Partium Chrisitan University), and Zsófia Vas (University of Szeged).

During the opening ceremony, welcome speeches were given by György Kosztolányi, vice-president of the Hungarian Academy of Sciences and Attila Miseta, the rector of the University of Pécs, respectively.

After the usual double-blind proofreading process, eight original manuscripts have made it to publication in the framework of the present issue. We would like to thank all the authors who submitted high-quality manuscripts and the reviewers, who completed their tasks on time. The Hungarian Regional Science Association represented by the editors hereby express their gratitude to the Editorial Board of the journal DETUROPE and especially its Editor-in-chief, Dr. Kamil Pícha.

The first group of studies examines the development of Pécs, the Pécs region and the neighbouring Croatian and Serbian regions. These studies were written mainly by Pécs colleagues from the University of Pécs, Institute of Geography and Earth Sciences (Faculty of Sciences), Institute of Education (Faculty of Humanities), Institute of Marketing and Tourism (Faculty of Business and Economics), as well as the academic research institute (HUN-REN CERS IRS) and Logframe Consulting Office (leading regional programming and project development company in South Transdanubia).

The paper of Norbert Pap and Marianna Ács presents the changes in the role of Pécs in higher-level education, and later in higher education, over a vast period of 1000 years, in terms of when and how it impacted and affected the Balkans. Pécs is an important cultural centre in Hungary, which carries in its spiritual and intellectual heritage the aspirations of about a millennium. As one of the regional centres of the southern border region of Central Europe, the city has a southern character, a rich cultural heritage and traditionally in its cultural heritage and functions cultural-educational activities with southern Slavic peoples (Croats, Serbs, Bosniaks) play a role.

Tourism is one of the main foci of Deturope. The second paper by Ádám Gyurkó and Tibor Gonda examines the tourism situation and performance of the Pécs-Villány tourism area between 2018 and 2023. The specificity of this area is due to the importance of cultural and wine tourism, active and eco-tourism and the significance of health tourism. The region has the mild Mediterranean atmosphere of Pécs and the charm of Villány with its wineries, while a wide range of attractions and cultural events can ensure that visitors have a rich and varied experience. According to the research, the destination is dominated by domestic tourism with a low number of foreign visitors and the region is not able to take advantage of its border location, with a significant gap still visible compared to 2019.

The Autonomous Province of Vojvodina is one of the most frequently studied regions in Deturope. The reason is that they have many ties to the region: the founding editor-in-chief, a quarter of the editorial board, a sixth of the authors of articles and the co-publisher (Regional Science Association in Subotica which also functions as the Vojvodina regional section of HRSA) are from Vojvodina. Dávid Moró and Péter Reményi analyse the ethnic diversity changes of Vojvodina in the Post-Yugoslav period. Vojvodina is situated in the southern part of the Pannonian Plain. It has developed into one of Europe's most ethnically diverse regions since the 17th century. The ethnic composition of Vojvodina has changed significantly since the last census conducted during the Yugoslav era. The proportions of ethnic minorities have been reduced, and their spatial distribution has also shifted. In the initial phase of the 30-year period under review, processes of homogenization played a crucial role in shaping the region's ethnic landscape. Over the following two decades, more municipalities underwent changes leading to increased diversity, even as the overall proportions of ethnic minorities continued to decline.

In recent years, border studies has also become a major focus of the thematic issues. The analyses mainly targeted border regions in Central, Eastern and Southeast Europe. The second group of papers deal with this topic, focusing on the theory and practice of cross-border cooperation, the economic and demographic dynamics of border regions. The study of Zoltán Pámer, Petra Buttinger and György Márton examines the evolution of SME development in EU cross-border cooperation through the example of direct funding in the framework of the Hungary-Croatia Interreg programme. This article is closely linked to the first group of studies due to the proximity of Pécs to the Croatian border region. The main finding of the paper is that, due to the logic of the funding scheme, innovation was easier to present in the case of more "materialised" sectors, such as wood processing, manufacturing and machine production, leading to higher success rates than in the case of the service sector where cooperation between partners was less obvious. Even if the majority of projects only promoted market entrance instead of innovation, rural areas have shown a higher success rate, demonstrating a relatively balanced spatial structure.

The next article looks at a larger geographical region, which is the main geographical focus of Deturope: Central Europe. Gábor Lados, Dávid Nagy and Réka Horeczki analyse the main characteristics of economic and population dynamics in border regions in Central Europe. Changes of regimes, and later EU accession have activated and deepened horizontal cross-border interactions within and outside the region, often in order to access EU funds. The study identifies areas with population trends that are unfavourable, on NUTS 3 territorial level. The

macro-region under study has a very diverse administrative structure, with a network of settlements of different sizes and functions, the nodes of which are generally urban settlements with a larger population and a dominant position in the socio–economic–regional division of labour. The study shows that border regions have a very diverse demographic profile, which can differ depending on the type of border. Different dynamics can be observed in the Eastern and Southern regions, which are also the external borders of the European Union, in the border regions of the new Member States that joined the EU in 2004 and the old Member States, as well as in the border regions of the old Member States.

The next paper in this group of studies authored by József Fogarasi (Partium Territorial Research Institute of the Partium Christian University in Oradea which also functions as the Partium regional section of HRSA) provides a review of the literature on cross-border cooperation in Europe. The key findings of the study underscore the multifaceted nature of cross-border cooperation and its pivotal role in European regional policy. While CBC has facilitated significant progress in fostering integration, its effectiveness is often undermined by structural and institutional barriers. The author highlights the need for policies that move beyond funding-driven cooperation to establish genuinely collaborative frameworks grounded in shared regional objectives.

Spatial planning and urban development are important nodes in regional development studies in Deturope. The two final papers are written by the heads of the HRSA's key partners: the president of the Hungarian Society for Urban and Spatial Planning (Budapest), and the head of the Doctoral School of Regional and Economic Sciences at Széchenyi István University (Győr).

The paper of Géza Salamin contributes to the debate on the Europeanisation of spatial planning by attempting to identify the intellectual content of the EU-level orientation towards the transformation of spatial planning systems and practices of Member States. The outcome of the analysis of European spatial planning documents is mostly in line with the abundant and rather theoretical European planning literature on the dynamics of planning. The results suggest that the postmodern approach of planning since the 1990s, the governance transition and the new spaces emerging since the 2000s, as well as the resulting claims about the transformation of planning, are part of an interconnected logical chain, a narrative, so to speak, which is reinforced and sometimes generated by messages from the European Union. Spatial planning, embodied in new forms, is a postmodern approach to the new European paradigm that conveys the EU's spatial planning messages and reflects the challenges of globalisation. Accordingly, the role of planning as a driver of investments and a strategic

framework for resource allocation and investment is enhanced, and planning connects and integrates the public and private sectors. It increasingly creates a spatial dimension for national (sectoral) policies in the context of their spatial alignment and coordination.

The last original scientific paper provides an insight into smart city indicators and the conceptual problems of measuring smart cities. Tamás Dusek focuses on the uncertainties of smart city indicators, which are often used to form composite indicators that moreover form the basis for comparisons of the smartness of cities. The transformation of a multi-indicator system into a one-dimensional metric scale is a highly questionable practice. Composite indicators, despite their popularity, are methodologically and conceptually highly problematic analytical tools for researchers and normative targets for policy makers.

The last paper in the special issue is a conference report by Zsuzsanna Zsibók and Réka Horeczki of the 40th anniversary of the Institute for Regional Studies (originally the Centre for Regional Studies of the Hungarian Academy of Sciences). The IRS is the "birthplace" of the Hungarian Regional Science Association, the Pécs-based research network – more specifically, the Transdanubian Research Department – provides the headquarters (seat) for the HRSA. The anniversary conference was both retrospective and forward-looking, but with a greater emphasis on a strategic approach. The diverse mix of invited guests reflected the openness of the Institute to policy-makers at national and even EU level, as well as to the national and international research community, including those from the Carpathian Basin.

The 10th thematic issue thus reflected on a number of anniversaries, which framed the selected writings.

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

Ildikó Egyed[1] and Szilárd Rácz[2]
Editors of the thematic issue

[1] Research Fellow of the HUN-REN CERS Institute for Regional Studies in Pécs.
[2] Senior Research Fellow of the HUN-REN CERS Institute for Regional Studies in Pécs; Secretary General of the Hungarian Regional Science Association.

Original scientific paper

PÉCS AND THE BALKANS – HIGHER EDUCATION FUNCTIONS

Norbert PAP[a], Marianna ÁCS[b]

[a] Professor, University of Pécs, Faculty of Sciences, Institute of Geography and Earth Sciences, 7634 Pécs, Ifjúság útja 6., pnorbert@gamma.ttk.pte.hu; University of Pécs, Szentágothai Research Centre, Historical and Political Geograpahy Research Centrum, 7634 Pécs, Ifjúság útja 20., pap.norbert@pte.hu
[b] Assistant Professor, University of Pécs, Faculty of Humanities, Institute of Education, 7634 Pécs, Ifjúság útja 6., acs.marianna@pte.hu

Cite this article: Pap, N., Ács, M. (2024). Pécs and the Balkans - higher education functions. Deturope. 16(3), 9-35.

Abstract

Pécs is a Hungarian city in the country's south, close to the Croatian border. To define it as the gateway to the Balkans is an overstatement, but it has some potential. As a school town, it has the role of an intellectual gateway. In the Middle Ages, the (bishop's) city developed as a spiritual and intellectual bastion of Christianity on the southeastern periphery of the West. For centuries, the Church's missionary activity in Bosnia and Bulgaria gave a role to the Franciscan and Dominican monks who ran monasteries and schools in the city.
After the Ottoman-Turkish conquest, Pécs retained its multicultural and multiconfessional denominational school town character. In addition to the school system, which taught Muslim Sufism, there was also a Christian school. The dominant narrative of the intellectual centre was the expansion of Ottoman/Muslim rule in Central Europe.
Following the anti-Ottoman reconquest, it became a homogeneous Catholic fortress, which tended to develop unilateral relations only with the West. This also homogenised the school system (although Croatian language and culture were still studied through the Croatian school). As a result of 19th century industrialisation, civil transformation and imperial ambitions, as well as aspirations in the Balkans, its orientation gradually changed and partly turned southwards again.
For most of the 20th century, relations with the southern neighbour were characterised by hostile or distant relations. The social foundations of the southern Slavic relations system began to crumble as a result of emigration and assimilation, but the development of the school system was able to compensate for this to some extent. At the end of the 20th century, geopolitical changes reopened the possibility and the need for networking in the Balkans. The horizon is the same as it was at the beginning of the process in 1009: Slavonia, Bosnia and the Balkans beyond.

Keywords: Pécs, Balkans, school town, Christian, Muslim, madrasa, university

INTRODUCTION

This paper is an analysis of the changes in the role of Pécs in higher-level education, and later in higher education, over a vast period of 1000 years, in terms of when and how it impacted and affected the Balkans. It is not the aim of the authors to meticulously examine the historical sources, but rather to illustrate institutional changes and transformations and the underlying social, geopolitical processes and contexts.

Hungarian geography and historiography has dealt extensively with the characteristics of Hungary's relations with the Balkans (Cholnoky, 1917; Szabó, 1942; Hajdú, 2003; Sokcsevits,

2004; Glatz, 2007; Kitanics, 2013; Hajdú & Horeczki, 2023; Hajdú & Rácz, 2024). These works also explore transport connections, the economic role and the related connective roles of major Hungarian cities (Szeged, Pécs, Timișoara [Temesvár] Nagykanizsa, etc.) (Fodor, 1917a, 1917b; Varga, 1948; Illés, 2003; Erdősi, 2006). With regard to Pécs, the question of whether it could fulfil such a "southern gateway" role has already been raised several times (Hajdú, 2009; Pap, 2009; Pap et al., 2013).

Previous studies have mainly focused on the material, economic and transport links between Pécs and the Balkans. As these functions were not well developed in the region, the potential of a role as a "gateway" was considered instead. Zoltán Hajdú also suggested that Pécs is not a gateway, but rather a "bricked-up window", precisely because of the lack of convincing data (Hajdú, 2009). In this paper we have undertaken to review the processes of the non-material or intellectual dimension, throughout the last thousand years. Around the 650th anniversary of the founding of the university, disputes about its mission became particularly heated (Kuráth et al., 2021), which have also been published in international journals. What intellectual and educational role did the city play, that made it suitable to be a gateway to the Balkans? This is the research question we are addressing. In this paper, the authors attempt to chronicle the changes in the function of the school city from the Middle Ages onwards, to identify the main strategic directions and the local and national demands for shaping the functions.

As a direct precursor to this paper, we also refer to the strategy manifesto of the University of Pécs from 2023, which states that the university should play the role of a "geopolitical link" towards the Balkans region (PTE Strategy, 2023). This is based on the institution-building efforts of the previous decades and the intellectual potential developed in the city.

DATA AND METHODS

The nature of this topic is historical and geopolitical, and the study is largely based on a secondary analysis of secondary sources, complemented by primary data collection and analysis of contemporary school relationships. Considering the territorial scope, our study covers the city of Pécs and its southern (often claimed to be Balkan) contact areas, and the northern region of the Balkan Peninsula.

Due to the limitations of the journal and its geographical orientation, the exploration and analysis of primary historical sources could not be taken into consideration as a method for the study. As the volume of written sources from the last 1000 years is enormous, we have been unable to carry out the processing of primary sources. Thus, only a couple of primary

written sources of particular importance have been examined, such as Evliya Çelebi's record of his visit to Pécs in 1663 and the institutional strategy of the University of Pécs from 2023. We had the possibility to process secondary sources, and this also posed a great challenge in the studies, considering the fact that they are also very numerous and large in volume. (*Currently, the Hungarian Science Bibliography [MTMT] contains 3810 items selected for the search keyword "Balkans"* [Balkán]). Obviously, most of these are not related to this study topic, but nevertheless there are around 100 works to process from the publications of the last one and a half centuries. These belong to multiple groups.

Research papers about the period of the Hungarian conquest of the Carpathian Basin and the establishment of the state are relevant due to their considerations of the Hungarian foreign relations system concerning the Balkans (Kristó, 1985; Györffy, 1963, 1977). An extensive literature is available on the foundation of the University of Pécs in the medieval period (1367). These reflect on serious, unresolved controversies of several kinds: the circumstances and reasons for establishing the institution, its specific location, the type of education provided and how long the studium generale survived (Koller, 1784; Békefi, 1909; Csizmadia, 1965, 1967a, 1967b; Gabriel, 1969; Petrovich, 1971, 1972; Klaniczay, 1974; G. Sándor, 1998; Gerő, Gy., Fejérdy T., Kühlenthal, M., G. Sándor, M., 1999; Vones, 1998; Boda, 1999, 1992-1993; Petrovics, 2005; Rollo-Koster, 2015; Font, 2016; Fedeles, 2009, 2017; Schmelczer-Pohánka, 2017). Several papers cover Ottoman-era education, including the schools in Pécs (Karácson, 1904, Ágoston & Masters, 2008; Holovics, 1966; Vass & Szita, 1996; Fodor, 1999; Kéri, 1999; Varga, 2009; Sudár, 2010, 2012, 2020; Ács, 2022). The recent discovery of a dervish monastery between Pécs and Szigetvár and the works of one of its teachers is a significant added value in this case (Karic, 2020). This has given us a unique opportunity to gain insight into the life of such a school community. Studies on the period of the reconquest and Catholic revival accurately describe the school life of a purely Catholic town (Lengyel, 1967; Molnár, 2005; Nagy, 2010; Szögi, 2016b). The first Catholic Southern Slavic (Illyrian) school emerged in the city during this period (Filákovity, 1998; Franković, 2011). Modernisation and industrialisation in the 19th century, with the associated significant population changes also left a mark on the school system (Kaposi, 2006; Ács, 2017). The establishment of the seminary for priests and then a law school (Csizmadia, 1967a; Rajczi, 1998), as well as the military (officer training) school which gained importance due to the instability of the Balkans, are described in a different group of studies (Gál, 2001). The end of the First World War is traumatic in Hungarian historiography, including that of Pécs. Provisionally the city was occupied by Serb forces, and then the Erzsébet (Elisabeth) University was resettled to Pécs from Bratislava, which is extensively covered in scientific

literature (Szabó, 1940; Ravasz, 1992; Schneider, 2009; Popély, 2000; Lengvári, 2004; Gonda & Kaposi, 2022; Scott, 2022; Póla et al., 2022; Egyed & Rácz, 2020; Rácz & Egyed, 2023). The 650-year (Font, 2016; Szögi, 2016; Fedeles, 2017) anniversary of the initial foundation in 1367, and then the 100th anniversary of the establishment in 1923 initiated the development of numerous papers (Méreg, 2022; Polyák, 2023). There is a vast range of publications presenting events of the 20th and 21st centuries, providing an overview of the events in minute detail (Polyák, 2016; Szögi, 2016a; Fedeles et al., 2017).

The analysis method of this study applies geopolitical considerations. The aspects of the school foundations are identified, including those of founders and operators. The spatial determinants of operation are also taken into consideration, together with the social, political and economic context of the establishment. The analysis assesses the significance of the spatial connections of the institutions over the different periods.

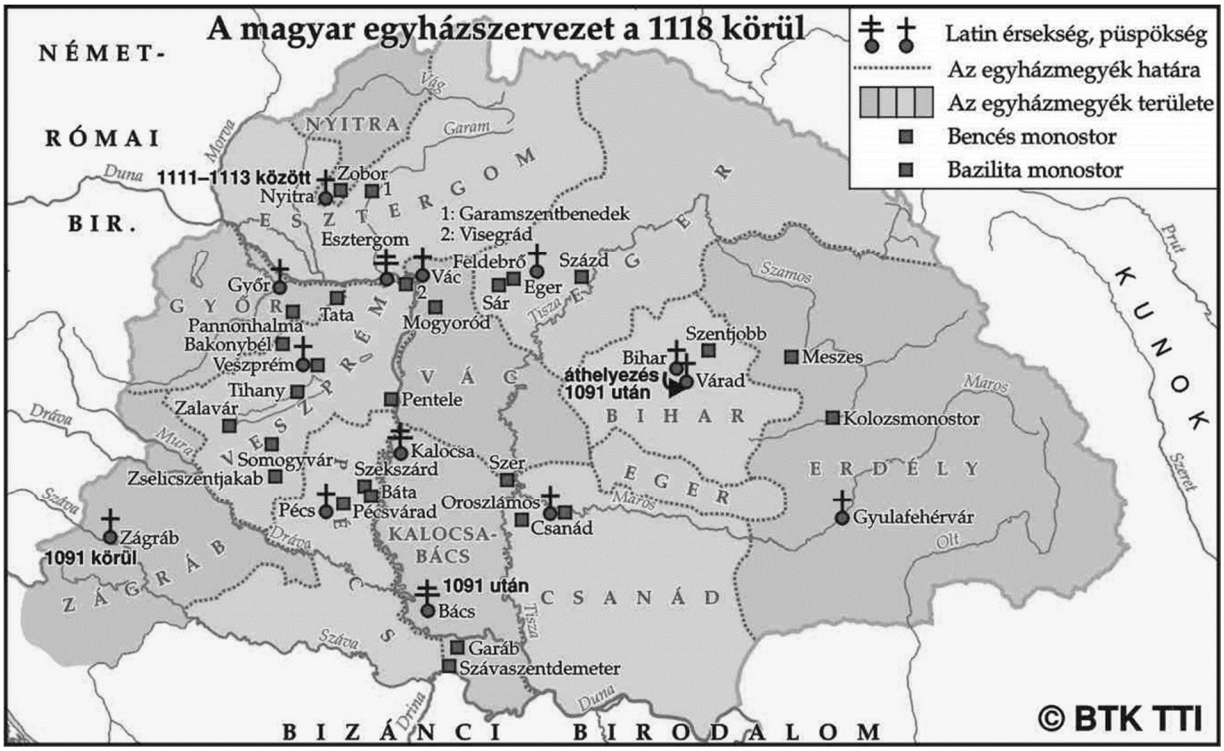
Empirical methods and exploration of primary data are used only for the last period of the operation of the university. The contractual relations of the University of Pécs from the last decades, the specific features of the Balkan-related operations, and the considerations of the strategy adopted by the UP in 2023 are explored through interviews.

RESULT 1: SCHOOL TOWN OF THE MIDDLE AGES, BASTION OF CHRISTIANITY

After the defeat of “Black Hungarians” (1008) (Kristó, 1985), the founder of the state, King Saint Stephen founded the bishopric in Pécs in 1009, where he settled priests from the West. The first bishop of Pécs was Bonipert of Lombardy. The bishopric covered the counties of Baranya, Tolna, Pozsega (Požega) and Valkó (Vukovo). This means that the southern border of the bishopric coincided with the southern border of the Kingdom of Hungary, and was thus open in the direction of the “Balkans” (Figure 1). This put Pécs on the map of **“**Rome” (i.e. the Catholic Church), with a border position between “West” and “East”. This also determined its school system, since from the very beginning its duty was to disseminate Western knowledge. It was established as a missionary church, and in the coming centuries it operated in the immediate vicinity of missionary territories (Bosnia, Bulgaria and the wider Balkan region).

In 1367, King Louis I (the Great) founded the university in Pécs, which was confirmed in a papal bull by Pope Urban V. It was not an isolated case. Contemporary rulers undertook numerous similar initiatives. This was just one item in a series of newly established institutions, in which after Prague (1348), Kraków (1364) and Vienna (1365), the school, or *studium generale*, of Pécs was founded.

Figure 1 The Bishopric of Pécs covered the counties of Tolna, Baranya, Valkó and Pozsega, and extended as far south as the river Sava



Source: BTK TTI, István Tringli – Béla Nagy

Despite the scarcity of written sources, it is possible to sketch out the motivations behind the establishment of the university (Font, 2016; Fedeles, 2017). Unlike the other three universities in Central Europe, this was not established in a royal centre, but in Pécs, the seat of one of the country's richest dioceses. Funding was provided not by the king but by the local bishop, and the initiator was also the bishop of Pécs, William (Wilhelm) of Koppenbach. Several researchers agree that the place of establishment also reflected foreign policy goals and orientation (Csizmadia, 1965; Petrovics, 2005). The Hungarian Anjou kings had interests to the south, also reflected in their foreign policy practice and presumably in their thinking.

During this era Pécs was an intellectual bastion of the Christian world. Its role as a school city is a consequence of the country's peripheral positi on. The efforts of Pope Urban V in the East were typically aimed at defending and strengthening Christianity (Vones, 1998; Rollo-Koster, 2015). This was also reflected in his declaration of a crusade to the Middle East. The Pope collaborated closely with Louis I (the Great), relying on him in various conflicts. He sent missionaries to several parts of the Balkans (Bosnia, Bulgaria) to counter heresy. It is likely that this had also been the wider geopolitical context for the founding of the University of Pécs. However, we do have no exact knowledge about the local articulation of these ideas, due to a lack of sources.

The institution only operated for a short time (a few decades), yet the memory of the "University of Louis the Great" has persisted and acted as a motivating force for centuries. The fact that this vision could be permanently sustained suggests the existence of local intelligentsia sustaining it. Pécs had already been a school city before 1367 and preserved this status after the university was closed, to some extent even during the Ottoman occupation period. In addition to local circumstances, the city's position in the territorial organisation of the country also played a role.

Pécs has been an important intellectual centre of the southwestern part of the kingdom, practically since the foundation of the Hungarian state. Throughout its long history, different factors have shaped its development. At times, it was influenced by grape and wine production, trade, as well as certain industrial activities (leather, porcelain, mining), but its intellectual and public service role has nevertheless remained strong, making the city an important factor in processes both within the country and in the northern Balkans. The "university vision" of Pécs was finally fulfilled in 1923. That time, in addition to the local aspects and arguments for its establishment, geopolitical considerations also emerged: the city and the new university had a mission to the south, towards the Balkans.

The famous establishment of the university in 1367 was facilitated by the uniquely strong school system that had developed in the city by the 14th century. The city of Pécs itself was owned by the Bishop of Pécs, who had considerable financial resources. According to the sources, the bishop of Pécs had the largest income in the country after the archbishop of Esztergom. This is why William of Koppenbach, the educated and cosmopolitan priest (Figure 3) was able to finance the *studium generale*.

The schools were partly connected to the Bishop's Castle (in the vicinity of the present cathedral) and to other church buildings and monasteries, as shown in Figure 2, i.e. the school system encompassed the whole city. The location of the medieval university is still disputed. Some claim that it was located at the premises of the present-day medieval university exhibition (G. Sándor, 1998, 2010), others dispute this (Boda, 1999; 13; Boda, 1992-93), but it is certainly the case that the ecclesiastical buildings adjacent to the cathedral were used as accommodation for students and professors, as well as for teaching rooms.

From the time of its foundation by Saint Stephen, the church undertook to spread and strengthen Christianity in the region from Tolna County to the Sava River, and partly beyond. This task was carried out by priests who sometimes came from the West, mainly from Italy and Germany, as exemplified by William of Koppenbach. In the 14th century, the town had four monastic schools in addition to the cathedral chapter school. The Dominican Order, in

particular, operated a strong and respected school. This may have played an important role in papal deliberations prior to the establishment of the university in 1367. The spread of westernised Christian patterns, ideas and lifestyles, the strengthening of the licentiate model, and the peregrination between universities had a stabilising effect on the eastern fringes of Western Christianity. The school city of Pécs might as well have played an important role in achieving these goals.

Figure 2 Wilhelm Koppenbach, Bishop of Pécs, founder of the medieval university, at the gate of the Ifjúság street campus of the university. Sculptor: Ferenc Tischler (1999*)*

Photo: author (2023)

The target areas of missionary activities were located close. Importantly, in Bosnia beyond the Sava River, where the existence of the crkva Bosanska, the Bosnian Church (formerly incorrectly referred to as Bogomil heresy) had been challenging the Catholic Church for some time and where Pope Urban V sent missionaries. Catholic conversion in the Balkans was carried out mainly by the Dominicans and Franciscans, also in Bulgaria (around Vidin) in addition to Bosnia.

Each order had monasteries in the diocesan seat. Geopolitical and cultural marginalisation was also manifest in the fact that Louis I fought against Romanian principalities as well, which were linked to Orthodoxy. The distant Ottoman Turkish threat was also advancing on the peninsula from the southeast, as it emerged on the foreign policy agenda. Therefore the

peripheral status in denominations and geopolitics was very much apparent during the reign of King Louis. We have no understanding of the role the university in Pécs played in these processes during its brief period of operation, as no such sources have been preserved.

The university certainly had faculties of philosophy and law, and it definitely lacked a theological faculty, according to the papal bull issued on 1 September 1367. *"Bishop Urban, servant of the servants of God. For eternal memory. (...) we resolve and order that a studium generale be established in the aforementioned city of Pécs, where canon law and civil law, as well as all other respectable sciences except theology, shall be taught for all eternity"* (Szögi, 1995).

Nothing certain is known about the medical faculty. After the death of bishop William, the university experienced rapid decline. According to some sources, after 1395 it continued to function as a *schola maior*, a kind of episcopal college. Some assume (Kollerus, 1784; Békefi, 1909) that the university existed until the Battle of Mohács (1526), pointing to the fact that many students from Pécs fell on the "battlefield of the nation" and that according to Istvánffy 2000 students lived within its walls until the fall of the city in 1543 (Istvánffy, 2009). These assumptions, which have become a traditional memory of the city (Schmelczer-Pohánka, 2017), suggest that the school city character of Pécs survived the demise of the university itself. This may be demonstrated by the fact that during the 15th century several church leaders were committed to science, for example the humanist bishop Janus Pannonius had "every book in Latin" available in his library. During the term of office of provost György Handó, the cathedral chapter had a collection of books estimated at more than 300 volumes, enabling the acquisition of high-level scientific knowledge in Pécs (Boda, 1999).

The debate surrounding the reasons of the city, the church and the king for the establishment of the University of Pécs will certainly continue. Any sources that may yet come to light may reopen the debate, but it is already certain that the city played an important role as a kind of intellectual bastion in the sustenance and dissemination of Western Christian culture in the Middle Ages, on the northern edge of the Balkans, in the vicinity of Bosnia. There is dispute whether this applies to the university (Fedeles, 2017), but Pécs has certainly played such a role as a school city.

RESULT 2: OTTOMAN-ERA PÉCS AS AN INTELLECTUAL BASTION OF ISLAM

The city fell to Ottoman Turks on 20 July 1543. As a regional centre and one of the largest and most important cities of Ottoman Hungary, Pécs played an important role in the economic and intellectual life of this peripheral region of the empire.

During the Ottoman occupation, Pécs became part of Ottoman Rumelia (i.e. the Balkans) and although its cultural periphery status did not disappear, its content changed. This time it found itself on the northern fringe of Ottoman Turkish culture. Its character resembled that of the Balkans, especially Bosnia. Its new Muslim inhabitants also came mainly from this region. During the period of the conquest in the 16th century, the Bosnian Sokollu family (originally known as Sokolović) had a strong influence in the Southern Transdanubia region, including the area around Pécs. In a sense, the city and the region became part of Greater Bosnia, incorporated into the Ottoman Empire, as part of the formal and informal sphere of influence of the Sokollu family. Also, Bosnia was the western bastion of Islam in this era. The school system of Pécs reflected imperial, as well as cross-border and local demands.

Pécs became a flourishing Sufi cultural centre. In addition to the Mevlevi Order, the Bektashis and the Halvetis (Khalwatis) also had monasteries and schools in town. During a visit to Pécs in 1663, the traveller Evliya Çelebi recorded 11 elementary schools and 5 medreses, which he commemorated in his memoirs, the Book of Travels (Seyahatnâme), as follows: "*The Quran interpreters and ulemas have five schools. Among others, the divine Eflatun (Plato) has an old academic college in the inner castle, with seventy rooms with royal vaults and a castle-like interior. In each of these there is an arrangement designed according to a different kind of architectural science, the description of which is impossible merely with language... In former times in this college there were several students from the East and West, who, having seen all the exotic and wonderful sciences from their masters, perfected these...*" (Karácson, 1904). The text suggests that the memory of a western school, perhaps the medieval university or a monastic school, appears in this description.

The other medrese described in detail, as the "*most distinguished and most prominent*", was located in the külliye of the Yakovalı Hasan Paşa Mosque, at the Sziget Gate of the city (Sudár, 2012) in the "*majestic Mevlana's Mevlevi monastery*". This was the northernmost Mevlevi institution in the empire, with the next monastery to the south located in Sarajevo. Evliya Çelebi also recorded that the Mevlevis taught in the Persian language in their medrese, reading the work of the mystical Persian poet Jalāl al-Dīn Rūmī (the founder of the order), titled Masnavi. The curriculum of the medreses in the Ottoman Empire suggests that students in Pécs may have also studied poetry, music and calligraphy (Ágoston & Masters, 2008).

The memory of the medieval university may have survived in Ottoman-era Pécs, as Evliya Çelebi's account suggests. János Cserneki recorded the following about the books kept in the cathedral of Pécs (which the Turks converted into "Sultan Suleiman's castle camii", based on an episcopal visitation of bishop Miklós Dallos in 1620: "*In the church itself, the altars are*

intact, decorated with antipendants as they were found when it was occupied. The gradual and antiphon books are also there, fastened to the wall by small chains, on which they hang." (Holovics, 1966; Sudár, 2012, 2014). When Evliya Çelebi visited Pécs in 1663, he may have also seen these chained books, because in relation to the beauty of the cathedral building he stated: "it was constructed this way, because this place is where the book of Plato is safeguarded" (Sudár, 2012; Ács, 2022).

However, there is no continuity between the two cultures, despite the fact that the Ottomans in many respects carried on the imperial legacy of the Byzantine Empire, as well as the achievements of Greek culture. Their aims were imperial and under the rule of the Ottomans, they aimed at expanding the Islamic world.

In the religious colleges of Pécs, education was based on the study of the Quran. Our knowledge of the teachers and the teachings of the sheiks managing the monasteries is rather scarce. However, we know the life and ideas of a spiritual leader who taught in the nearby Halveti monastery (Fodor & Pap, 2016, 2018) and can be considered analogous for the purposes of our research.

Ali Dede al-Busnawi was from Mostar in Bosnia, and he was the long-lived founding sheikh of the Halveti community of the tomb of Suleiman, whose rich spiritual heritage (more than 150 texts and passages) has survived. This enables us to imagine how higher education was practised in Ottoman Hungary and which ideas were considered important to pass on in the medreses. These texts are about *gaza*, i.e. the war of faith against infidelity, the definition of ideological foes, and support for the House of Osman (Karic, 2020).

The most famous of the students who studied in the medreses of Pécs was İbrahim Peçevi, born in the city in 1574. Peçevi became world-famous for his historical works, and he had studied in the medrese of Pasha Qasim in the main square. According to the "Appointment Defter of Medrese Teachers" (Fodor, 1999) his knowledge was so acclaimed that he was considered a future teacher.

After 1543, the Ottoman rule was established over Pécs for a century and a half. The city remained an intellectual centre. However, the meaning of this changed compared to the previous period, the religious institutions and the school system primarily served the purpose of solidifying Ottoman Turkish rule. The city took on a Bosnian character, and an increasing number of its residents spoke southern Slavic languages. Remnants of the Bosnian character can still be seen in some places in the Tettye district. The population also began to segregate along sectarian lines, with Muslims concentrated inside city the walls and Christians outside.

The latter could practise their religion in the All Saints Church and also operated schools. Records of the Catholic and Unitarian schools have been preserved. In 1582 and 1583, Miklós Fazakas Bogáti, a famous songwriter who had fled from Transylvania to Pécs and was a follower of Ferenc Dávid, became a teacher in the Unitarian school. The school of the Unitarians was also mentioned by István Szini, a Jesuit monk who came to Pécs in 1613 (Vass & Szita, 1996: 83). The presence of high Christian theological literacy (e.g. a library or book collection) in the city is also evidenced by the fact that Miklós Fazakas Bogáti wrote his commentary titled Apocalypse and his famous psalm paraphrases during his stay in Pécs (Ács, 2017).

Based on the above, it can be concluded that the denominational school city character of Pécs continued to exist in the Ottoman period. Islamic mysticism and the culture of the followers of Sufism became dominant in the spiritual life of the city. Sustaining this was the duty of the religious colleges attached to the dervish monasteries, i.e. the medreses. At the same time, it should also be noted that the conquerors constituted only 2-3% of the population in the occupied territory (Muslim population was concentrated in the walled cities). The overwhelming majority of society in Ottoman Hungary was Christian, with whom there was no alternative to sustaining cooperation. This also meant tolerating the sustained church organisation, including schools. The limited community autonomy present in the Ottoman imperial model allowed for this.

But there was also a shift from the pre-Ottoman situation. While genius loci had previously been determined by the high level of ecclesiastical education in the monastic and chaplaincy schools (*and for a short time the studium generale*), in the Ottoman period Christian education was conveyed by Protestant preachers and their followers, and from the 17th century onwards, by southern Slavic and Hungarian Catholics (Molnár, 2005). The school system reflected the specific cultural, social and political considerations of the Ottoman frontier.

RESULT 3: CATHOLIC “FORTRESS”, THEN GEOPOLITICAL CORNERSTONE

Pécs was retaken from the Turks by Holy League troops on 21-22 October 1686. Some of the Muslim residents fled, others were allowed to stay if they converted to and joined Catholicism. It was the effect of the reconquista that ended Muslim rule that the city became fully Catholic for a century. A significant proportion of its new settlers came from German Catholic areas.

In the 18th and 19th centuries, the former Muslim inhabitants of the town were known as *Poturs* (single: Potur, plural: poturci, poturice), with the pejorative meaning of "Turkified, Islamicised", because their way of life and clothing were reminiscent of Balkan Muslims, while their language remained mainly a dialect of southern Slavic typical of a Bosnian region (around Tešanj). They referred to themselves as Bosniaks. They were concentrated in the present-day Tettye district and the area below the Havihegy hill (*Poturluk, Zidina, Benga, Malomszeg*), many of them tanners. The Poturci were integrated into the Catholic institutions (no Muslim school could survive). Initially, their main religious centre was the Ágoston Square Catholic Church, the former mosque of the tanners. Later on, the small chapel on the Havihegy hill, which served as a pilgrimage site, also became very important. The Poturs practically disappeared by the end of the 19th century, as they assimilated into majority groups living in Pécs.

Muslim religious buildings have been taken over by the Catholic Church. Members of the Catholic clergy took over the former dervish monasteries and mosques. The buildings changed their function, housing the monastic orders and the institutions of the Bishopric of Pécs. The school city character prevailed, but within a purely Catholic institutional framework. After the reconquista, reconstruction works (in accordance with the prominent ideology) required mainly priests and lawyers.

The creation of a local priestly education can be seen as an important stage in the demand for higher education in the city from the Catholic clergy. After the expulsion of the Ottoman Turks, the bishop of Pécs, Zsigmond Berényi established a priest seminary, the cornerstone of which had been laid on 4 June 1742 and then it was consecrated on 4 September 1746 in honour of Saint Paul. Following Zsigmond Berényi, Bishop György Klimó was also committed to the operation of the seminary, increasing the number of students, setting up new departments and launching a philosophy course, increasing the period of study from two to four years, and further expanding the book collection begun by Berényi and opening the first public library in Hungary in 1774. After the death of Bishop Klimó in 1779, the Josephine policy of centralisation relocated the seminary to Buda, which was only returned to Pécs in 1791.

Bishop György Klimó was so committed to the cause of higher education in Pécs that in 1784 he applied for the establishment of a "Public Higher Education School" in the city. Following this request, the royal academy was moved from Győr to Pécs in 1785, and it operated in the city until 1802. Law students attended the two-year liberal arts and then the two-year law programme.

Figure 3 The entrance to the military training school. The inscription ARMIS ET LITTERIS, meaning “with arms and science”

Source: Gál, 2001

After the turn of the century, with the expansion of the Dual Monarchy, the vision of an important role in the Balkans emerged in Pécs. In this regard, several statements in the press of the time can be noted, for example, that of the future minister and then state secretary Kunó Klebelsberg, who told the local daily that “Pécs, this beautifully-situated Hungarian city should be the first major station of intellectual and economic culture from the Balkans, which could also stand in for the capital” (Pécsi Napló, 30 January 1916). However, there was no breakthrough. A few years later, by the end of First World War, when the empire collapsed, Pécs had transformed into the regional centre of a small state. Ambitions and needs had to be revised.

RESULT 4: A UNIVERSITY CITY ON THE NORTHERN EDGE OF THE BALKANS

The few years following the First World War were very special for Pécs, as the city and its surroundings came under Serbian occupation which ended on 22 August 1921. Serb troops were withdrawn and the Hungarian National Army entered the city. By this time it had become clear that Pécs would not (after Ottoman times) become the centre of the northern periphery of a Balkan-centric state (the Kingdom of Serbs, Croats and Slovenes, or later Yugoslavia). Reorganisation, including that of the school system, started. The military training school moved back to the city, and even more significant events took place: Pécs set out on a path to becoming a modern European university city.

The transformation of Pécs from a school town to a university city was made possible by Act 25 of 1921 in response to the situation after the Treaty of Trianon (1920), stating in Article 1

that "*the Hungarian Royal Erzsébet University of Pozsony established by Act XXXVI of 1912 shall be temporarily relocated to Pécs*."

Overall, the establishment of the university was a matter of necessity, with local and regional demands being the main considerations in making the decision. In addition to the sustenance and development of knowledge and culture, and the historical tradition (of the medieval university), the improvement of regional health care services was apparently the most decisive argument. Decision-makers hoped that regional health care access was going to improve. Apparently, not everyone was happy about these developments, and there were also counter-arguments and scepticism, stating that there were too few teachers, there was no adequate infrastructure available in the city. But the local majority was enthusiastic about the plan, and neither the pessimism nor the lofty rhetoric had any particular impact on the process. The national and local government and the Catholic Church joined forces and pushed through to establish the university and provide locations for institutes of the Erzsébet University. Geopolitical considerations only began to have an impact decades later.

The main actor in 1923, Kunó Klebelsberg, the minister of culture who oversaw the establishment of the university, formulated his concept of the possible role of Pécs in 1916 as state secretary: on the route from the Balkans towards Budapest, this city should be an intellectual centre of comparable importance to the capital. However, between 1916 and 1923, fundamental geopolitical changes took place: as a result of the lost world war, Pécs became the regional centre of a small state instead of an imperial power.

In 1923, the local Catholic clergy and the city administration also cooperated with the government in the resettlement and relocation efforts. County lord-lieutenant (főispán) Ferenc Fischer argued for the university's admission to the city on the grounds of its cultural mission: "*in the absence of other means, it is culture that raises us above the Balkan peoples*", he stressed in volume 26 of the local daily Dunántúl, dated 01/02/1922. By this time, the visions of the local political elite already extended beyond the narrow borders of the city and the county.

In the context of the establishment of the University of Pécs in 1923, it is worth reviewing the higher education and research activities relevant to the Balkans from a broader perspective, enabling the proper assessment of ranks and importance. The first official efforts emerged in Hungary in the late 19th century. In addition to Budapest, several cities in the south played a role, but over time the city of Pécs and the University of Pécs came to play the dominant role.

Table 1 Main Hungarian Balkan "Institutes"

	Name	Location	Duration	Profile
1	Hungarian Oriental Cultures Centre (Magyar Keleti Kultúrközpont), then Hungarian Turan Society (Turán Társaság)	Budapest	1910-1943	Research of Turkic peoples, Bulgarians
2	Hungarian-Bosnian and Oriental Economic Centre (Magyar-Bosnyák és Keleti Gazdasági Központ)	Budapest	1908-1920 (?)	Economic research
3	Fiume Export Academy (Fiumei Kiviteli Akadémia)	Fiume (Rijeka)	1912-1919	Elite training, economics, geography, languages
4	Technical university oriental trade training site	Budapest	1914-1920	Elite economics training
5	Constantinople Hungarian Scientific Institute (Konstantinápolyi Magyar Tudományos Intézet)	Istanbul	1916-1919	Historical, turkological and Balkan studies research
6	Temesvár Balkans Bureau (Temesvári Balkáni Iroda)	Temesvár (Timișoara)	1917-1918 (?)	Research activities
7	Political Science (then Teleki Pál) Institute	Budapest	1926-1945 (?)	Complex research of Romania and the Kingdom of Serbs, Croats, and Slovenes
8	Faculty of Economics (merged with the Oriental Trade Academy (Keleti Kereskedelmi Akadémia) in 1920, additionally Oriental Institute (Keleti Intézet) from 1926 to 1931)	Budapest	1920-	Education and research. Languages, economics and politics with a focus on the Middle East and the Balkans
9	Palatine Joseph University of Technology and Economics Oriental Institute (József Nádor Műszaki és Gazdaságtudományi Egyetem Keleti Intézete)	Budapest	1934-	Carries on Balkans research and education
10	Keleti Kereskedelmi Főiskola Balkán Intézet (Oriental Trade College Balkans Institute)	Újvidék (Novi Sad)	1942-1944	Commerce, economics, languages
11	Transdanubian Research Institute (Dunántúli Tudományos Intézet, DTI - instead of the planned Southern-Hungarian Research Institute)	Pécs	1943-today	Research of Transdanubia in Hungary, as well as the Balkans
12	The Oriental Trade College fled from Újvidék (Novi Sad) to Budapest in 1944, and then merged with the Palatine Joseph University of Technology and Economics Oriental Institute in 1946. It terminated in 1948 when the Hungarian University of Economics was established.	Budapest	1946-1948	Research and education with a focus on economics

	Name	Location	Duration	Profile
13	Hungarian Balkans Society (Magyar Balkán Társaság, MKT), Balkans Institute (Balkán Intézet), merged in late 1948 into the Eastern-European Research Institute (Keleteurópai Tudományos Intézet, formerly known as Teleki Pál Research Institute)	Budapest	1947-1948	Publishing activities: Balkán Füzetek (Balkans Volumes), Balkán Könyvtár (Balkans Library), Balkán Könyvek (Balkans Books), etc.
14	The DTI and the leaders of the Pécs university made great efforts in this period to make Pécs the "gateway to the Balkans" as a centre of research and higher education. Numerous rectors of the University of Pécs worked towards this goal. The list includes József Holub 1944-1945, Béla Entz, 1945-1946, Sándor Krisztics, 1946-1947, who (in addition to the re-establishment of the Faculty of Humanities) wanted to establish an organisation focusing on the Balkans under the name Faculty of Oriental Economics. To no avail.	Pécs	Planned, but failed to materialise.	
15	Janus Pannonius University (JPTE) Faculty of Teacher Education, History of the Balkans seminar	Pécs	1987-1993	Teaching regional history, individual research efforts of the participants
16	Janus Pannonius University (JPTE) East Mediterranean and Balkan Studies Centre	Pécs	1999- today	Research and teaching of the regional structure with a geography focus, operation of the Balkan MA and geopolitical doctoral programme
17	Eötvös Loránd University Faculty of Humanities (ELTE BTK) Institute of History Department of Eastern Europe Balkans Group	Budapest	2010-today	Teaching and research of the history of the Balkans (mainly Yugoslavia)
18	Teleki László Institute from 1999, Hungarian Institute of International Affairs (Magyar Külügyi Intézet) from 2006	Budapest	Throughout this period	Foreign policy background analyses, international relations marketing
19	Hungarian Academy of Sciences Szeged Committee (SZAB) South Research Centre (Délvidék Kutatóközpont)	Szeged	2010-today	Organising historical research, conferences
20	Hungarian Academy of Sciences (MTA), then Eötvös Loránd Research Network (ELKH) then HUN-REN Research Centre for the Humanities Institute of History, History of South-Eastern Europe Theme Group	Budapest	2014-today	Historic research works in the Balkans

Author: own research based partly on Hajdú, 2003.

In summary, over the past one and a half hundred years, the 20 consultancy, research and education organisations with a "Balkans" profile that are listed and examined in the table were, for the most part, linked to the prevailing political course: each institution was close to the political elite. In addition to the dominant role played by Budapest, several cities in the south, including Pécs in particular, have played a role as main offices and an operating environment. Typically, these all operated with modest resources, mostly for short periods of time, mainly during periods of political upheaval. Accordingly, their achievements remained severely limited. At the same time, however, prominent members of the Hungarian scientific elite were involved in their work, hence in some cases significant individual achievements can be recognised. Their impact on Hungarian politics and policies was very limited, not to say insignificant, in all periods. Also, their international impact has remained minor, practically invisible even compared to the national one.

Several periods of institutionalisation can be distinguished. The first period lasted until the end of the First World War, the second was during the interbellum period, the third between 1946 and 1948, and then, after a long hiatus in activity, from the 1980s to the present day. In the first period (Table 1: 1-6), such organisations were active in the primarily economic expansion of Hungary in the Balkans, and secondly for conveying general knowledge of the region. Most of them were based in Budapest, with one each in Fiume (Rijeka), Temesvár (Timișoara) and Istanbul, a total of seven institutions. Perhaps this can be considered the golden age of Balkans research in Hungary.

In the period from 1918 to 1945, only five institutions are listed: in addition to Budapest, the names of Újvidék (Novi Sad) and Pécs also appear (Table 1: 7-11). At the same time, while during the existence of the Monarchy of Austria-Hungary, the Balkans as a whole, and even the Middle East were included in the focus topics, in the Horthy era the focus shifted more to the neighbouring states, and nothing beyond Romania and Yugoslavia. There is also some, but rather effective, activity during the brief democratic period after 1945 (Table 1: 12-14). However, the conflict with Tito's Yugoslavia rendered any further relevant efforts impossible. Nevertheless, in Pécs the university rectors undertook significant efforts to establish a Faculty of Oriental Economics. The names of the rectors József Holub, Béla Entz and Sándor Krisztics should be mentioned in this regard. In the end, this endeavour did not succeed either.

The Transdanubian Research Institute (DTI) in Pécs - originally intended at least in part to have a Balkans profile - continued to operate, but any further development of the institution

and the establishment of “Balkan gateway” role of Pécs could not take place within the atmosphere of the Cold War.

Afterwards, Balkans research became impossible in Hungary for a long time. Only the “fellow Socialist” Bulgaria was suited for field research. The deep antagonism, which was only easing slowly, was not conducive to institution-building. Towards the end of the Kádár era in Hungary, the slow process of democratisation enabled resuming the reorganisation efforts. The centres of these endeavours were (just as before) Budapest, Pécs and Szeged (Table 1: 15-20). These organisations operated and continue to operate with a historical, political history, geopolitical and national security focus, in line with the challenges of the period, especially the break-up of Yugoslavia. The economics themes were only complementary, and this is what makes them so different from previous periods.

In the 20th century, the city's links to the Balkans faded. In the interbellum period, the confrontation with Kingdom of Yugoslavia, and in the early 1950s, the near-war with Tito’s Yugoslavia, severely limited and made impossible the improvement of southern relations. Only the slow rapprochement following the Cold War period brought along some minor, symbolic changes. For instance, the sister city treaty between Pécs and Osijek was signed in 1973. The actual window of opportunity to restore links only opened after the transition to democracy in 1989/1990. The disintegration of the Yugoslav federal state, the tensions of war during 1990s did not allow for significant improvements. Hungary's accession to NATO and then to the EU in 2004 focused attention and efforts on the western direction of international relations. In this process, the Balkans emerged not as an opportunity but as a serious security risk. That fact that the region also holds economic and political potential was recognised by the post-2010 cabinets led by Viktor Orbán.

What kind of underlying social basis is available in this relationship? The intense social and cultural links of Pécs with the Balkans are primarily represented by the southern Slavic (Croat, Serb, Bosnian, Albanian) and Roma/Gypsy ethnic groups living in the city and its surroundings. Among the southern Slavs, Serbs have completely disappeared from the city, and the assimilation of the Croats is also progressing, but their numbers are still significant. However, there is no sign of such kind of awareness among the Roma. The established educational system therefore has a particular responsibility to take care of this function. What are the main actors in education?

In Pécs, following the historical precedents of the 18th century, regular education in “Serbo-Croatian” language started in 1952. From 1983, there was also a Serb-Croat secondary school offering secondary school exit certificates. Nowadays, the Miroslav Krleža Croatian

School offers education from kindergarten to secondary school for ethnic Croats in Hungary. University education is provided by the Institute of Slavic Studies of the University of Pécs. In addition to the educational institution, the Croatian Theatre and the nationality radio station were the main sources of transmitting Croatian cultural heritage.

Pécs is the only municipality where teaching in the Roma languages - Boyash/Beás and Lovari/Lovári - is available from kindergarten to university, mainly because of the Boyash (archaic Romanian-speaking) Romani people who resettled to Baranya from the Balkans. The Gandhi Secondary School, established in 1994, is a pioneer in this field, being the first in the country and the first in the European Union to offer secondary school exit certificates. The Department of Education Sociology and Romology at the University of Pécs Faculty of Humanities, the only such department in the country, has been conveying scientific knowledge about the Roma population since 1997.

At the University of Pécs and the Transdanubian Research Institute (today called in abbreviations HUN-REN KRTK RKI DTO), partly relying on the traditional contacts and reacting to the geopolitical changes in the wider region, a small number of lecturers and researchers with an interest in the Balkans have joined forces, but at the time of writing this paper it is the only such team in the country. They are currently operating low-key, as an informal knowledge centre. This centre is characterised by teaching (Croatian language and culture, Balkan Studies MA, PhD programme), journal and periodical publishing (Mediterrán és Balkán Fórum, Balkán Füzetek) activities, regular international academic publications and has built up a functioning academic network in Southeast Europe.

From the early 1990s, an institutionalisation process can be identified in the city, which started to support the active role of Pécs in the former Yugoslavia and throughout the Balkans, although the level of consciousness was rather low for a long time. Some examples include:

- During the Yugoslav Wars, Pécs was awarded the UNESCO prize “Cities for Peace” for providing a safe haven to Bosnian refugees (1992-1995). This had no major consequences, it was more of an anomaly that made the citizens of Pécs aware that they were living near a place at risk of explosion. The settlement of Bosniaks during this period was more noticeable in the towns of Siklós and Harkány. The Balkan Gate Mosque, a spiritual and community centre for local Bosniaks and Albanians, opened in Siklós-Máriagyűd in September 2022.
- In 2000, the University of Pécs was established through the integration of former higher education institutions. It has developed strong international functions. By 2023, the

number of international students had exceeded 5000. More than 1000 such students came from countries with a Muslim background. When the Islamic Centre of Pécs opened in September 2023, near the Pasha Qasim Mosque (the Pécs Downtown Parish Church) in the main square, the opening ceremony was attended by around 300 people. The city has once again become a multiconfessional place. The centre has started offering religious education and Arabic language training. Attendees are mostly from Arab countries and other states further in Asia and Africa. The number of Bosniaks and Albanians among them is small.

- In 2010, Pécs became a European Capital of Culture. The programme was implemented jointly with Istanbul and Essen, with the motto "Borderless City" and the slogan "Pécs, the gateway to the Balkans". The programme was overambitious in its goals and the cultural gateway function was not achieved.
- Pannon EGTC (European Grouping of Territorial Cooperation) is an organisation established on the basis of an EU legal construction, which is a voluntary cross-border organisation of the municipal and state sectors in Hungary and Croatia.
- In early 2022, the University of Pécs underwent a change of operator: the institution is operated by a foundation. In this process it had to rethink its operating environment and increasingly has to rely on market revenues. This has led to a reassessment of its role in international relations and (although not entirely voluntarily) has also encouraged university fora to explore the opportunities of the Western Balkans as a potential market.

The strategy was adopted by the governing bodies of the university in July 2023. The document stated that the university should play a geopolitical mediating role between Central and Eastern Europe and the Western Balkans. Page 15 of the strategy states the following:

e) "Establish a geopolitical link between Central and Eastern Europe and the Western Balkans. *The University's regional geographic position makes it suitable to act as a geopolitical link between regions of Central and Eastern Europe and the Western Balkans. Based on its research and teaching tradition and current capabilities relevant to the Western Balkans, the University intends to strengthen these competences in order to play a key role in the future of maintaining and developing up-to-date knowledge on the Western Balkans. This knowledge has the potential to have a positive impact on the economic, commercial, touristic, cultural and innovation standing of the region.*"

At the time of writing this paper, it is not yet clear which of these ambitious goals will be realised, but it seems clear that the position of being on the cultural periphery has been reproduced and prompted (and still does) a rethinking of the mission of Pécs to the Balkans (Sipos et al., 2021).

DISCUSSION

The topic addressed by this paper touches on several academic debates. One is whether Pécs can be considered a gateway city or not. Did the establishment of the medieval university of Pécs reflect geopolitical considerations? Is the Ottoman occupation period a part of the organic development of Pécs? In a broader sense, it is an important, unresolved, and possibly never-ending debate whether Hungary is the southern border of Central Europe and thus is in a peripheral location. This raises the question of whether it has an organic link with southeastern Europe, and what kind of link it is.

Pécs is a Hungarian regional centre whose functions not only cover former Hungarian territories to the south but also the Balkans. According to the analyses published so far, defining Pécs as a gateway city to the Balkans is an overstatement: it does not have any economic or infrastructural role that would make this gateway function meaningful, even if it does have such potential features (Hajdú, 2009; Pap et al., 2013). It features a frontier character: as a border region centre of church/civilisation, empires, as well as of Euro-Atlantic integration, it has mostly participated in the territorial system of the northern, and less often the southern, side of the border. On the basis of this analysis, if not in economic and transport terms, but in intellectual terms, as a school city, the gateway role does appear from time to time, and in these functions the relevant social, economic, political changes and geopolitical challenges can be perceived.

In the context of establishing the university in 1367, there has been a debate about whether geopolitical considerations (related to the Balkans) played a role in the foundation of this studium generale (Csizmadia, 1965; Petrovics, 2005). According to one view, this could only be proven if it had had a theological faculty (Fedeles, 2017). Our analysis in this debate has not been able to uncover decisive direct evidence, but indirect evidence suggests that such a consideration did exist. In the Middle Ages, the bishopric's seat of Pécs developed as a spiritual and intellectual bastion of Christianity on the southeastern fringe of western Christianity. The bishopric itself was established as a missionary institution after the defeat of the so-called "Black Hungarians", near the southern fringes of the country, with a territory

spreading to the Sava river. For centuries, the missionary activity of the Church in Bosnia and Bulgaria gave a missionary role to the Franciscan and Dominican orders that maintained monasteries and schools in the city. This was the social context of the university, and its founders could hardly ignore it.

According to the majority approach of historians, the Ottoman Turkish conquest left the central part of the Kingdom of Hungary, including Pécs and the other occupied settlements, outside the historical development of Hungary for a century and a half, and they suffered heavy losses in human life and material assets as well. It was only after the end of the 17th century that the Central European model of normality and development was restored (Pálffy, 2010; Fodor, 2017). In this approach, recognition of the intellectual achievements of the Ottoman period was little acknowledged, or if acknowledged, it was seen as part of the inner workings of the Ottoman Empire. The balance sheet of this period is - rightly - short on positives. The building of Turkish baths and mosques, the introduction of a few dishes and plants, a few poems by Bálint Balassi with Turkish melodies, or Turkish embroidery are just some of the examples that are usually mentioned, among the many negatives. In addition to the overall image of undeniably heavy losses, the war period also provided cultural opportunities in some protected cities, including Pécs, and led to the establishment of schools, the nature of which differed greatly from those of the past.

The intellectual character of the city was very different from that of the pre-Turkish and post-Turkish periods, but there are also indications that its intellectual life was not entirely isolated from Hungary. The city became a *de facto* northern outpost of Greater Bosnia and an outpost of Islam, but its demographic characteristics and complex culture gave it the character of a multicultural and multiconfessional denominational school town. A Christian denominational school coexisted with a school system that taught Islam and several branches of Sufism as well. The dominant narrative of the intellectual centre was the extension of Ottoman rule. Not only was the Unitarian school influential, but elements of Ottoman intellectual achievement were also transferred to Hungarian culture and the school system. At the same time, in the Catholic school system and cultural life which later became dominant, Islam and strict monotheistic Unitarianism could only appear as alien, heretical and hostile.

CONCLUSION

Pécs is an important cultural centre in Hungary, which carries in its spiritual and intellectual heritage the aspirations of about a millennium. Geopolitical determinants can be detected in

its development trajectory. As one of the regional centres of the southern border region of Central Europe, it has had to reorganise its southern (ecclesiastical, educational, cultural) contact functions and, although with a limited territorial scope, its school functions as well. The city has a southern character, a rich cultural heritage and traditionally in its cultural heritage and functions cultural-educational activities with southern Slavic peoples (Croats, Serbs, Bosniaks) play a role.

Some sharp divisions can be detected in the process of its organisation of such links and contacts. Following Ottoman conquest (1543), Pécs found itself on the "other" side of the Central European border zone, but in a similar role. After the reconquest wars, it switched sides again (1686) and became a kind of Catholic fortress. The modernisation process in the 19th century once again opened it up culturally, and in the Austro-Hungarian Empire it became a geopolitical cornerstone of Balkan ambitions, a military and school city with minor imperial ambitions. After the First World War, it was first under Serbian occupation and again threatened by having to "switch sides", but eventually became the southern regional centre of the small Hungarian state in a much smaller, more restricted territorial framework than before. Hungary's accession to NATO and then the European Union brought it into a larger framework that offered new opportunities for links with the southern neighbourhood. In a sense, ambitions similar to those of the Austria-Hungary era were expressed. This influenced the thinking of the city and especially of the University of Pécs about its relations with the south. At the same time, the social foundations of the political ambitions and the increasingly modest resources had to be taken into consideration with great emphasis.

For most of the 20th century, hostile, or at least distant, relations with the southern neighbours were typical. The social foundations of the southern Slavic relations therefore began to crumble as a result of emigration and assimilation, but the development of the school system was able to compensate for this to some extent. In the late 20th century, geopolitical changes reopened the possibility and the need for building networks of international relationships in the Balkans. Today's horizon is the same as at the beginning of the process in 1009: Slavonia, Bosnia and the Balkans beyond have been in focus.

Acknowledgement

This paper has been made with funding from Hungarian Scientific Research Fund (OTKA) project number K 146585 titled "Hungary and the Western Balkans".

REFERENCES

Ács, M. (2022). A muszlim oktatás és neveltetés a hódoltság kori Oszmán Birodalomban, Pécshez kötődő példákkal. *Balkán Füzetek,* Különszám III., 115-126.

Ács, M. (2017). Hagyomány és megújulás: protestáns iskolaügy Pécsett (16. századtól a 20. század végéig). In Sárkányné Lengyel, M. (Ed.), *Hagyomány és megújulás* (pp. 47-62). Pécs: Leöwey Klára Gimnázium. Iskolatörténeti konferencia.

Ágoston, G., & Masters, B. (2008). *Encyclopedia of the Ottoman empire.* Facts On File Publisher, New York. https://psi424.cankaya.edu.tr/uploads/files/Agoston%20and%20Masters,%20Enc %20Ott%20Empire.PDF. pp. 198-200; 209-210; 333-335.

Békefi, R**.** (1909). *A pécsi egyetem. Székfoglaló. (Olvastatott a M Tud. Akadémia II. osztályának 1909. évi február 8-iki ülésén).* Budapest: Magyar Tudományos Akadémia.

Boda, M. (1999). Pécs középkori egyeteme a kutatások tükrében. *Pécsi Szemle*, 2, 1-2, 9-16.

Boda, M. (1992-93). A középkori egyetem lokalizációjáról. *Baranya*, 1992-93/1-2, 5-34.

Cholnoky, J. (1917). A Magyar-medence kapcsolata a Balkánnal. *Turán*, *A Turáni Társaság folyóirata*, 2(1), 76-85.

Csizmadia, A. (1965). A pécsi egyetem a középkorban. *Studia luridica Auctoritate Universitatis Pécs Publicata* 40.

Csizmadia, A. (1967a). A pécsi egyetem és a magyar jogi oktatás útja. *Felsőoktatási Szemle*, 16(9), 513-517.

Csizmadia, A. (Ed.) (1967b). *A Pécsi Egyetem történetéből. 1. kötet.* Pécs: Pécsi Tudományegyetem Állam- és Jogtudományi Kar.

Egyed, I., & Rácz, S. (2020). The Role of Territorial Capital in Urban Renewal in a Non-Core Central European City. *Deturope,* 12(3), 108-132. doi: 10.32725/det.2020.024

Erdősi, F. (2006). A Balkán közlekedésének főbb földrajzi jellemzői. *Balkán Füzetek*, 3, 124.

Fedeles, T. (2009). Studium Generale Quinqueecclesiense. In Fedeles T., Sarbak G., & Sümegi J. (Ed.), *A Pécsi Egyházmegye története. I. A középkor századai (1009-1543)* (pp. 557-572). Pécs. http:// publicatio.bibl.u-szeged.hu/3149/7/3149.pdf.

Fedeles, T. (2017). Oktatási központ a Mecsek lábánál Az első magyar egyetem történetének súlypontjai. *Per Aspera ad Astra.* 4(1-2), 14- 39.

Fedeles, T., Lengvári, I., Pólyák, P., & Schmelczer-Pohánka, É. (2017). *A pécsi felsőoktatás évszázadai.* Pécs: Pécsi Tudományegyetem.

Filákovity, I. (1998). Az első pécsi horvát iskola. *Pécsi Szemle*, 1(1-2), 28-30.

Fodor, F. (1917a). A Délvidék és a Balkán közlekedési kapcsolata. *A Temesvári Balkán Iroda Kiadványai,* No. 1., Temesvár: Hunyadi nyomda.

Fodor, F. (1917b). Temesvár és Szeged földrajzi helyzete és balkáni hivatása. *A Temesvári Balkán Iroda Kiadványai,* No. 4. Temesvár: Hunyadi nyomda.

Fodor, P. (1999). Egy pécsi származású török történetíró. In Szakály F., & Vonyó, J. (Ed.), *Pécs a törökkorban* (pp. 107-131). (Tanulmányok Pécs történetéből, 7.) Pécs: Pécs Története Alapítvány.

Fodor, P., & Pap, N. (2016). Szulejmán szultán szigetvári sírkápolnája nyomában. *Magyar Tudomány,* 177(9), 1057-1066.

Fodor, P., & Pap, N. (2018). In search of the tomb of Sultan Süleyman in Szigetvár. *Acta Orientalia Academiae Scientiarium Hungaricae,* 71, 179-195.

Font, M. (2016). A magyar felsőoktatás születése: 650 éve alapították a pécsi egyetemet. *Jogtörténeti Szemle*, 2, 1-10. https:// majt.elte.hu/media/6f/eb/7ddc3ae1aa529407c642fad4ac26857bec388aa266fbb0c56d066f4bb4cc/MAJT-Jogtorteneti-Szemle-201602.pdf.

Frankovć, D. (2011). Makari-donatori Ilirske (Hrvatske) škole u Pečuhu. *Cris, god.* 13(1), 42 – 45. https://hrcak.srce.hr/file/118618.

Gabriel, A. L. (1969). The Mediaeval Universities of Pécs and Pozsony. Frankfurt Am Main: Josef Knecht.

Gál, A. (2001). Armis Et Litteris - A M. Kir. Honvéd Zrínyi Miklós Honvéd Hadapródiskola történetéből. https://www.arcanum.com/hu/online-kiadvanyok/2vhSzakkonyv-magyarok-a-ii-vilaghaboruban-2/armis-et-litteris-a-pecsi-m-kir-zrinyi-miklos-honved-gyalogsagi-hadaprodiskola-tortenetebol-18981944-B58A/a-pecsi-magyar-kiralyi-honved-hadaprodiskola-B635/

Gerő, G., Fejérdy T., Kühlenthal, M., & G. Sándor, M. (1999). **Die Bischofsburg zu Pécs: Archäologie und Bauforschung (Pécs Püspökvár: régészet és épületkutatás).** Projekt jelentés. Akaprint, Budapest: Akaprint, 151 p. ICOMOS Hefte des Deutschen Nationalkomitees, 22.

Glatz, F. (2007). A Balkán és Magyarország. Váltás a külpolitikai gondolkodásban, 2004–2006. (Előszó helyett). In Glatz, F. (Ed.), *A Balkán és Magyarország. Váltás a külpolitikai gondolkodásban? Magyarország az ezredfordulón. Stratégiai tanulmányok a Magyar Tudományos Akadémián. I. Rendszerváltozás: piacgazdaság, társadalom, politika (*pp. 7–16). Budapest: MTA Társadalomkutató Központ-Európa Intézet.

G. Sándor, M. (2010). Pécs-Fünfkirchen. Az első magyar egyetem (1367) ásatása és épületkutatása. *Pécsi Szemle*, 13(3), 13-25.

Gonda, T., & Kaposi, Z. (2022). Innovative tourism development in a Hungarian regional centre in the 1930s. *Journal of Tourism History*, 2022, 14(2), 202-214.

Györffy, G. (1963). *Az Árpád-kori Magyarország történeti földrajza I.* Budapest: Akadémiai Kiadó.

Györffy, G. (1977). *István király és műve.* Budapest: Gondolat.

Hajdú, Z. (2003). Az intézményes Balkán-kutatás kialakulásának és fejlődésének problémái Magyarországon 1948-ig, különös tekintettel a földrajzi kutatásokra. *Balkán Füzetek,* 1. Pécs: PTE Kelet-Mediterrán és Balkán Tanulmányok Központja.

Hajdú, Z. (2009). Pécs: kapu, vagy vakablak a Balkánra? *Balkán Füzetek,*7(2), 195-203. Pécs: PTE Kelet-Mediterrán és Balkán Tanulmányok Központja.

Hajdú, Z., & Horeczki, R. (2023). Pécs és Baranya megye fejlődése a történetileg változó földrajzi periférián. *Tér és Társadalom*, 37(3), 10-31.

Hajdú, Z., & Rácz, S. (2024). Does István Bibó's Concept of the "Misery of Small States" Carry a Message for the Western Balkans Today? *Balkanistic Forum*, 33(2), 102-119. http://doi.org/10.37708/bf.swu.v33i2.8

Illés, I. (2003). *Közép- és Délkelet-Európa az ezredfordulón.* Budapest-Pécs: Dialóg Campus Kiadó.

Istvánffy, M. (2009). Magyarok dolgairól írt históriája. Balassi Kiadó, Budapest, 496.

Kaposi, Z. (2006). *Pécs gazdasági fejlődése 1867-2000.* Pécs: Pécs-Baranyai Kereskedelmi és Iparkamara.

Karácson, I. (1904). *Evlia cselebi török világutazó magyarországi utazásai 1660-1664.* Budapest: Magyar Tudományos Akadémia.

Karic, D. (2020). A birodalom szolgálatában: Ali Dede élete és munkássága. In Pap, N. (Ed.), *Turbék. Szulejmán szultán zarándokvárosa* (pp. 149-166). Szigetvár könyvek 2. Budapest-Pécs: BTK-PTE.

Kéri, K. (1999). Medreszék a középkori iszlám világban. *Iskolakultúra,* 9(12), 29-39. Elektronikus kiadás: Terebess Ázsia E-Tár. https://terebess.hu/keletkultinfo/medreszek.html.

Kitanics, M. (2013). A Magyarországra irányuló horvát migráció a 16-18. században. PhD doktori disszertáció, Pécs, 182 p.

Klaniczay, T. (1974). Megoldott és megoldatlan kérdések az első magyar egyetem körül. https:// real.mtak.hu/180724/1/cut_ItK_1974_3-20.pdf.

Koller, J. (1784). Historia episcopatus Quinqueeclesiarum. 7 tomi. (4-r.) Posonii, 1782-1812. Sumptibus Joan. Mich. Landerer; Pesthini, typ. Math. Trattner. pp. 69-138.

Kristó, G. (1985). A fekete magyarok és a pécsi püspökség alapítása. *Acta Universitatis Szegediensis: acta historica,* 82, 11-17.

Kuráth, G., Szabó-Bálint, B., & Jarjabka, Á. (2021). Can a university's anniversary be used to strengthen employee engagement and improve the employer brand? *Perspectives: Policy and Practice in Higher Education*, 26(1), 11–18. https://doi.org/10.1080/13603108.2021.1955033

Lengvári, I. (2004). A város és az „árva leány" - Pécs és az Erzsébet Tudományegyetem. Egyetemváros - Trianonváros? *Limes - Tudományos szemle*, 17(4), 83-92.

Lengyel, A. (1967). A Pécsi Királyi Akadémia története (1785-1802). In Csizmadia, A. (Ed), *A Pécsi Egyetem történetéből* (2/1) (pp. 261-282). Jubileumi Tanulmányok. 1. Kötet. Pécs: Pécsi Tudományegyetem Állam- és Jogtudományi Kar.

Méreg, M. (2022). Klebelsberg Kunó 1922-es pécsi látogatása. https://tgyoblog.lib.pte.hu/klebelsberg-1922-pecs/

Molnár, A. (2005). A Katolikus Egyház intézményrendszere a hódolt Magyarországon. In Fedeles, T., & Varga, Sz. (Ed.), *A pécsi egyházmegye a 17-18. században* (pp. 7-18), Pécs: Pécsi Hittudományi Főiskola, Egyháztörténeti Intézet.

Nagy, I. (2010). Szepesy Ignác és a reformkori pécsi irodalmi műveltség. Öttorony XV. *Pécsi Szemle*, 13(3), 26-45.

Pap, N., Gonda T., & Raffay Z. (2013). Pécs, a possible gateway city. *Forum Geographic*, 12(29), 178-186. https://forumgeografic.ro/wp-content/uploads/2013/2/Pap.pdf

Pap, N. (Ed.) (2020).*Turbék. Szulejmán szultán zarándokvárosa.* Szigetvár könyvek 2. Budapest-Pécs: BTK-PTE.

Petrovich, E. (1971, 1972). A középkori pécsi egyetem épülete és címere. In *Janus Pannonius Múzeum Évkönyve* 16. (pp. 153-166). Pécs: Janus Pannonius Múzeum.

Petrovics, I. (2005). A középkori pécsi egyetem és alapítója. *Aetas*, 20(4), 29-40.

Póla, P., Pálné Kovács, I., & Gibárti, S. (2023), *Pécs, egy periféria fővárosa.* Tér és Társadalom, 37(3), 148-175. doi: 10.17649/TET.37.3.3493

Polyák, P. (Ed.) (2023), Reprezentáció és nyilvánosság az Erzsébet Tudományegyetemen. *Per Aspera ad Astra,* 10(1-2).

Polyák, P. (2016). *„A hallgatóknak meg kell lenni". A felsőoktatási beiskolázás és felvételi rendszere az első ötéves terv idején.* Pécs: Pécsi Tudományegyetem Egyetemi Levéltár.

Popély, G. (2000). Az Erzsébet Tudományegyetem végnapjai az impériumváltás után. *Irodalmi Szemle*, 43(1-2), 74-87.

PTE Stratégia, 2023-2030. Retrieved from: https://pte.hu/hu/egyetemunk/strategia.

Rácz, S., & Egyed, I. (2023). From the "West of the East" to the "East of the West": The post-socialist economic and structural transition of Central and South-Eastern Europe. *Deturope,* 15(2), 9-27. doi: 10.32725/det.2023.010

Rajczi, P. (1998). A pécsi püspöki jogiakadémia története. *Pécsi Szemle,* 1(3-4), 33-39.

Ravasz, J. (1992). A volt pozsonyi egyetem elhelyezése Pécsett. *Honismeret*, 20(3), 82-87.

Rollo-Koster, J. (2015). *Avignon and Its Papacy, 1309–1417: Popes, Institutions, and Society*. New York-London: Rowman & Littlefield Publishers.

Sándor, M. (1998). A középkori pécsi egyetem helye és épülete. *Pécsi Szemle*, 1(3-4), 11-15.

Schneider, I. (2009). Gróf Klebelsberg Kunó kultuszminiszter révén került Trianon után Pozsonyból Pécsre az Erzsébet Tudományegyetem. *Pécsi Szemle*, 12(3), 86-95.

Schmelczer-Pohánka, É. (2017). Egy legenda nyomában. A pécsi egyetemi hallgatók ereklyéje a mohácsi csatából. *Per Aspera ad Astra* , 4(1-2), 211-221.

Scott, J. W. (2022). Hungarian Border Research as a reflection of European integration and regional transformation. *Tér és Társadalom,* 36(3), 28-46. doi: 10.17649/TET.36.3.3428

Sipos, N., Kuráth, G., Bányai, E., & Jarjabka, Á. (2021). Applicants' institution selection criteria in the higher education: An empirical study in Hungarian higher education management. *Management in Education*, 37(4), 178-189. https://doi.org/10.1177/08920206211030975

Sokcsevits, D. (2004). *Magyar múlt horvát szemmel.* Budapest: Magyar a Magyarért Alapítvány.

Sudár, B. (2010). *A pécsi Jakováli Haszan pasa-dzsámi.* Budapest: Műemlékek Nemzeti Gondnoksága.

Sudár, B. (2012). Pécs 1663-ban. Evlia cselebi és az első részletes városleírás. *Források Pécs történetéből 4*. Pécs: Pécs Története Alapítvány, Kronosz Kiadó.

Sudár, B. (2014). *Dzsámik és mecsetek a hódolt Magyarországon.* MTI BTK TTI, Budapest.

Sudár, B. (2020). A városkép a hódoltság idején. Imahelyek, küllijék. In Sudár, B., Varga, S., & Varga, J. J. (2020), *Pécs története III. A hódoltság korában (1543-1686) (*pp. 263-268). Pécs-Budapest: Pécs Története Alapítvány, Kronosz Kiadó, Bölcsészettudományi Kutatóközpont.

Szabó, P. (1940). A *Magyar Kir. Erzsébet Tudományegyetem és irodalmi munkássága.* Pécs: Szerzői kiadás.

Szabó, P. Z. (1942). Szeged és a Balkán. *Délvidéki Szemle*, 1(8), 305-309.

Szögi, L. (2016a). A pécsi felsőoktatás évszázadai. Szerkesztette Fedeles Tamás, Lengvári István, Pohánka Éva, Polyák Petra. Pécs, [é. n.]. *Gerundium*, 7(1-2), 245-250.

Szögi, L. (2016b). A pécsi felsőoktatás intézményeinek hallgatói (1714) 1782-1852. *Felsőoktatástörténeti Kiadványok, új sorozat 12., A pécsi egyetemi könyvtár kiadványai 15.* Pécs-Budapest.

Tringli, I. & Nagy, B. (no data). Egyházszervezet Szent István korában. BTK TTI, https://tti.abtk.hu/terkepek/terkepek/1031-1043-egyhazszervezet-szent-istvan-koraban

Vass E., & Szita L. (1996). A török hódoltság alatti város és a felszabadító háborúk. 1526-1686. Pécs város Szulejmán szultán árnyékában. 1526-1543. In Nagy I. G., & Kövecs F. (Ed.), *Pécs ezer éve. Szemelvények és források a város történetéből (1009-1962). Történelmi olvasókönyv* (pp. 61-107). Pécs: Pécs Története Alapítvány.

Varga, L. (1948). *Magyarország és a Balkán vasúti vonatkozású kapcsolatai.* Budapest: Balkán Intézet, Balkán Könyvtár No. 4., Radó ny.

Varga, S. (2009). *Irem kertje. Pécs története a hódoltság korában (1526-1686).* Pécs: Pécs Története Alapítvány, Pécsi Hittudományi Főiskola.

Vones, L. (1998). *Urban V. (1362-1370): Kirchenreform zwischen Kardinalkollegium, Kurie und Klientel.* Stuttgart: Anton Hiersemann. https://regipecs.blog.hu/2019/05/15/zidina_es_egyeb_kornyekek.

Original scientific paper

REGIONAL SITUATION AND PERFORMANCE EVALUATION OF TOURISM DEVELOPMENT IN THE PÉCS-VILLÁNY TOURISM AREA

Ádám GYURKÓ[a], Tibor GONDA[b]

[a] Assistant Professor, Eszterházy Károly Catholic University, Faculty of Economics and Social Sciences, 3300 Eger, Eszterházy tér 1., gyurko.adam@uni-eszterhazy.hu
[b] Associate Professor, University of Pécs, Faculty of Business and Economics, 7622 Pécs, Rákóczi út 80., gonda.tibor@ktk.pte.hu

Cite this article: Gyurkó, Á., Gonda, T. (2024). Regional situation and performance evaluation of tourism development in the Pécs-Villány tourism area. *Deturope.* 16(3), 36-56.

Abstract

The study examines the tourism situation and performance of the Pécs-Villány tourism area between 2018 and 2023. The aim of the research is to analyse the effects of the pandemic, to explore the spatial rearrangements of the region and to examine the quantitative and spatial distribution of tourism development resources. In addition, the study will review the delimitation of the Pécs-Villány tourism area at the municipal level, as defined by Government Decree 429/2020 (IX. 14.). The results show that the region was not as severely affected by the pandemic as the national average, but in 2023 there was a significant decline in the tourism sector. Another key conclusion of the research is that a more efficient and equitable allocation of development resources would also be crucial for the balanced development of the region.

Keywords: spatial reallocation, tourism competitiveness, tourism development, tourism benchmarking

INTRODUCTION

The specificity of the Pécs-Villány area is due to the importance of cultural and wine tourism, active and eco-tourism and the significance of health tourism. The region has the mild Mediterranean atmosphere of Pécs and the charm of Villány with its wineries, while a wide range of attractions and cultural events can ensure that visitors have a rich and varied experience. The aim of the research is to assess the situation and performance of tourism in the Pécs-Villány tourism area between 2018 and 2023, with a special focus on 2020 and 2021 as the pandemic has caused dramatic changes in both domestic and international tourism during this period. However, the recovery was not made easier in 2022, as the sharp increase in inflation, which also affected the tourism sector to a greater extent, did not allow a clear recovery from the crisis.

For holidays, the increase in the consumer price index for 2023 was above the average inflation rate for all goods and services, according to the Hungarian Central Statistical Office (HCSO). The increase in the price of domestic holiday services in 2023 was 121.9% (HCSO, 2024), while for all goods and services it was 117.6% (HCSO, 2024). It can therefore be said that the tourism sector has been affected by an above average inflationary impact. These tendencies have affected the various tourist destinations in different ways, with the result that regional competition is likely to intensify again.

The main focus of the research is therefore to shed light on how domestic tourism indicators have changed during this period and what territorial rearrangements can be observed in the Pécs-Villány tourism area. In addition, the quantitative and territorial distribution of development funds allocated to the region – on the grounds of tourism development – will also be examined.

THEORETICAL BACKGROUND

The COVID-19 epidemic has posed an unprecedented challenge to the global economy, with ripple effects reaching across the globe. The disruption caused by the pandemic hit trade, financial markets and most industries hard. Healthcare systems were the hardest hit. Measures taken to contain the spread of the virus, such as closures and travel restrictions, led to a drastic reduction in economic activity and consumer spending. Many sectors such as hospitality, tourism and retail have been almost completely paralysed (Fekete-Fábián & Jánosi, 2022; Fekete-Frojimovics et al., 2024; Hajdú & Rácz, 2020).

A tourist destination can only be successful and competitive from a tourism point of view if four general conditions are met. These conditions are safety, quality of life, freedom from threats and an adequate level of public health (Michalkó, 2016, 2020). The public health situation was even more dramatically raised during the SARS-CoV-2 pandemic. The tourism sector was one of the first to suffer a tragic collapse as a result of the coronavirus, with international tourism in 2020 down 74% on the previous year (Gössling et al., 2020; Nod et al., 2021; Michalkó, 2023; Palkovics, 2022). Despite a drop in traffic in 2020-21, tourists' willingness to travel has not decreased significantly (Fotiadis et al., 2021; Kovács et al. 2021). This is supported by the fact that the sector was able to show good results in the summer months, which were less constrained, but was limited to shorter stays and primarily to closer domestic destinations. The historical low also provided an opportunity to rebuild and

redesign, so that the principles of sustainability could be more clearly applied in the destinations (Kupi & Szemerédi, 2022).

A tourist region is a well-defined geographical area with a rich tourist offer and attractions. Furthermore, its built environment, natural assets and cultural values combine harmoniously to create a unique atmosphere. It is also important that, at least among domestic tourists, it is a well-known and popular destination, where development takes place within a coherent concept and the creation of a regional tourism brand serves not only local but also national interests (Jóvér et al., 2019). The delineation of tourism areas is a key issue in the design of tourism development strategies and the optimal allocation of resources. However, since tourist attractions are rarely confined to administrative boundaries, it is necessary to define tourism development on the basis of attractions at the territorial level (Hernández-Martín 2016). In Hungary, several scientific studies have been conducted that define tourism areas in different regions of the country according to comprehensive methodologies (Aubert & Szabó, 2007; Bujdosó et al., 2019; Gyurkó & Bujdosó, 2017; Gyurkó, 2020). According to the most general definition, a destination is an area offering tourism services and activities that tourists choose as a destination in their travel decision because it has some aspect of attraction for them. Destinations "become central elements of the tourism system as they are demand-driven homogeneous supply units that provide tourists with different services; and although they are collectively created, they are also independently fulfilled" (Aubert, 2011a, p. 143). In the domestic context, the National Tourism Development Strategy 2030 (2017) also provides a comprehensive definition, stating that: "A destination is a geographically definable, identifiable area that can be presented in the tourism supply market as a single host area and is made up of elements that are coherent in terms of built environment, natural geography or cultural values."

A large number of measures and methodologies can be used to define destinations, but there is no standardised procedure at national or international level (Végi, 2021; Pap, 2007). This is mainly due to the fact that the delimitation of tourist areas is a very complex process for which there is no universally applicable methodology (Rodríguez-Rodríguez & Hernández-Martín 2020). No two areas have exactly the same characteristics and the golden rule of delimitation is that it must be based primarily on the characteristics of the area. On this basis, all proposed indicators can only be a starting point and should be adapted to the specific needs of the region when defining tourist destinations. There is, therefore, no universal good practice but the integration of some generic indicators can be paramount in this process.

One of the most commonly used indicators for defining tourism destinations is tourism revenues which is frequently used by the United Nations World Tourism Organization (UNWTO) (Fintineru et al., 2014). This indicator is also used by the World Travel and Tourism Council (WTTC), but the Council also considers the number of people employed in the sector (Bednarska, 2013). Finally, the third most widely used indicator is the number of nights spent, which is used by, for example, the European Union and the Member States of the Integration (Roman et al., 2020).

The central actor of tourism management in Hungary is the Hungarian Tourism Agency (MTÜ), which operates under the supervision of the Prime Minister's Office and is responsible for the implementation of the objectives of the National Tourism Development Strategy 2030, the elaboration of tourism development strategies and national and international tourism marketing. The MTÜ's activities range from defining the main orientations for tourism development to tourism branding, ensuring that development resources are allocated in a centrally coordinated manner. At regional level, county and municipal governments and local Tourism Destination Management (TDM) organisations are responsible for coordinating and implementing local development. These organisations are responsible for integrating local tourism needs and opportunities with central strategic objectives, but are often criticised for being less supportive of local initiatives. The allocation of tourism resources is centralised, which in many cases does not allow for development based on the specificities of localities. More emphasis should be given to local initiatives and a more decentralised allocation of resources to create more sustainable and competitive tourist destinations (Csapó, 2019).

Hungary's tourist regions

In Hungary, the first comprehensive destination and regional approach to tourism began to emerge in the 1970s and 1980s. During this period, a Regulation of the Council of Ministers was issued on priority tourist areas and resort zones and on the establishment of permanent tourism committees. At the same time, a statistical system for monitoring and registering tourism processes was introduced and it was operated by the Institute of Urban Science and Design (VÁTI), Institute of Internal Trade Research BKI), Hungarian Central Statistical Office (KSH) and the National Tourist Office (Dávid et al., 2003; Aubert, 2011a). These factors have clearly indicated that the key to the dynamic expansion of the country's tourism statistics lies primarily in destination-oriented thinking.

Priority holiday areas can be understood as areas of regional importance and special significance. These areas require integrated development and regulation, often involving several regions, and may be characterised by voluntary partnerships outside statutory requirements (National Concept of Territorial Development, 2005). Examples of areas that may fall into this category include national parks and environmentally sensitive areas.

The priority holiday areas have been defined on the basis of tourism attraction indicators. The municipalities in this category are rich in tourist attractions, services and infrastructure (Aubert, 2011b; Pap, 2005). Based on the legislation in force at the time (Government Decree 2012/1986), the municipalities in our country were classified into four groups according to their touristic importance.

- Priority resort areas (353 settlements) (Budapest, Lake Balaton, Danube Bend, Lake Velence, Mátra-Bükk, Sopron-Kőszeghegyalja, Lake Tisza, Mecsek-Villány).
- Resort areas (1.363 settlements) (Western border edge, Göcsej, South Zala, Inner-Somogy, Kapos Valley, Mecsek and Villány Mountains, Rába-Marcal, Szigetköz, Vértes-Gerecse, Bakony, Budapest area, Ráckevei-Duna, the Lower Danube section in Hungary, the Upper and Central Tisza regions, the Tisza section in Szolnok, the Tisza-Körös region, Cserhát and its surroundings, the Zemplén Hills, Aggtelek and its surroundings).
- Settlements with recreational and leisure facilities outside the holiday area (139 settlements).
- Non-resort settlements.

The political regime change of the 1990s not only transformed economic sectors, but also induced spatial processes that affected the tourism sector (Palkovics, 2022). For Hungary, the biggest initial negative impact in terms of tourism was that East-Central Europe became an open space, losing its unique attractiveness and this openness also resulted in the emergence of significant competitors. In addition, regional management of tourism was only present in Lake Balaton and the South Transdanubian region which made it urgent to improve the quality of domestic destinations (Aubert, 2011b).

The lessons of the Prime Minister's Tourism Day in 1996 highlighted the situation of domestic tourism after the change of regime and the need to boost it. In the socialist period, family reunification between East and West Germany provided a significant demand which disappeared with the change of regime and the opening of borders. The conference therefore initiated a change of direction, with each ministry being given specific tasks to support, in

particular, the development of domestic tourism. This strategic move laid the foundations for a long-term tourism management system that served the sustainable development of Hungarian tourism (Michalkó et el., 2023).

In Hungary, the nine tourism regions established in 1998 served as the basis for the regional development of tourism. These were named in Decree no. 28/1998 (13.V.) of the Ministry of Industry and Trade (IKIM). The main purpose of their creation was to promote regional and local resources for tourism development and to strengthen cooperation and coordination. The professional management of tourism development in the regions was undertaken by the Regional Tourism Committees, complemented by the Regional Marketing Directorate (Aubert, 2011b; Patkós, 2011). The tourism regions were extended beyond the borders of the statistical region with two separate areas, Lake Balaton and Lake Tisza. In addition, the touristic region of Northern Hungary did not include the western parts of Nógrád County (which belong to Budapest and its surroundings) and some settlements in Southern Heves and Southern Borsod-Abaúj-Zemplén County were added to the Lake Tisza region.

The National Tourism Development Strategy 2030 has identified various priority tourism development areas which were also the subject of a government decision in 2017 (Hungarian Tourism Agency, 2014; Aubert et al., 2017). The National Tourism Development Strategy 2030 aims to promote a destination-centred approach. Instead of the former tourism regions, priority tourism development areas have become the main focal points for tourism development. A total of five regions, comprising eight destinations, have been given the flagship designation with the aim of better achieving tourism development policy objectives. The designation of the areas was based on geographical and infrastructural characteristics, the intensity of demand, the elements and characteristics of the tourism offer and the supply of attractions (Kovács & Kiss, 2018). The priority tourism areas have access to the financial resources of the Kisfaludy Tourism Development Programme which was the largest programme of tourism development in Hungary from national funding (Horváth et al., 2018).

The Pécs-Villány destination is one of the classic hospitality areas of the country, with a centuries-old tradition of hospitality in the area. Unfortunately, during the period of the regime change, the relative position of the region deteriorated due to the interaction of several factors. Firstly, the effects of the South Slavic war prevailed, which for years caused travellers to consider the region as an unsafe destination (Rácz ,2017). Traditional large-scale industry in the region ceased to exist, and the population of the cities decreased significantly (HORECZKI et al. 2023). Another major difficulty is the underdeveloped public transport in the destination, although its importance is clear (Samková & Navrátil, 2023) The situation

was worsened by the lack of targeted tourism development, compounded with a partial lack of professional management and marketing knowledge, which is essential in tourism. The general decline in the region's visitor numbers, the existence of the established motorway network and the partial success of the Pécs European Capital of Culture 2010 programme have not been able to bring about a significant turnaround, and tourism in the region is still underperforming. While other rural areas of the country have seen significant attraction developments and emblematic hotel construction, the tourism offer of the Pécs-Villány destination is – with a few welcome exceptions – stuck at post-regime change levels, despite an excellent destination product base in national comparison:

The cultural offer of Pécs spans a heritage of more than two thousand years. Walking around the city, you can discover almost every period of history – the Roman period with its World Heritage-listed early Christian tomb complex, the founding of the state with the Romanesque altar church of the cathedral, the Turkish occupation with the mosque in the main square, the city centre with its buildings of different architectural styles (neo-Baroque, classicist, art nouveau, etc.), or even the most outstanding monuments of industrialisation, the products of the Zsolnay factory, the Zsolnay Cultural Quarter, the Zsolnay ornamental fountains and ceramics in the city centre, created in connection with the European Capital of Culture 2010 title. The city's cultural offer is also internationally competitive (Berki & Csapó, 2006).

Villány is one of the few areas in the country that has “invented and implemented itself” without any particular central intervention. Unlike Tokaj, the wine-growing region has been made nationally famous not by its wines but by the hard work of renowned and popular winemakers and wineries (Bock, Gere, Tiffán, Polgár, Günzer, Sauska, Vylyan, Jammertal, etc.). Local product production is a priority for gastronomic tourism (Ülker & Karamustafa, 2023; Kulát et al., 2023), and a wine road brand has been developed to promote this. They have set an example by offering traditional wine tasting with local dishes (Swabian dishes – stifolder, steamed dumplings, strudel), by hosting guests in villages and later by creating the first “wine wellness” services in the country (Crocus Gere Borhotel, Bock Hotel Ermitage).

Orfű is a natural attraction for tourists, offering opportunities for swimming and active relaxation, while hosting numerous festivals and events throughout the year.

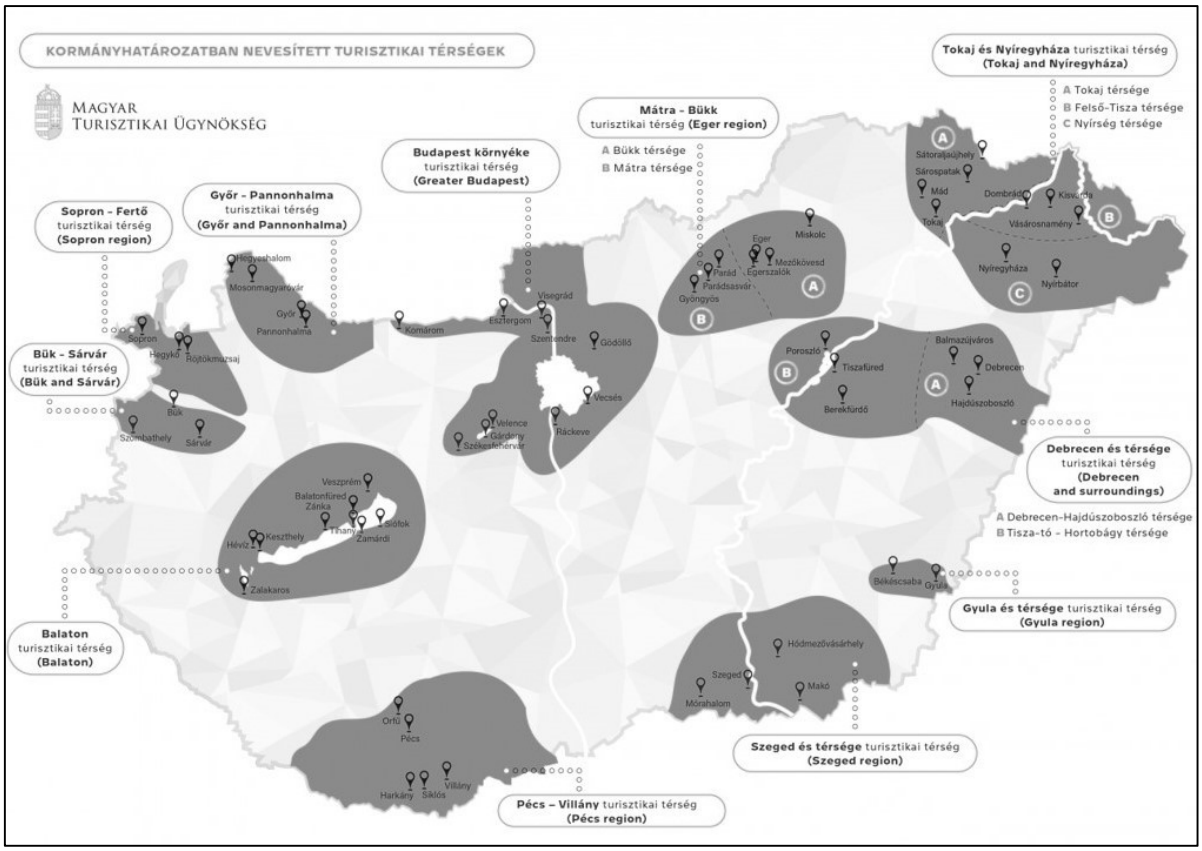
The spa of Harkány, which has been in operation for 200 years, has been a popular destination for people seeking a cure since the end of the 19th century and its medicinal waters, which are also suitable for the treatment of psoriasis, still have a lot of untapped potential.

The quality of the basic tourism infrastructure (accommodation and catering) in the region can be considered as mediocre at best, apart from the smaller capacity premium hotels, and with a few exceptions, the catering facilities show a similar quality; the destination is not currently suitable for attracting a high spending clientele, with the exception of Villány.

Tourist regions based on Government Decree 429/2020 (IX. 14.)

In the autumn of 2020, the Government of Hungary designated 11 tourist areas in Hungary on the basis of Government Decree 429/2020 (IX. 14.). By designating destinations, the aim was to improve the efficiency of tourism operations and to create easily identifiable and communicable destinations in line with the objectives of the NTDS 2030. In addition, the definition of tourist areas aims to strengthen cooperation between operators once they have been properly positioned, to increase the competitiveness of the host areas and to transform existing offer elements into a coordinated package of services. It is important to note that these distinctive destinations are able to propose competitive travel offers in the short term to foreign and domestic visitors in search of new experiences and have continuously increasing unit spending.

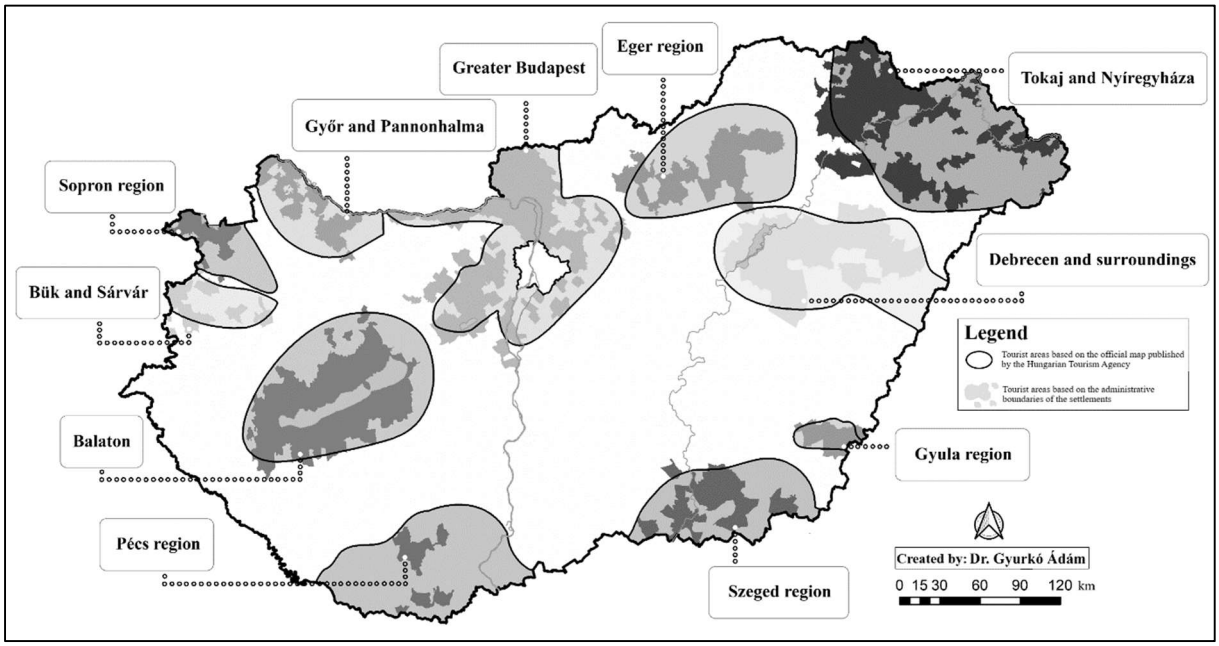
Figure 1 Tourist regions of Hungary according to Gov. decree 429/2020 (IX. 14.)



Source: https://mtu.gov.hu/dokumentumok/TERKEP-ARANY-JO-1008.pdf

Figure 1 shows the map of the tourist areas in Hungary officially published by the Hungarian Tourism Agency (MTÜ) on the basis of Government Decree 429/2020 (IX. 14.). During the professional conferences in tourism and catering, authors have often faced the professional criticism that the map, published by the MTÜ, gives the impression that a large part of the country is a tourist area, but the list of municipalities included in the delimitation leaves the reader with a feeling of incompleteness. The reason for this is that in the mapping of the spatial delimitation, MTÜ has neglected the geoinformatics approach, as some areas would in reality be so small and/or so shaped that it would be problematic to call them a region. As a result, while Figure 1 provides an aesthetic map whose content can be easily and effectively used as a basis for marketing strategies, the professionalism of the geoinformatics and tourism aspects have been sidelined. In response to these, the authors agreed to produce a more accurate overview map of the municipalities included in the tourism area delimitation which was then compared with the map published by the MTÜ.

Figure 2 Tourist areas in Hungary defined on the basis of Gov. decree No 429/2020 (IX. 14.) based on the map officially published by the MTÜ and the administrative boundaries of the municipalities



Source: own editing based on own research.

Figure 2 shows the tourist areas in Hungary defined on the basis of the administrative boundaries of the municipalities in line with Government Decree No. 429/2020 (IX. 14.). This map already shows the actual territorial extent of the tourist areas beyond the approximate regional delimitation of the MTÜ. The aforementioned geoinformatics and touristic criticisms

are clearly visible on the map as the administrative delimitation of the areas in reality shows a completely different picture than the map published by the MTÜ. A very significant criticism is that the map published by the MTÜ can be misleading even for the professional observer. In professional circles, therefore, the use of Figure 2 produced by the authors is justified.

DATA AND METHODS

The regional tourism performance assessment was based on the following statistical data, all of which were taken from the Information Database of the Hungarian Central Statistical Office. In most cases, turnover indicators for commercial accommodation, but in some cases also for private and other accommodation, were analysed.

- Number of nights spent in accommodation by foreign visitors
- Number of guests in accommodation
- Number of nights spent in accommodation

Territorial data on EU funds allocated to tourism development is available through the Funded Project Finder application at https://archive.palyazat.gov.hu. After filtering, the amount of tourism funds allocated to municipalities, the scope and content of projects were summarised.

A further aim of the research was the professional correction of the overview map of the tourist areas issued by the Hungarian Tourism Agency on the basis of Government Decree No. 429/2020 (IX. 14.). Since the map of the MTÜ does not fully reflect the actual area of the destinations, a new map was drawn up using geoinformatics methods, based on the administrative boundaries of the settlements included in the delimitation.

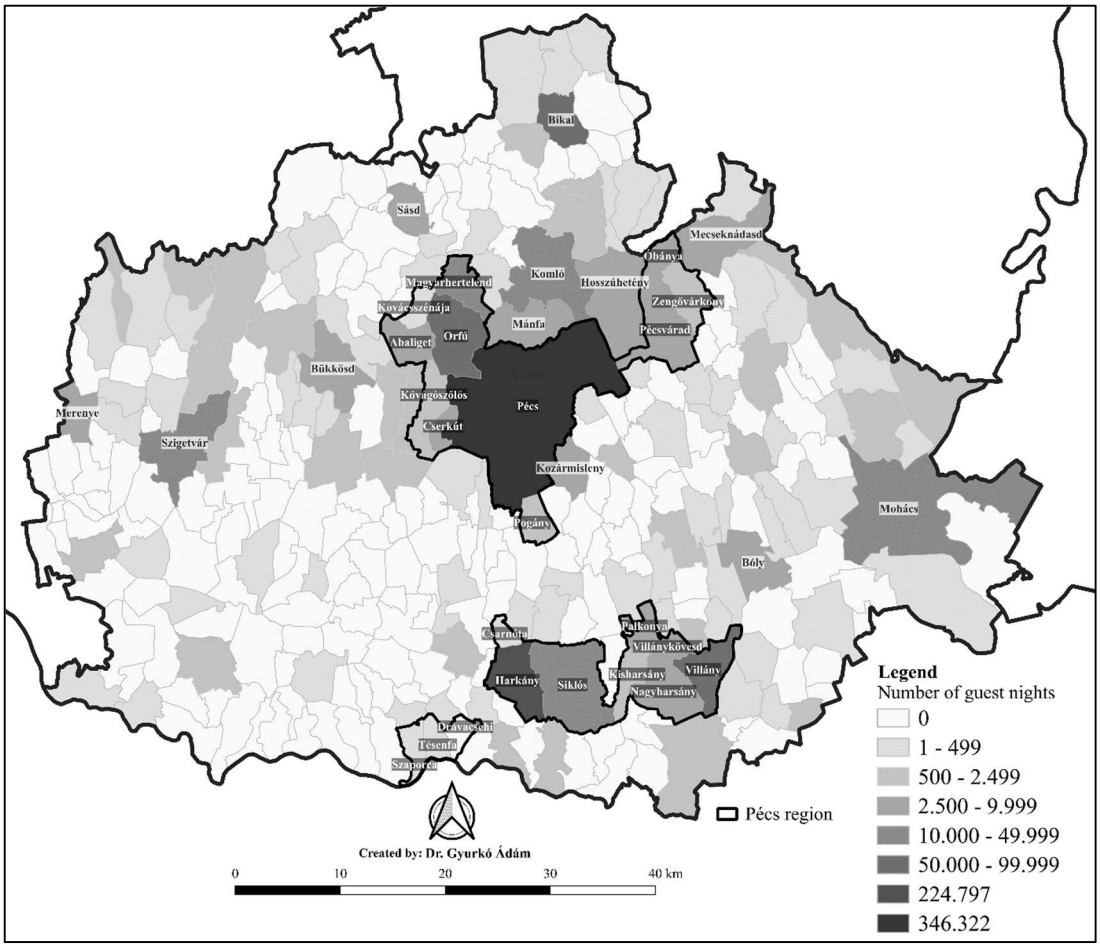
RESULTS

In line with the names of the two settlements, the Pécs-Villány tourist region can be defined as a destination based on cultural, wine and gastronomic products, health tourism products through the settlement of Harkány and active recreation due to Orfű (Kovács & Horeczki, 2023; Csapó, et al. 2015). This is supported by a recent research, the results of which show exactly which factors attract the interest of tourists arriving in the county. Based on the evaluation of this research, a study, aimed at identifying the image elements of the South Transdanubian Tourism Region, showed that the three most important elements in the profile of our destination – according to the opinions of the guests surveyed – are natural values, wine and culture/history (Spiegler et al., 2023). Partly linked to the above, but still mentioned as a separate category in the context of its distinctive tourism offer, it is also appropriate to mention spa and health tourism (Szabados & Merza, 2023).

The presence of around 5,000 foreign students studying at the University of Pécs has a significant impact on the Pécs-Villány tourist area. Foreign students are not only part of university life, but also use the various services of the city. This creates a continuous demand for local catering, accommodation and leisure activities, which are closely linked to the tourism sector. The presence of students has a direct economic impact, as they visit restaurants, entertainment venues, cultural and tourist facilities, which contributes to the maintenance of tourism in the city of Pécs. In addition, students are often visited by family members and friends, who usually book accommodation and participate in tourist activities. This increases the number of overnight stays and generates additional revenue for the region. And the cross-cultural contacts mediated by foreign students also enhance the reputation of the region, as students share their experiences with their home communities. In the longer term, this can help to raise the profile of the region, potentially attracting more tourists. These effects should be taken into account when drawing up tourism strategies and development plans, as tourism generated by foreign students can be an important part of the economic and cultural life of the region.

The destination has not always been one of the priority areas in terms of hospitality, but it is nevertheless based on a centuries-old tradition. The touristic infrastructure and superstructure of the area is generally of medium quantity and quality. There are only a few small-capacity premium hotels in the area. Villány is the only destination in the region capable of attracting big spender tourists (Szabó, 2023). Overall, it can be concluded that currently only Budapest and the Lake Balaton region are considered to be destinations with significant international tourism among the 11 Hungarian tourist regions identified by the Hungarian Tourism Agency. According to the 2019 statistics of the Hungarian Central Statistical Office (KSH), Budapest and the Lake Balaton region together account for 72.4% of the total number of nights spent by foreign tourists in Hungary (Budapest 60.1%, Lake Balaton region 10.3%), which highlights the regional disproportions within the structure of Hungarian tourism (KSH 2019). The data also show that Hungary is in relatively strong demand from foreign tourists, while the untapped and under-utilised rural destinations and weak regional cooperation systems (clusters, TDM cooperation) actually mean that most areas of Hungary benefit to a very limited extent from foreign tourists – and partly from domestic tourists. Therefore, in the long-term tourism development of the Pécs-Villány tourism area, it is important to pay special attention to the development of a regional cooperation institutional system and business ecosystem that can undertake the future stimulation of tourism in the destination more effectively with the help of competitive branding, more professional marketing activities and demand-generating networked destination development.

Figure 3 Number of nights spent in commercial, private and other accommodation in Baranya County and in the Pécs-Villány tourist area in 2023



Source: own editing; Data: KSH database, 2023.

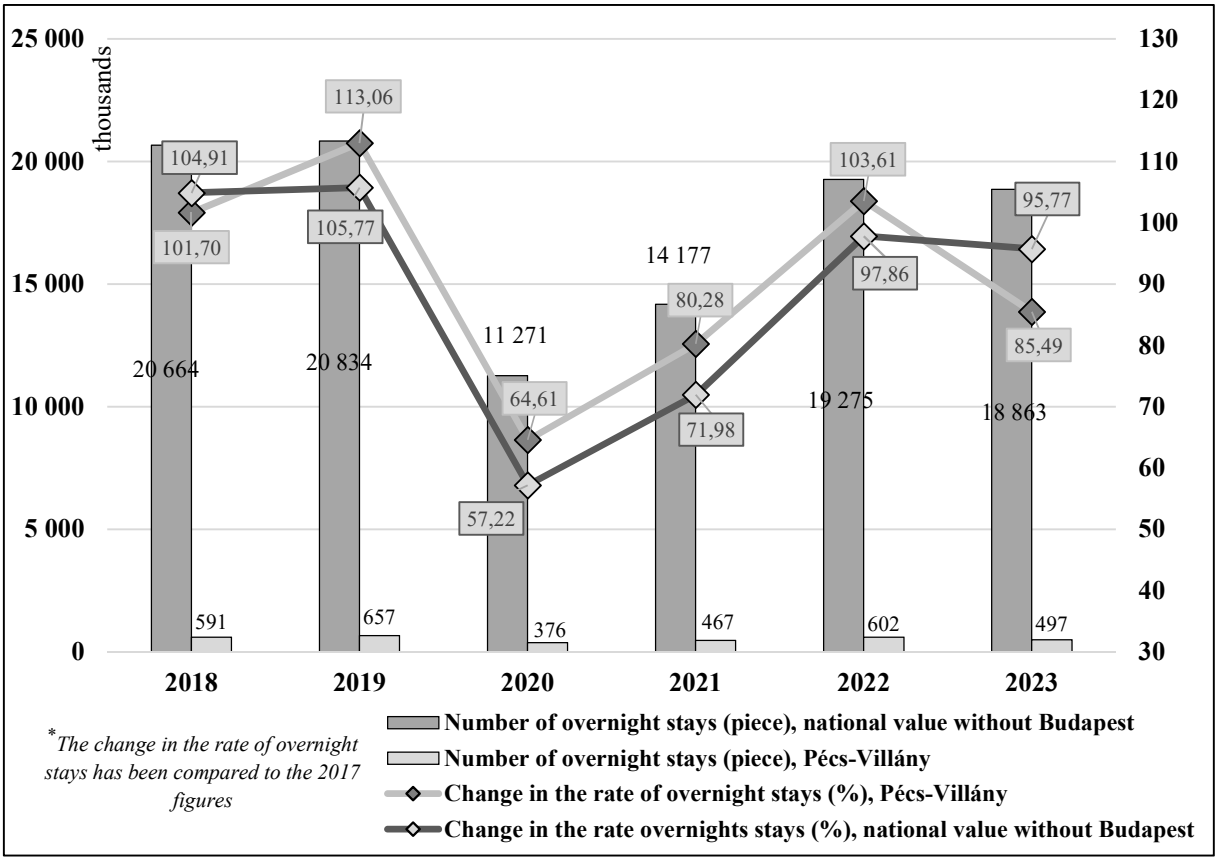
In terms of the number of nights spent in commercial, private and other accommodation, Pécs (346,322 nights) and Harkány (224,797 nights) were the most visited settlements in Baranya County in 2023 (Figure 3). At the regional level, Villány (75,451 nights), Bikal (66,104 nights) and Orfű (57,065 nights) were the most significant settlements with more than 50,000 nights. As for the county's tourism performance and potential, data show mediocrity by national standards. The Pécs-Villány tourist area, defined on the basis of Government Decree No 429/2020 (IX. 14.), essentially includes the two most important products of the tourist destinations of Baranya County. However, the delimitation of the municipalities raises several professional questions. In addition to the fact that the 22 municipalities in question do not form a geographical unit, the following problems can be identified in relation to the delimitation:

- There are a few bordering settlements in the area whose omission is not professionally justified (e.g. Hosszúhetény, with its significant gastronomic, natural, cultural

attractions, and two Michelin-recommended restaurants, and Mecseknádasd which also has significant tourism potential).

- The two settlements of the county with a very significant historical heritage, Mohács and Szigetvár, are not included in the delimitation.
- The omission of Mohács, in particular, gives rise to a number of professional objections. The town has good tourist attractions (*busójárás*, hotel cruise tourism, the memorial site of the Battle of Mohács, etc.), although the current tourism figures are far below the potential. At the same time, the fact that the municipality is preparing for the 500th anniversary of the Battle of Mohács with considerable government funding could have a significant impact on tourism in the area.
- According to the tourism figures of Drávacsehi, Tésenfa and Szaporca, it is unclear why they are treated as part of the region.
- Based on their tourism figures, Bikal, Komló, and Szigetvár are very important tourist settlements, making their inclusion in the tourist area justifiable. Moreover, in the case of Komló, the territorial link is also evident.

Figure 4 Change in the number (piece) and rate* (%) of nights spent in commercial accommodation between 2018 and 2023



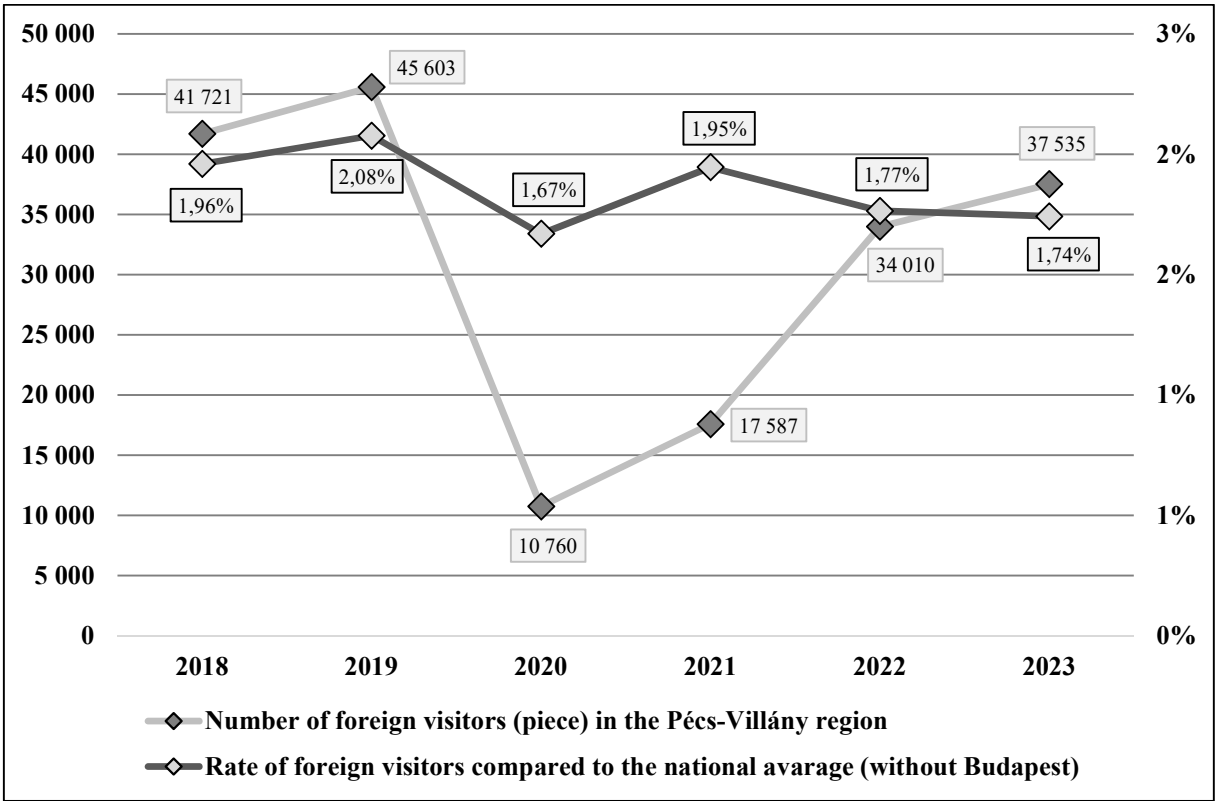
Source: own editing; Data: KSH database, 2023.

Figure 4 illustrates the change in the number (piece) and rate (%) of nights spent in commercial accommodation at the national level (excluding Budapest) and in the Pécs-Villány tourism area between 2018 and 2023. Almost all socio-economic indicators characterise the capital city as disproportionately large. For this reason, the statistical indicators used in this study of tourism performance are mostly based on the situation without Budapest. The tourism performance of the Pécs-Villány tourist region is not outstanding as it accounts for only 3-4 % of the national total. The most visited settlement in the region is Pécs which was “only” the 20th most visited settlement in the country in 2023 although it accounts for almost half of the region's performance (46.30%). Pécs ranked 9th in terms of the number of nights spent in commercial accommodation between 2001 and 2003 (KSH, 2024), but has seen a significant decline since that time, one of the main reasons being that the city has not been able to exploit the potential of spa development. While other cities in Hungary have undertaken significant spa developments, which have increased their attractiveness to tourists, Pécs has failed to exploit this potential, partly due to the lack of long-term coordinated development strategies by the managing bodies and partly due to its omission from local tourism development priorities.

The coronavirus epidemic, unfolding in 2020-21 and later becoming a worldwide pandemic, did not affect the Pécs-Villány tourism region as severely as the national average. In fact, according to Figure 4, in 2022, tourism in the region even exceeded the 2017 performance. In 2023, however, there was a more significant drop, due to a general decline in the region's tourism indicators, but it should be noted that the most important municipalities with tourism potential in the region had particularly poor performance indicators. Harkány had 46,000 fewer overnight stays compared to the 25,000 recorded in Pécs and the 4,000 in Villány. The decline is also underlined by the national data, but to a lesser extent than in the Pécs-Villány tourism area, thus, the destination is still experiencing a period of crisis conducive to a significant loss of market position. Hungary's tourism indicators are basically characterised by a moderate growth from 2022 to 2023, with a 1% increase (418,000) in the number of overnight stays. However, the increase is mainly due to the dynamic growth of Budapest, since, excluding the capital city, Figure 4 shows a decline in the observed period. Stagnation can be observed in most destinations and the authors believe that the moderate decline is due to inflation and changes in consumer habits which also affect tourism to a large extent. In the latter case, we are talking about a drop in domestic tourist arrivals, owing to the high inflationary impact mentioned above, but also – in parallel and somewhat paradoxically – to the increased focus on foreign destinations. In terms of value for money, domestic

tourism services have deteriorated to a larger extent due to higher than average inflation in the macro-region and foreign destinations have been given a higher priority. This is further compounded by the fact that Hungarian tourists are seeking to compensate for lost travel experiences abroad in 2020-21.

Figure 5 Number (persons) and rate (%) of foreign visitors in the Pécs-Villány tourist area between 2018 and 2023



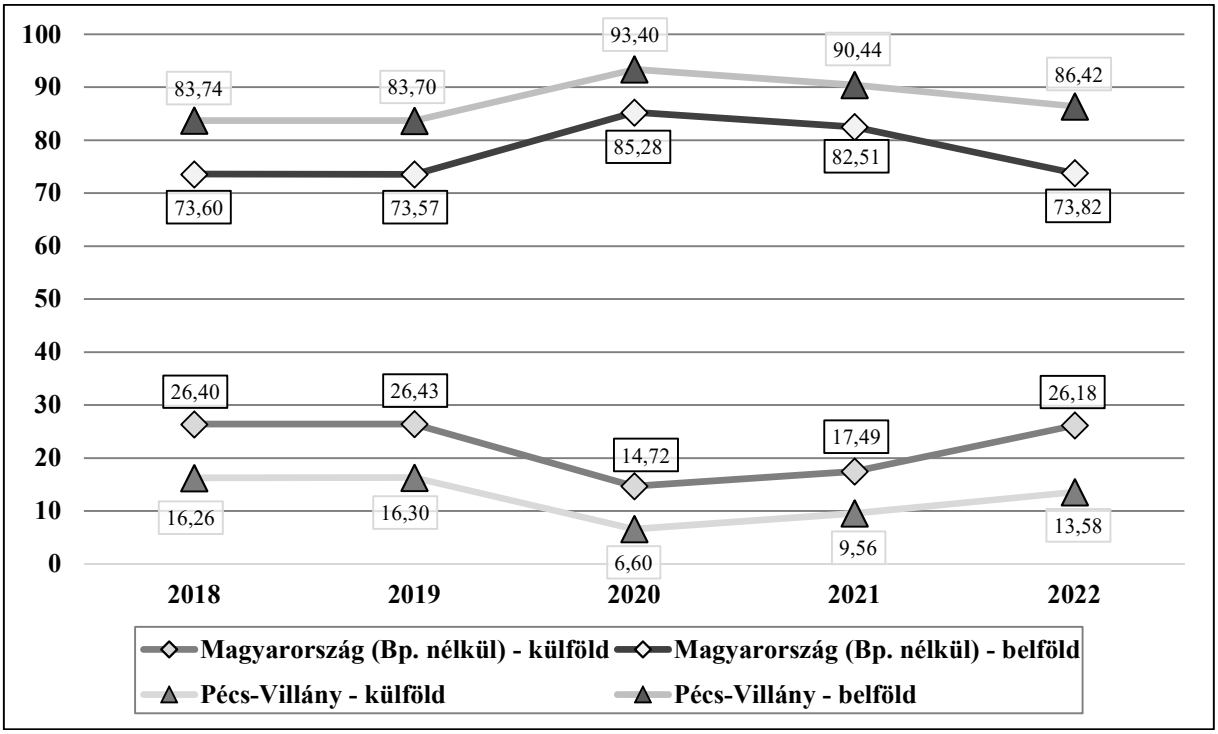
Source: own editing; Data: KSH database, 2023:

In terms of the number of foreign visitors, the Pécs-Villány tourist region cannot be considered an international destination (Figure 5). In the investigated period, 2019 saw the highest number of foreign tourists (45,603) which decreased to a fraction during the pandemic period. In 2023, cca. 8,000 fewer foreign tourist arrivals were observed than in the record year of 2019. The rate of foreign visitors in the region compared to the national average is very low (between 1.7-2.0%) even though the national benchmark in Figure 5 was defined without Budapest.

The region is not able to take sufficient advantage of its border location in international destination development. Croatian visitors can be detected in the area due to its accessibility but only as daily visitors. They are frequent guests in the Harkány spa, for instance. In terms of location, Serbian visitors could be even more dominant in the region, as they are more

inclined to spend several days in health tourism, but they tend to prefer the spa resorts of the Southern Great Plain. Maintaining a balance between domestic and foreign visitors is key to the stability of the tourism sector and the diversity of tourist attractions is also paramount to achieving tourism sustainability. On this basis, the development and diversification of the tourism sector is also crucial for enhancing the competitiveness of the Pécs-Villány tourism area and improving its resilience to crises.

Figure 6 Change in the share of foreign visitors (%) in the Pécs-Villány tourist region between 2018 and 2022 compared to the national average



Source: own editing; Data: KSH database, 2022.

The ratio of foreign and domestic visitors also shows that the Pécs-Villány tourism area is dominated by domestic tourism compared to the national average (Figure 6). In 2020-21, domestic tourism became dominant nationwide due to the impact of the coronavirus. In 2022, the national average was already close to the pre-pandemic figures but the number and rate of foreign tourists in the Pécs-Villány tourism area were still significantly lower than in 2019. In the Pécs-Villány tourism area, the balance of domestic and foreign visitors cannot be identified on the basis of 2019 and current national conditions. This is due to a lack of international tourist arrivals which can create a significant competitive disadvantage and exposure. The harmony between international and domestic tourism is of paramount importance for the resilience of a destination to a tourism crisis. Destinations that attract tourists from different directions in a diversified way are less exposed to external factors. It is

also crucial that the region has a wide range of tourism products which can make a constructive contribution to managing the crisis situation effectively.

Table 1 EU development funds (HUF) allocated for tourism development in the settlements of the Pécs-Villány tourist area, 2004-2020

Settlement	Support 2004-2006	Support 2007-2013	Support 2014-2020	Total amount of support
Pécs	2 483 654 743	7 684 334 264	4 245 000 000	**14 412 989 007**
Harkány	425 983 069	2 548 203 798	0	**2 974 186 867**
Orfű	0	2 543 257 417	96 029 776	**2 639 287 193**
Siklós	0	1 258 994 795	0	**1 258 994 795**
Szaporca	0	1 038 386 480	0	**1 038 386 480**
Villány	0	1 006 762 869	0	**1 006 762 869**
Nagyharsány	162 557 162	782 736 500	0	**945 293 662**
Pogány	0	750 154 463	0	**750 154 463**
Kovácsszénája	0	0	666 528 740	**666 528 740**
Pécsvárad	0	287 458 680	162 908 497	**450 367 177**
Kisharsány	0	277 645 131	0	**277 645 131**
Abaliget	0	199 797 850	65 130 440	**264 928 290**
Magyarhertelend	0	150 000 000	0	**150 000 000**
Tésenfa	0	0	149 996 993	**149 996 993**
Palkonya	0	41 234 558	0	**41 234 558**
Csarnóta	0	0	0	**0**
Cserkút	0	0	0	**0**
Drávacsehi	0	0	0	**0**
Kővágószőlős	0	0	0	**0**
Óbánya	0	0	0	**0**
Villánykövesd	0	0	0	**0**
Zengővárkony	0	0	0	**0**

Source: own editing; Data: https://archive.palyazat.gov.hu/

An analysis of the European development funds received by the tourist area (Table 1) shows that the distribution of funds is mostly in line with the tourist flows of the municipalities concerned, i.e. the most important ones in terms of tourism have been able to attract the most funds. The only exception is Kovácsszenaja, which has no significant tourist traffic, but in this case the application for the development of a cycle route involving several municipalities (including Orfű) accounted for this significant amount. It is worth mentioning, however, that 7 municipalities in the tourist region did not receive any EU funding during the period under review. It would be desirable that in future resource allocation practices, more attention is paid to a more balanced funding of the municipalities in the tourism area.

CONCLUSIONS

The research indicates that the tourism performance of the Pécs-Villány tourism area is not outstanding in a national comparison. The most visited settlements in the region are Pécs, Harkány and Villány. The pandemic did not affect the region as severely as the national average in terms of proportions, but there was a more significant drop in 2023. The destination is dominated by domestic tourism with a low number of foreign visitors and the region is not able to take advantage of its border location and there is still a significant gap compared to 2019. The overall destination conditions in the Pécs-Villány tourist area are favourable and the region has good tourism potential. On the supply side, there are a number of features with national or even international attractions. At the same time, however, the tourist figures show that Baranya County does not generate as much turnover as would be expected given the wealth of attractions and other endowments. The need for the renewal of the destination is also underlined in the MTÜ's destination charter.

In addition to continuously strengthening our brand and image to develop tourism, we can respond to the challenges of the future in three ways:

- Attraction-oriented renewal of areas relevant to tourism in the region,
- Development of tourist receptiveness and skills,
- Strengthening tourism governance and management organisations.

Naturally, as these are not mutually exclusive categories, all three action areas can be used simultaneously and in some host areas they are highly necessary.

It is also essential to strengthen the marketing of the region through better communication and target-group definition. Improving the quality of tourism services and increasing guest satisfaction should also be an important objective. In addition, it is also necessary to strengthen cooperation between the actors of the tourism sector.

On the basis of to the EU tourism development funds allocated between 2004 and 2020, the city of Pécs received the largest funding, amounting to over HUF 14.4 billion. The remaining 21 municipalities in the region received a total of HUF 12.6 billion. It would be desirable that the Hungarian Tourism Agency, the governmental bodies coordinating tourism development funds, as well as local and regional authorities, apply the destination logic in future resource allocation practices. This approach would ensure a decentralised allocation of resources, while taking into account the tourism potential of each municipality. In addition, this approach would help to ensure that aid is tailored to the development needs of the

destinations, thus contributing to the development of competitive and sustainable tourism in the region.

Acknowledgements

The study was funded by a grant of the National and Research, Development and Innovation Fund of the Ministry of Culture and Innovation (New National Excellence Programme; code: ÚNKP-23-4).

REFERENCES

Aubert, A. (2011a). Turisztikai régiók helyzete a területfejlesztésben. In Dávid, L. (szerk.), *Magyarország turisztikai régiói: „Komplex megközelítésű digitális tananyagfejlesztés a közgazdaságtudományi képzési terület turizmus alap- és mesterszakjaihoz". TÁMOP-4.1.2-08/1/A-2009-0051* (pp. 22-26). Pécs: Pécsi Tudományegyetem.

Aubert, A. (2011b). *A turizmus területi lehatárolásának kérdései.* In Dávid, L. (szerk.), *Magyarország turisztikai régiói: „Komplex megközelítésű digitális tananyagfejlesztés a közgazdaságtudományi képzési terület turizmus alap- és mesterszakjaihoz" TÁMOP-4.1.2-08/1/A-2009-0051* (pp. 1-17). Pécs: Pécsi Tudományegyetem.

Aubert, A., Barcza, A., Gonda, T., Horváth, Z., & Pálfi, A. (2017). Paradigmaváltás(ok) a magyarországi turisztikai desztinációk fejlesztésében és menedzselésében. *Turizmus Bulletin,* 17(1-2), 15-25. https://doi.org/10.14267/TURBULL.2017v17n1-2.2

Aubert, A., & Szabó, G. (2007): *A Dél-dunántúli régió turisztikai magterületeinek lehatárolása.* Budapest: Xellum Kft., 1-23.

Bednarska, M. A. (2013). Quality of Work Life in Tourism-Implications for Competitive Advantage of the Tourism Industry. *Journal of Travel & Tourism Research,* 13.

Berki, M., & Csapó, J. (2006). Comparative Analysis of Competitiveness in the Major Cultural Cities of Hungary. In Aubert, A., & Tóth, J. (szerk.), *Stadt und Region Pécs : Beiträge zur angewandten Stadt- und Wirtschaftsgeographie* (pp. 49-65). Bayreuth: Universität Bayreuth, Lehrstuhl Wirtschaftsgeographie und Regionalplanung, 175.

Bujdosó, Z., Gyurkó, Á., & Benkő, B. (2019). Tourism development in Hungary on the example of Northern Hungary Region. *Folia Geographica,* 61(2), 86-103.

Csapó, J. (2019). *A turizmuspolitika és turizmusirányítás elmélete és gyakorlata az Európai Unióban.* Budapest: Akadémiai Kiadó. https://doi.org/10.1556/9789634544838

Csapó, J., Celan, T. J., & Trócsányi, A. (2015). A határmenti együttműködés hatásai a területi fejlődésre a magyar-horvát szakasz példáján az EU tervezési mechanizmusának tükrében (2007–2013). *Területfejlesztés és Innováció*, 9(2), 22-31.

Dávid, L., Bujdosó, Z,. & Patkós, C. (2003): A turizmus hatásai és jelentősége a területfejlesztésben. In Süli-Zakar, I. (szerk.), *A terület és településfejlesztés alapjai* (pp.431-451). Budapest-Pécs: Dialog Campus Kiadó.

Fekete-Fábián, Z., & Jánosi, D. (2022). A 2008. és a 2020. évi válság hatása a hazai munkaerőpiacra és turizmusra. *Területi Statisztika,* 62(2), 135-165. https://doi.org/10.15196/TS620201

Fekete-Frojimovics, Z., Csillag S., Farkas, J. (2024). A Covid19-pandémia hatása a fogyatékossággal élő emberek foglalkoztatására a vendéglátásban: Tétlenség vagy reziliens építkezés? *Turizmus Bulletin,* 24(1), 24-32. https://doi.org/10.14267/TURBULL.2024v24n1.3

Fintineru, A., Fintineru, G., & Smedescu, D. I. (2014). Analysis of top destinations in tourism, according to volume of receipts during 2001-2011. *Scientific Papers Series. Management, Economic Engineering in Agriculture and Rural Development,* 14(2), 119-122.

Fotiadis, A., Polyzos, S., & Huan, T-C. (2021). The good, the bad and the ugly on COVID-19 tourism recovery. *Annals of Tourism Research,* 87(3), 103-117. https://doi.org/10.1016/j.annals.2020.103117

Gössling, S., Scott, D., & Hall, M. (2020). Pandemics, tourism and global change: a rapidassessment of COVID-19. *Journal of Sustainable Tourism,* 29(1), 1-20. https://doi.org/10.1080/09669582.2020.1758708

Gyurkó, Á., Bujdosó, Z. (2017). Turisztikai magterületek lehatárolása az Észak-Magyarország régióban. *Acta Carolus Robertus,* 7(2), 67-88.

Gyurkó, Á. (2020). Az Észak-Magyarország statisztikai régió idegenforgalmi térszerkezetének általános jellemzői és változásai az európai uniós turizmusfejlesztési források tükrében 2004-2019 között. PhD-disszertáció. Debrecen: Debreceni Egyetem, 33-41.

Hajdú, Z., & Rácz, S. (2020). Államhatár-politikák az Európai Unióban és Magyarországon a globális koronavírus-válság kezdeti időszakában. *Tér és Társadalom,* 34(2), 202-210. http://doi.org/10.17649/TET.34.2.3260

Hernández-Martín, R., Simancas-Cruz, M. R., González-Yanes, J. A., Rodríguez-Rodríguez, Y., García-Cruz, J. I., & González-Mora, Y. M. (2016). Identifying micro-destinations and providing statistical information: a pilot study in the Canary Islands. *Current Issues in Tourism,* 19(8), 771-790. https://doi.org/10.1080/13683500.2014.916657

Horeczki, R., Molnár, E., & Pirisi, G. (2023). Population dynamics of the Hungarian small towns in the light of censuses. *Deturope,* 15(2), 66-84.

Horváth, Z., Pálfi, A., & Aubert, A. (2018). A desztinációfejlesztés hangsúlyainak változása a Balaton turisztikai régióban. *Turisztikai és Vidékfejlesztési Tanulmányok,* 3(3),44-56.

Jóvér, V., Bagdi R., & Kóródi, M. (2019). Desztinációk ismertségének vizsgálata a lehatárolás összefüggéseiben. *Economica,* 10(1), 8-12. https://doi.org/10.47282/ECONOMICA/2019/10/1/4114

Kovács, E., & Kiss, K. (2018). *Turisztikai trendek.*Budapest, Akadémiai Kiadó, 1-33.

Kovács, D., & Horeczki, R. (2023). Új jelenségek a baranyai gasztronómiában. születőben a Mecsek-Völgység-Hegyhát gasztrotérség? *Turisztikai és Vidékfejlesztési Tanulmányok,* 8(3), 54-69. https://doi.org/10.15170/TVT.2023.08.03.04.

Kovács, L., Keller, K., Tóth-Kaszás, N., & Szőke, V. (2021). A Covid19-járvány hatása egyes turisztikai szolgáltatók működésére: azonnali válaszok és megoldások. *Turisztikai és Vidékfejlesztési Tanulmányok,* 6(2), 6-24. https://doi.org/10.15170/TVT.2021.06.02

KSH (2019). Helyzetkép a turizmus, vendéglátás ágazatról, 2019. https://www.ksh.hu/docs/hun/xftp/idoszaki/jeltur/2019/index.html#%20terletisszehasonlts

KSH (2024). Tájékoztatási Adatbázis. https://statinfo.ksh.hu/Statinfo/haViewer.jsp

Kubát, P., Králikova, A., & Ryglová, K. (2023). Shifting the Focus From Mere Wine (and) Tourism to the Wine Destination and Winescape Concept. *Deturope.* 15(3), 78-92.

Kupi, M., & Szemerédi, E. (2022). A magyarok környezettudatos utazással kapcsolatos attitűdjének és egyes magatartásformáinak vizsgálata a Covid-19 járvány tükrében. *Turisztikai és Vidékfejlesztési Tanulmányok,* 7(2), 49-71. https://doi.org/10.15170/TVT.2022.07.02.04.

Magyar Turisztikai Ügynökség (2014). Nemzeti Turizmusfejlesztési Stratégia 2030. Budapest.

Michalkó, G. (2016). Turizmológia – Elméleti alapok. Budapest: Akadémiai Kiadó, 36-95. http://doi.org/10.17649/TET.27.1.2504

Michalkó, G. (2020): A biztonság szerepe a turizmus rendszerében. In Michalkó G., Németh, J., & Ritecz, G. (szerk.), *Turizmusbiztonság* (pp. 15-28). Budapest: Dialóg Campus Kiadó.

Michalkó, G. (2023). *A turizmus esszenciája.* Budapest: Akadémiai Kiadó.

Michalkó, G., Németh, J., & Birkner, Z. (2023). Termékközpontú biztonság – turizmusipari aspektusok. In Michalkó, G., Németh, J., & Birkner, Z. (Eds.): *A biztonság szerepe a turisztikai termékfejlesztésben és -menedzsmentben* (pp. 7-12). Budapest: Bay Zoltán Alkalmazott Kutatási Közhasznú Nonprofit Kft.

Nod, G., Mókusné Pálfi, A., & Aubert, A. (2021). Kispadra ültetett desztinációmenedzsment a pandémia félidejében(?). *Turizmus Bulletin,* 21(2), 43-54. https://doi.org/10.14267/TURBULL.2021v21n2.5

Palkovics, K. (2022). A turizmus és a gazdaság alakulása Magyarországon és az Európai Unióban a Covid-19 árnyékában. *Turisztikai és Vidékfejlesztési Tanulmányok,* 7(3). https://doi.org/10.15170/TVT.2022.07.03.06

Pap, N. (2007). *Kistérségfejlesztés: A kistérségfejlesztés elmélete és gyakorlata a rendszerváltozás után Magyarországon.* Pécs: Alexandra Kiadó.

Pap, N. (2005). A terület- és településfejlesztés cél- és eszközrendszere. In: Pap, N., & Tóth, J. (szerk.), *A terület- és településfejlesztés alapjai* (pp. 7-26). Pécs, Magyarország: Alexandra Kiadó.

Rácz, S. (2017). Main characteristics of Hungarian-Croatian political relations and Cross-Border Co-operations. *Geographica Pannonica,* 21(1), 54-67. http://doi.org/10.18421/GP21.01-05

Rodríguez-Rodríguez,Y., & Hernández-Martín, R. (2020): Expert Consensus Versus Statistical Techniques in the Delimitation of Tourism Destinations. *Sustainability,* 12(6), 2540. https://doi.org/10.3390/su12062540

Roman, M., Roman, M., & Niedziółka, A. (2020). Spatial Diversity of Tourism in the Countries of the European Union. *Sustainability.* 12(7),2713. https://doi.org/10.3390/su12072713

Samková, L., & Navrátil J. (2023). Significance of the public transport for tourism development in destinations. *Deturope.* 15(1), 158-189.

Spiegler, P., Nagy, D., & Egyed, I. (2023): Opportunities for the touristic utilization of heritage values in Baranya county along the Croatian-Hungarian border. *Turisztikai és Vidékfejlesztési Tanulmányok,* 8(3), 99-117. https://doi.org/10.15170/TVT.2023.08.03.07

Szabó, A. (2023). A turisztikai térségek jelene és jövője. A Pécs-Villány turisztikai térség esettanulmánya. *Területfejlesztés és Innováció,* 16(1), 47-58. https://doi.org/10.15170/terinno.2023.16.01.05

Szabados, Y., & Merza, P. (2023). A hozzáférhető turizmus – kitekintő Baranya vármegye turisztikai kínálatának elérhetőségére. *Turisztikai és Vidékfejlesztési Tanulmányok,* 8(4), 49-62. https://doi.org/10.15170/TVT.2023.08.04.03

Ülker M., & Karanustafa K. (2023). Understanding The Use of Local Food Through the Extended Theory of Planned Behaviour. Deturope. 15(1), 66-94.

Végi, S. (2021). Magyarország járási szintű turisztikai centrumtérségeinek lehatárolása és hazánk kiemelt turisztikai térségeivel történő összevetése térökonometriai módszerekkel. *Turisztikai és Vidékfejlesztési Tanulmányok,* 6(3), 44-58. https://doi.org/10.15170/TVT.2021.06.03.03

Original scientific paper

ETHNIC DIVERSITY CHANGES OF VOJVODINA BETWEEN 1990 AND 2020

Dávid MORÓ[a], Péter REMÉNYI[b, c]

[a] PhD student, University of Pécs, Doctorate School of Earth Sciences, 7625 Pécs, Ifjúság útja 6., morodavid98@gmail.com
[b] Associate Professor, University of Pécs, Institute of Geography and Earth Sciences, 7625 Pécs, Ifjúság útja 6., remko@gamma.ttk.pte.hu
[c] Senior Research Fellow, HUN-REN CERS Institute for Regional Studies, 7621 Pécs, Papnövelde u. 22., remenyi.peter@krtk.hun-ren.hu

Cite this article: Moró, D., Reményi, P. (2024). Ethnic diversity changes of Vojvodina between 1990 and 2020. *Deturope.* 16(3), 57-81.

Abstract

Vojvodina, a region in the southern part of the Pannonian Plain, is home to a significant Hungarian ethnic minority living beyond the borders of Hungary. Located in northern Serbia, it has become one of Europe's most ethnically diverse regions since the 17th and 18th centuries. This diversity is largely due to planned and spontaneous migrations aimed at compensating for the substantial population loss that occurred during the Ottoman conquest of the region and the subsequent wars of reconquest. Historical, political, and economic transformations have drastically altered the dynamics between ethnic groups multiple times. In the second half of the 20th century, homogenization at the provincial level became a predominant trend. Conversely, at the municipal level, various degrees of parallel homogenization and diversification can be observed, depending on local ethnic structures and regional demographic changes. Analyzing ethnic diversity plays a crucial role in quantitative ethnic studies; however, the societal effects of this diversity are still widely debated. Using the ethnic diversity index, we analyze census results from Yugoslavia and Serbia to identify major trends regarding changes in ethnic diversity at both the regional and municipal levels. We argue that large-scale homogenization occurred in the 1990s at the regional level, a trend that has continued thereafter, albeit at a reduced pace. Changes at the municipality level, however, varied significantly, influenced by both spatial and ethnic factors. We have organized the municipalities into four basic groups based on their ongoing diversification processes and current levels of ethnic diversity compared to the regional average.

Keywords: Vojvodina, ethnic diversity, homogenization, ethnic diversity index

INTRODUCTION

Vojvodina, situated in the southern part of the Pannonian Plain, is notable for its significant Hungarian ethnic minority. As part of northern Serbia, it has developed into one of Europe's most ethnically diverse regions since the 17th and 18th centuries, largely due to planned and spontaneous migrations to address the population decline caused by the Ottoman conquest and subsequent wars of reconquest. In addition to the three dominant ethnic groups – Hungarians, Serbs, and Germans – many smaller ethnic groups (including Croats, Romanians, and Slovaks) settled in this depopulated area, contributing to its high levels of ethnic

diversity. While some of these groups remain integral to the region's ethnic landscape, others (e.g., Germans) have significantly decreased in number. The dynamics between ethnic groups have undergone drastic changes due to historical, political, and economic transformations, with homogenization at the provincial level emerging as a significant trend in the second half of the 20th century. In this analysis, we aim to illustrate changes in ethnic diversity over the past decade using the latest Serbian census data, while also highlighting trends from the past 30 years beginning with the last Yugoslav census in 1991 (longitudinal analysis). Our focus will be on the municipal scale, where we will compare and categorize municipalities based on their changes in diversity (cross-sectional analysis). This quantitative analysis serves as a preliminary step in a broader research effort aimed at understanding the evolving ethno-cultural landscape of Vojvodina and its broader region of Central and Southeastern Europe.

THEORETICAL BACKGROUND

A typical branch of ethnic studies involves research based on quantitative analysis. Beyond a simple enumeration of individual ethnic groups and tracking changes in numbers and percentages, a variety of composite indices can be employed to identify community-level characteristics, with the concept of ethnic diversity being among the most extensively studied. This multifaceted phenomenon is utilized across various disciplines to describe the complexity (ethnic, linguistic, cultural, etc.) of a given society and assess its impact on social characteristics such as cohesion and trust. Its influence on more practical social institutions, like education and the economy, is also a subject of research. However, findings can be contradictory or reveal a complex interplay between diversity and different social factors. For example, Alesina and Ferrara (2004) suggest that while diversity can decrease social trust, it may simultaneously foster economic dynamism and innovation. In our analysis, we will utilize the concept of diversity, particularly its changes over time (longitudinal analysis), to understand the ethnic processes of recent decades and provide a generalized framework for comparing the examined territorial units (cross-sectional analysis).

An early attempt to quantitatively analyze ethnic diversity in social sciences can be traced back to the 1970s (Taylor & Hudson, 1972). The so-called ethno-linguistic fractionalization index, developed during this period, was based on ecological indices used to measure biological diversity (Simpson, 1949). In the 1990s, with the study of increasingly diverse Western societies, the use of probability-based indices to measure diversity gained popularity (e.g., Mauro, 1995; Easterly & Levine, 1997; Reilly, 2000; Collier, 2001; Alesina et al., 2003;

Fearon, 2003; Montalvo & Reynal-Querol, 2005). The index was introduced into the Hungarian literature in the 2000s as the diversity index. This method has been utilized by Bajmócy (2004) to study the historical demography of the Kingdom of Hungary, Reményi (2009) to examine the changing ethnic spatial structure of the Yugoslav successor states, Németh (2013) to analyze ethnic relations in the Baltic states, and Léphaft, Németh, and Reményi (2014) to discuss ethnic polarization in Vojvodina.

By employing quantitative analysis, particularly indices, we can model and measure multi-component processes, comparing regions with different patterns of change based on macro-level developments. Indices also allow for comparisons of the same territorial unit across different periods. Focusing on dynamic values (e.g., changes rather than static figures, or in this case, diversification instead of diversity) enables us to analyze large-scale, long-term processes and identify territorial units that require further, in-depth qualitative analysis. Consequently, we can analyze changes in diversity levels among territorial units for the same period (cross-sectional analysis) by comparing their values to identify 'where' changes are occurring, as well as evaluate the level of changes within the same territorial units over different time periods (longitudinal analysis) to determine 'when' these changes are occurring.

Ethnic diversity is a prominent topic in Western social sciences, increasingly relevant due to migration processes. The interactions between citizens from different cultures and the resulting challenges are central to these studies. However, the impact of ethnic diversity on societies – particularly in politics, economics, social cohesion, and conflicts – remains widely debated (Dinesen et al., 2020; Montalvo & Reynal-Querol, 2021). Researchers investigating traditionally ethnically fragmented regions of Central and Southeastern Europe (and beyond), such as Vojvodina, are also interested in the reverse processes of ethnic homogenization and the decline of traditional ethnic diversity (Brubaker et al., 2009; Raduški, 2011; Léphaft et al., 2014), including native languages and cultures. Both phenomena are driven by similar processes and differences in natural population change, migration, and assimilation.

It is essential to acknowledge that relying solely on quantitative analysis in ethnic studies has limitations. Ethnic (and other) identities have become increasingly fluid – changing over time and resulting in significant shifts in longitudinal data analyses, as seen in the case of the Yugoslav category in our case. They have also become increasingly hybrid, involving multiple or mixed identities that complicate cross-sectional data analyses, while quantitative analysis struggles to cope with non-binary situations. Moreover, an increasing number of individuals refuse to disclose their (ethnic) identity, which may stem from multiple identities

derived from ethnically mixed parentage, as is common in former Yugoslavia. This refusal can also lead to inaccurate findings. Acknowledging these limitations, quantitative analysis in ethnic studies and diversity remains a valid approach in review analysis, provided that cross-sectional and/or longitudinal data analyses establish a solid foundation for further in-depth qualitative research, which is a key objective of this paper.

DATA AND METHODS

We utilize the ethnic diversity index (EDI) and its changes (ΔEDI) to measure alterations in the ethnic diversity of a spatial unit (province or municipality). This index is based on Simpson's Diversity Index, which is a straightforward measure of the probability that a person from a given ethnicity in a community will encounter someone of the same or a different ethnicity. The index ranges from 0, indicating completely homogeneous communities, to 1, representing communities where every individual belongs to a different ethnicity. It can be calculated using the formula:

$$EDI = \frac{L*(L-1)/2 - \sum_{i=1}^{n} e_i*(e_i-1)/2}{L*(L-1)/2}$$, where:

L: total population of the municipality
e_i: number of individuals of ethnicity (i)
n: total number of ethnicities

Official census data from the Serbian Statistical Office's website were used as input. We analyzed tables from the 1991, 2002, 2011, and 2022 censuses at the provincial and municipal levels (Statistical Office of the Republic of Serbia, 1991, 2002, 2011, 2023) to calculate changes in ethnic diversity, thereby interpreting processes of ethnic homogenization and diversification in the region. To explain the observed changes, an analysis of yearly demographic statistics at the municipal level from 2012 to 2022 was conducted. By comparing the natural increase in population with the variations observed between two censuses, it has been demonstrated that both natural growth and migration significantly contribute to changes in ethnic diversity (Statistical Office of the Republic of Serbia, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023).

We have chosen the Autonomous Province of Vojvodina as our study area, which has historically been interpreted as a multicultural ethnic contact zone, particularly regarding the Hungarian and Slavic (especially Serbian) relations. The region has undergone several changes in political rule, particularly during the 20th century, which have left a profound impact on its ethnic landscape. Vojvodina was part of the Kingdom of Hungary until the First World War when it was annexed to the first Yugoslavia. During the Second World War, some areas were reannexed by Hungary, and after the war, it became part of socialist Yugoslavia.

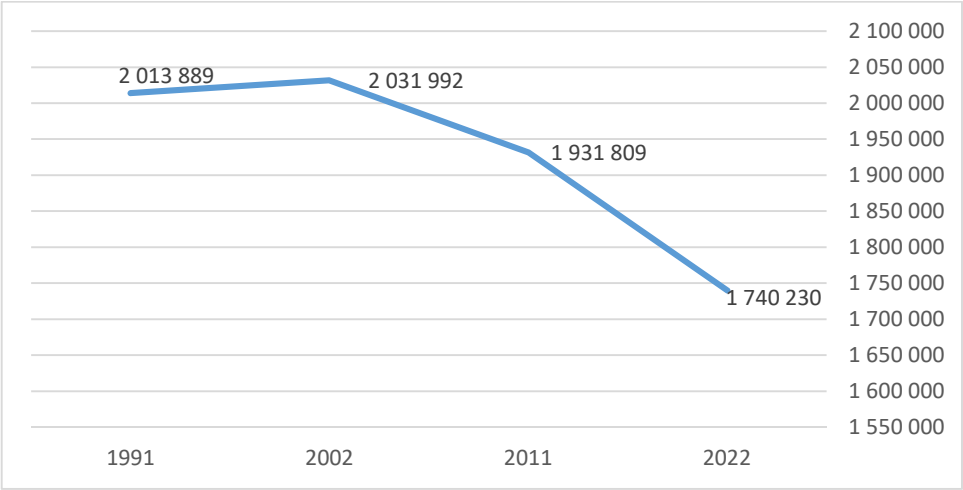
Following the breakup of Yugoslavia, Vojvodina became a northern province of Serbia. Throughout these transitions, both spontaneous and planned ethnically determined migrations have occurred. Today, Vojvodina faces serious demographic challenges, characterized by negative natural growth and emigration.

DEMOGRAPHIC CHANGES IN VOJVODINA OVER THE LAST DECADE

High ethnic diversity is not unique to Europe; various regions exhibit this characteristic which is a consequence of its turbulent history and political geography, which drew the attention of several scholars for decades (Hajdú & Rácz 2024). Vojvodina, Serbia's northernmost province, bordered by Croatia to the west, Hungary to the north, and Romania to the east, serves as a notable example. The region currently has more than 20 different ethnic groups distinguished in censusesn addition to Serbs, there are significant Hungarian, Slovak, Montenegrin, Romanian and Croatian minorities (Trombitás & Szügyi, 2019). The region's ethnic diversity stems from its rich history, in the course of which multiple states have controlled the area and influenced its ethnic composition. The several border changes throughout the 20th century position the region to a prominent place in Hungarian border studies (Scott, 2022). The last significant impact occurred during the 1990s, with the Yugoslav Civil War reshaping the ethnic (and political, economic, etc.) landscape of both the wider region and Vojvodina (Rácz 2023). So far, the 21st century has been calmer for the province, but its ethnic structure and diversity continue to evolve. Various ethnic groups still constitute significant minorities in Vojvodina, but their numbers are consistently declining. Serbia, like many developed countries, particularly in Central and Southeastern Europe, is facing a serious demographic crisis (Judah, 2019, Reményi et al. 2024), characterized by population decline, an aging society, and emigration. These issues, combined with unfolding peripherialisation (Nagy et al. 2022) and the political transformations of the last decades (Rácz & Egyed 2023) pose significant social and economic challenges for both the country and Vojvodina.

The last population increase in Vojvodina occurred after 1991 due to the Yugoslav Civil War, which forced many Serbs to leave their former homes in other Yugoslav republics, prompting a substantial number to settle in Vojvodina. This influx contributed to a decrease in ethnic diversity, as the growing Serbian population led to the increased homogenization of society. By the next census, Vojvodina's population had decreased by 100,183 people, a trend that continued until 2022, when the population fell to 1,740,230 – representing a total decline of 273,659 since 1991 (see Fig. 1).

Figure 1 Population of Vojvodina from 1991 to 2022



Source: Statistical Office of the Republic of Serbia, 1991, 2002, 2011, 2023

Ethnic changes from 1991 to 2022

Significant changes occurred in the ethnic composition of Vojvodina during the decade between the last Yugoslav census in 1991 and the Serbian census in 2001. The last decade of the 20th century had a strong impact on the transformation of ethnic proportions and their spatial distribution. The Yugoslav Civil War, which lasted from 1991 to 1996, not only redrew borders in the Western Balkans but also significantly altered the ethnic makeup of the countries involved (Reményi, 2010).

In 1991, Vojvodina's ethnic composition was much more diverse (see Table 1). Serbs made up just over half of the population, while Hungarians represented the largest minority group at 16.86%. Yugoslavs were the second-largest ethnic group at that time, accounting for 8.56%. Croats, Slovaks, Romanians, and Montenegrins constituted smaller but still noteworthy proportions. The dissolution of Yugoslavia and the subsequent armed conflicts greatly reshaped Vojvodina's ethnic composition, resulting in a rise in the share of Serbs by 8.26 percentage points by the next census. Hungarians remained the largest minority but their representation fell to 14.28%, and the proportion of other ethnicities – especially Yugoslavs – declined significantly, from 8.56% to 2.45% in 2002. Since “Yugoslav” was more of an identity linked to the Yugoslav state, than a traditional ethnicity, many people abandoned it after the country's breakup.

The 21st century has been a much more peaceful period, which is reflected in changes in the ethnic structure. By 2011, the share of Serbs continued to rise by 1.71 percentage points, while the proportions of minorities decreased. Hungarians also saw a reduction in their share, although it was smaller, at 1.28 percentage points. In the last decade of the survey (2011-2022), these trends persisted: the share of Serbs increased by 1.67 percentage points, while the

proportions of minorities – except for the Roma and Yugoslavs – all decreased. Notably, the share of Hungarians fell by 2.52 percentage points.

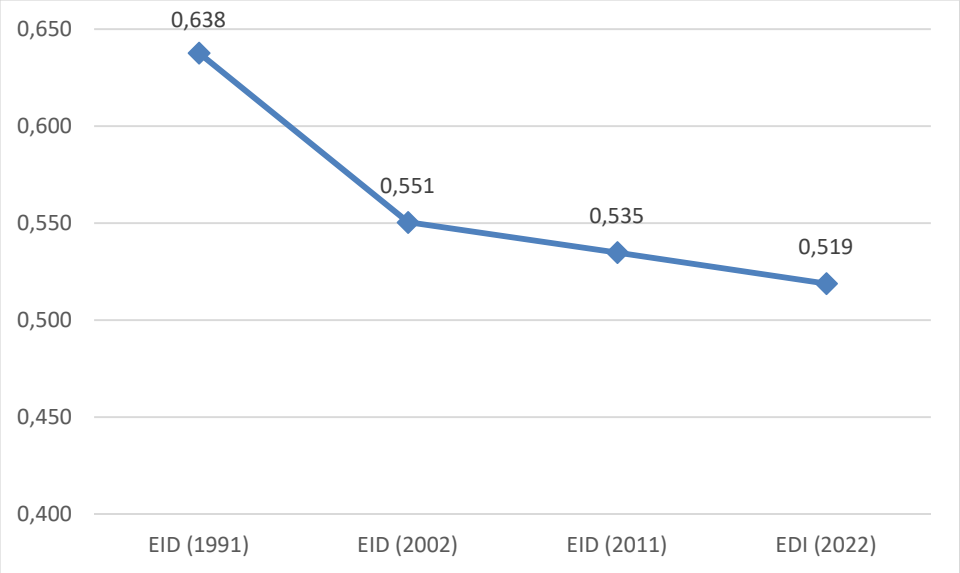
Table 1 The ten largest ethnic groups in Vojvodina

Ethnicities	2022		2011		2002		1991	
	Population	%	Population	%	Population	%	Population	%
Total	1,740,230	100.00	1,931,809	100.00	2,031,992	100.00	2,013,889	100.00
Serbs	1,190,785	68.43	1,289,635	66.76	1,321,807	65.05	1,143,723	56.79
Bunjevci	10,949	0.63	16,469	0.85	19,766	0.97	21,434	1.06
Yugoslavs	12,438	0.71	12,176	0.63	49,881	2.45	174,295	8.65
Hungarians	182,321	10.48	251,136	13.00	290,207	14.28	339,491	16.86
Roma people	40,938	2.35	42,391	2.19	29,057	1.43	24,366	1.21
Romanians	19,595	1.13	25,410	1.32	30,419	1.50	38,809	1.93
Slovaks	39,807	2.29	50,321	2.60	56,637	2.79	63,545	3.16
Croats	32,684	1.88	47,033	2.43	56,546	2.78	74,808	3.71
Montenegrins	12,424	0.71	22,141	1.15	35,513	1.75	44,838	2.23
Macedonians	7,021	0.40	10,392	0.54	11,785	0.58	17,472	0.87
other	191,268	10.99	164,705	8.53	128,726	6.33	71,108	3.53

Source: Statistical Office of the Republic of Serbia, 1991, 2002, 2011, 2023.

The changes in ethnic composition have significantly impacted the ethnic diversity of Vojvodina, with an overall decrease in diversity observed between 1991 and 2022 (see Fig. 2). At the beginning of the 1990s, the diversity index value was still above 0.6, but by the 2000s, it had dropped to 0.55. This decline was largely attributed to the Yugoslav civil war in the 1990s and the subsequent ethnically driven migrations. While the decrease in the diversity index has slowed down in the subsequent years, the process of homogenization has continued and is likely to persist in the future.

Figure 2 Ethnic Diversity Index change in Vojvodina (1991-2022)

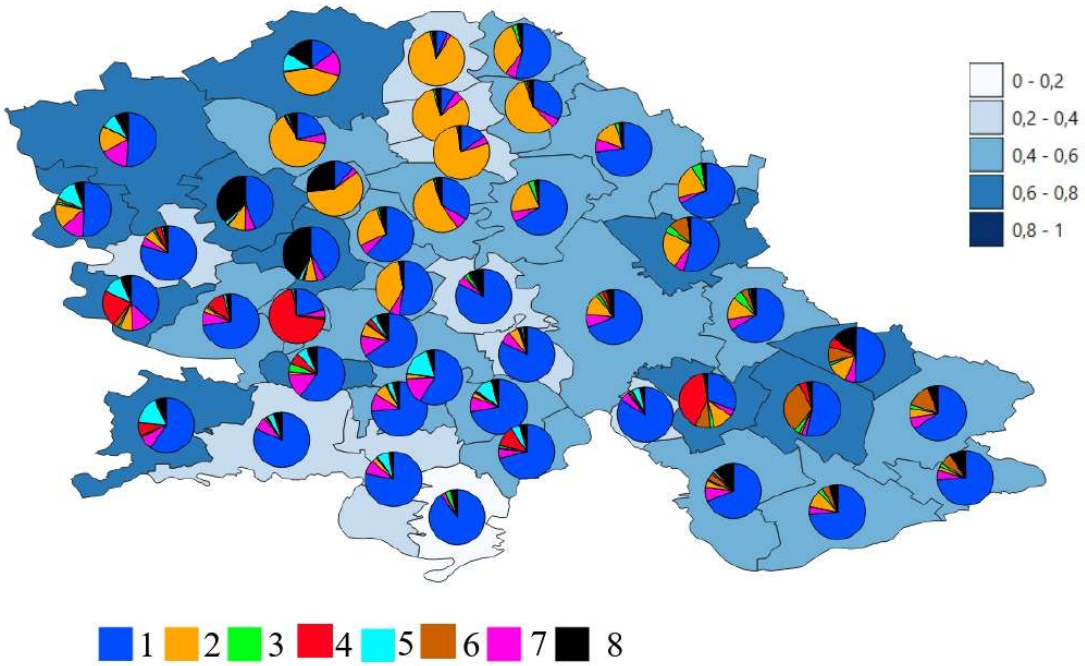


Source: Statistical Office of the Republic of Serbia, 1991, 2002, 2011, 2023.

Based on these findings, it can be concluded that the ethnic structure of Vojvodina is shifting from a former multi-ethnic region toward a more homogeneous future. This trend is observable at the municipal level; however, some municipalities have seen an increase in diversity. In the early 1990s, a group of municipalities characterized by high diversity was clustered in the northern and northwestern parts of the region (see Fig. 3). Additionally, there was a smaller group of high-diversity municipalities in the southeast along the Romanian border. Although Serbs constituted a majority in many of these areas, there were still significant minority groups present, particularly Hungarians and Croats in the northwest, and Romanians and Slovaks in the southeast. A common feature of these high-diversity municipalities was the absence (or only slight presence) of any ethnic group holding an absolute majority, combined with the presence of more than one significant (5%+) minority groups.

The most homogeneous municipalities were not concentrated in one dominant block during this period; rather, they were dispersed throughout the region. A larger cluster was found in the north, including Kanjiža, Senta, and Ada, where the low diversity can be attributed to the prominent Hungarian majority. Additionally, there was a smaller cluster in the southern part of the province with a Serbian majority, while other low-diversity municipalities were scattered across the area. All of these municipalities share the characteristic of having an ethnic group that constitutes over or close to 75% of the population.

Figure 3 Ethnic diversity in 1991 and the largest ethnicities



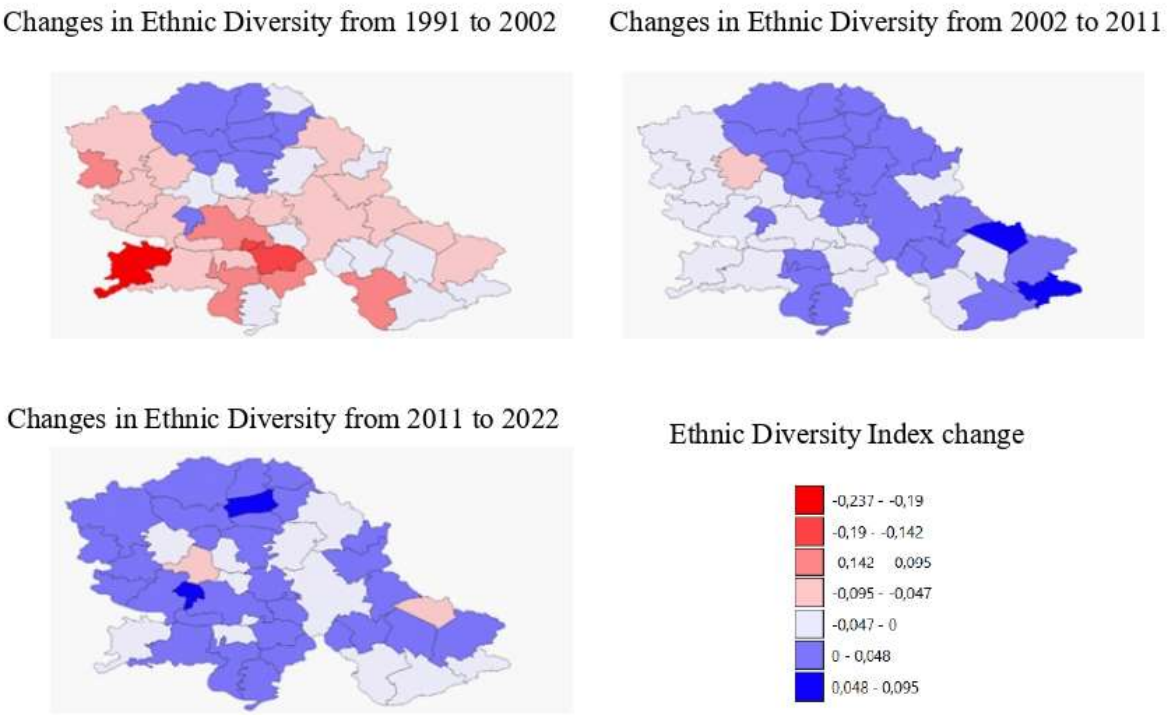
1 – Serbs, 2 – Hungarians, 3 – Roma, 4 – Slovaks, 5 – Croats, 6 – Romanians, 7 – Yugoslavs, 8 – Others.
Source: Statistical Office of the Republic of Serbia, 1991.

Post-1990s, the diversity index in Vojvodina underwent considerable changes (see Fig. 4). The Yugoslav civil war resulted in large-scale emigration of several minority groups, which were replaced by Serbs from other regions of former Yugoslavia. Consequently, diversity decreased in most municipalities, with exceptions found in a larger northern block of municipalities and in Bački Petrovac, but since they have been minority-majority municipalities, the influx of Serbs resulted in diversification (Léphaft et al., 2014).

Changes in diversity were more moderate after 2001, as the influx of Serbs and the emigration of minorities began to slow down. Areas experiencing homogenization were primarily found along and to the west of the Sombor-Temerin-Stara Pazova line. Apart from these, only three municipalities displayed a decrease in diversity: Pančevo and Alibunar in the southeast, and Žitište in the east. The primary reason for homogenization in these areas was the decline in the number of both minority groups and Serbs, with the effect of minority decline being more pronounced. For municipalities along the Sombor-Temerin-Stara Pazova line, while trends of homogenization were similar, there were also cases where the number of Serbs increased, leading to greater homogenization, such as in Kula, Novi Sad, Sremski Karlovci, and Temerin. The latter three municipalities are part of the gravitational zone of Serbia's second largest city, Novi Sad, attracting internal migrants from across Serbia.

In the last decade under observation, most municipalities exhibited diversification, with only 14 out of 45 municipalities showing signs of homogenization. These homogenizing municipalities do not form a contiguous block but are instead segmented into smaller groups. To the southeast, Pančevo, Kovin, and Bela Crkva can be found; to their north are Kikinda, Zrenjanin, and Novi Bečej; to the west lie Kula, Vrbas, Srbobran, and Temerin; while Irig and Sremski Karlovci are located to the south. Additionally, two municipalities, Šid to the west and Plandište to the east, do not connect with any of the above groups. In these municipalities, both the number of Serbs and minorities has decreased. Although the drop in the absolute number of Serbs has been more significant, the reduction has had a more pronounced impact on ethnic groups with smaller populations (see Figure 4).

Figure 4 Ethnic diversity change between 1991 and 2022

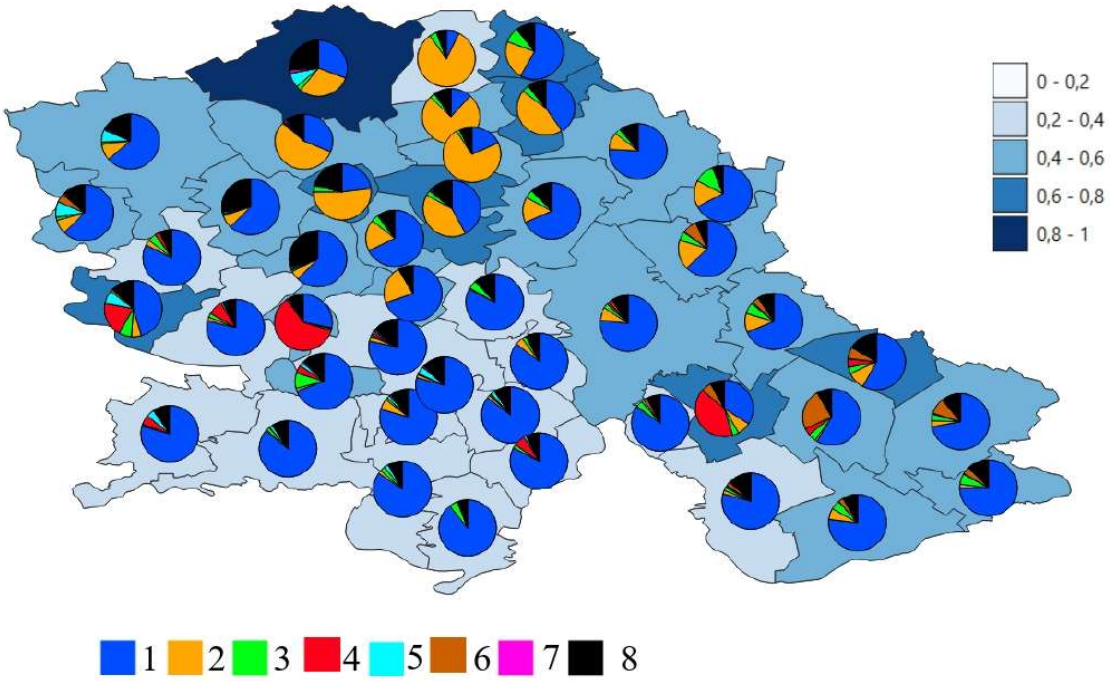


Source: Statistical Office of the Republic of Serbia, 1991, 2002, 2011, 2023.

The spatial distribution of ethnic diversity in Vojvodina has changed significantly since the beginning of the period under study (Fig. 5). The northwestern region, which previously had a high level of diversity, has experienced a substantial decrease. Similarly, the southeastern and eastern areas have become much more homogeneous. The most notable change has occurred in the south and southwest, where a large, contiguous area of municipalities with low diversity has emerged. In these regions, Serbs already constituted the majority in 1991, but over the past 30 years, the number of minorities living here has dramatically declined. While

the number of Serbs has seen only a slight increase since the post-war wave of immigration, the population of minority groups has decreased significantly.

Figure 5 Ethnic diversity in 2022 and the largest ethnicities



1 – Serbs, 2 – Hungarians, 3 – Roma people, 4 – Slovaks, 5 – Croats, 6 – Romanians, 7 – Yugoslavs, 8 – Others.
Source: Statistical Office of the Republic of Serbia, 2023.

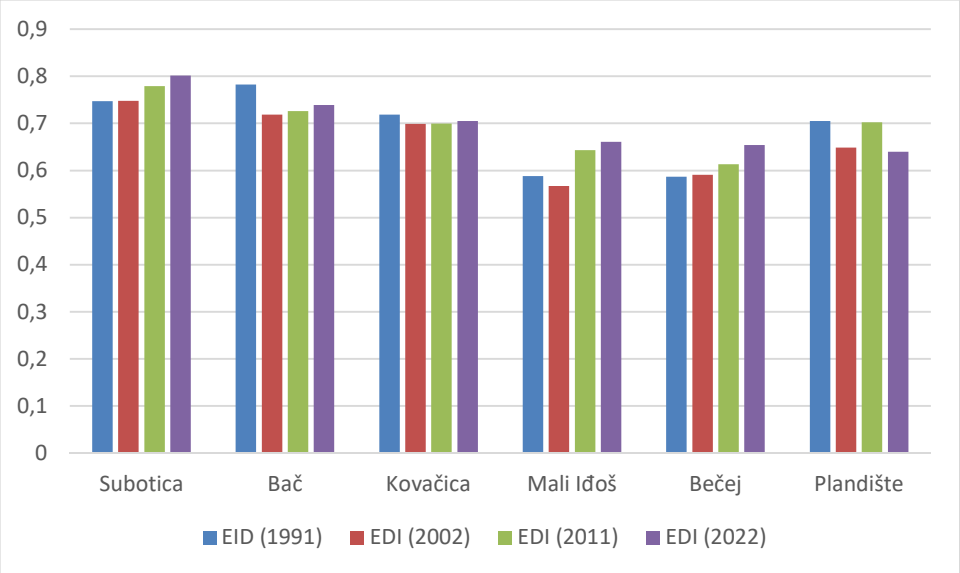
Diversity Index deviations from the regional average

The current level of diversity varies significantly among the municipalities. Based on the average diversity index for the region, we can classify the municipalities into two groups: those with a higher-than-average index and those with a lower-than-average index.

Higher-than-average diversity index

According to 2022 data, Subotica, Bač, Kovačica, Mali Iđoš, Bečej, and Plandište exhibited the highest values, all exceeding the regional average. These municipalities are primarily located in the northern and northwestern parts of Vojvodina, with the exception of Kovačica and Plandište, found in the southeastern part of the region. The impact of the Yugoslav civil war on diversity changes can be observed in all of these areas (Fig. 6).

Figure 6 The six municipalities with the largest positive deviations from the regional average



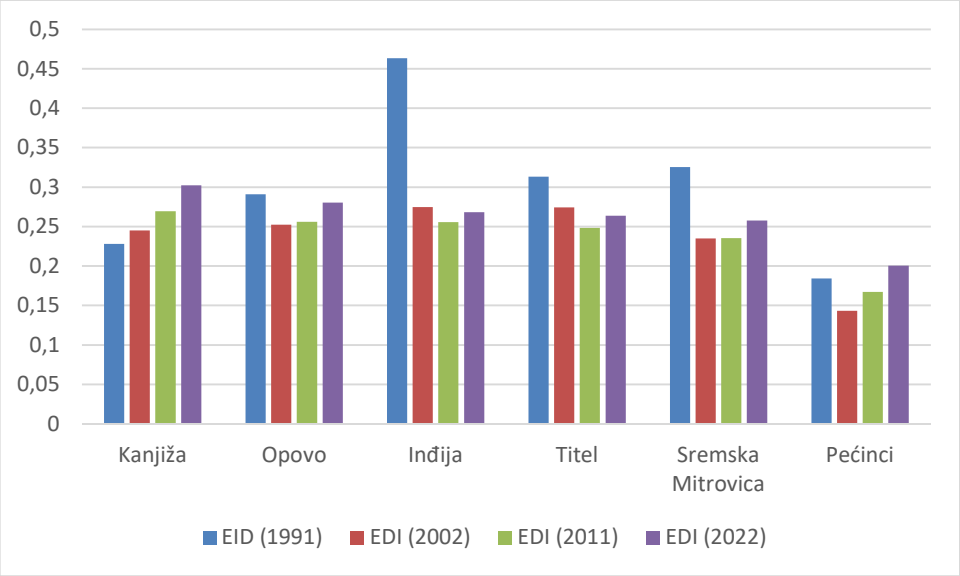
Source: Statistical Office of the Republic of Serbia, 1991, 2002, 2011, 2023.

Subotica had the highest diversity index in 2022 for the entire region, with a value of 0.8014, which is 70.94% higher than the regional average of Vojvodina. Notably, Subotica has consistently maintained an above-average diversity index throughout the study period, which has also been increasing due to a rise in the share of Serbs (who were a minority at the municipal level until the last census) and a decline in the share of minorities, particularly Hungarians (who formed the majority at the municipal level until the last census) and Croats. This trend was similarly observed in other minority-majority municipalities like Mali Iđoš and Bečej. However, Bečej had a lower diversity index in 1991 than the regional average, making its rise to a higher diversity group a more significant change compared to Subotica, which has always been diverse. Bač and Plandište, on the other hand, have been Serb-majority municipalities for several decades. In Bač, significant Slovak, Croat, Roma, and Hungarian minorities contributed to the high diversity value, and further diversification was driven by a larger decrease in the proportion of majority Serbs compared to the minorities combined. Plandište did not experience major diversification in the early 1990s but underwent significant changes between 2002 and 2011, marked by a sharp decline in the number of Serbs, which slowed down by 2022. Kovačica has maintained a Slovak majority over the last 30 years, with Serbs forming the largest minority and Hungarians, Roma, and Romanians present in substantial numbers. Its increasing diversity can be attributed initially to the immigration of Serbs during the 1990s, and in the last two decades, it is mainly due to the decreasing share of the non-Serb population, resulting from emigration, assimilation, and natural decline, particularly among Slovaks – the still relative majority group in this municipality.

Lower-than-average diversity index

Most municipalities with a lower-than-average diversity index are located in the southern part of Vojvodina (including Pećinci, Sremska Mitrovica, Titel, Opovo, and Inđija), with the exception of Kanjiža, which borders Hungary to the north (Fig. 7).

Figure 7 The six municipalities with the largest negative deviation from the regional average



Source: Statistical Office of the Republic of Serbia, 1991, 2002, 2011, 2023.

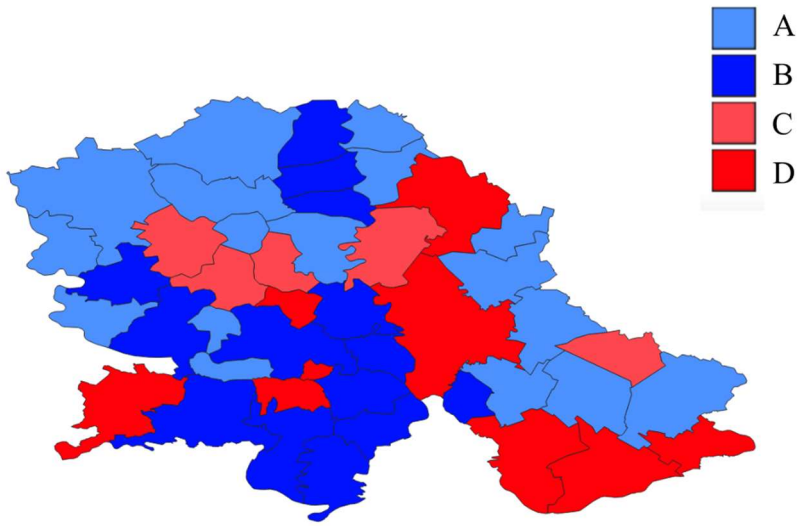
Among this southern group, Pećinci showed the greatest deviation from the average, with a diversity index of 0.2004 in 2022, which is 57.24% lower than the regional average. Like much of Vojvodina, Pećinci's population homogenized after 1991. Following 2002, it began to diversify again; however, the index remained consistently below the regional average, with only the Roma population increasing significantly. The area's diversity has steadily increased, primarily due to a decline in the number of Serbs. Sremska Mitrovica and Titel followed a similar trend, with a significant rise in the number of Serbs during the 1990s, nearly offsetting the decrease in the Yugoslav population. The later increase in diversity was mainly due to a decline in the Serb population (resulting from emigration and low birth rates) alongside an increase in the Roma population. Inđija municipality had notable Yugoslav and Croatian minorities in the 1990s, but their number significantly dropped after the turn of the millennium while the Serb population grew. Eventually, the number of Serbs also started to decline, outpacing the decrease of minorities and leading to an increased diversity index. In Opovo, Serbs have consistently been the dominant majority, with only the Roma and Romanians present in larger numbers. The increasing diversity can be attributed to a significant reduction in the Serbian population, along with an uptick in the Roma and

Romanian populations. In Kanjiža, in contrast to the previous areas, Hungarians formed the majority, with Serbs represented as a minority. Over a 30-year period, the number of Hungarians and several other minorities decreased, except for Serbs and the Roma. The increase in the number of Serbs continued until 2011, after which their number began to decline, while the Roma population continued to grow. This led to continuous diversification over three decades, similar to trends in other minority-majority municipalities. However, despite these changes, Kanjiža remained one of the most homogeneous municipalities.

Spatiality of diversity and diversification

To assess the difference in ethnic diversity from the regional average and its change from 2011 to 2022, we classified the municipalities into four categories. This classification considered both the positive and negative deviations of ethnic diversity from the Vojvodina provincial average, as well as the direction of diversification (increasing or decreasing) (Fig. 8).

Figure 8 Clusters of municipalities



A – Ethnically diverse and further diversifying municipalities; B – Less diverse but diversifying municipalities; C – Ethnically diverse but homogenizing municipalities; D – Continued ethnic homogenization with low diversity.
Source: Statistical Office of the Republic of Serbia, 1991, 2002, 2011, 2023.

- Category A includes municipalities that show both a positive deviation in diversity from the provincial average and an increase in diversity (ethnically diverse and further diversifying municipalities).

- Category B includes municipalities with ethnic diversity lower than the provincial average but experiencing an increase in diversity (less diverse but diversifying municipalities).
- Category C consists of municipalities with higher ethnic diversity than the provincial average but showing a downward trend (ethnically diverse but homogenizing municipalities).
- Category D includes municipalities with ethnic diversity below the provincial average that are also experiencing a decrease (continued ethnic homogenization with low diversity).

For the municipalities in category A (ethnically diverse and further diversifying), two larger, spatially coherent areas can be identified: the northwestern group, which includes Apatin, Sombor, Bačka Topola, Mali Iđoš, Subotica, and Bečej and the southeastern unit, which comprises the municipalities of Alibunar, Kovačica, Nova Crnja, Sečanj, Vršac, and Žitište. A smaller pair, Čoka and Novi Kneževac, is located in the northeast; however, other municipalities do not show any territorial coherence. In the larger northern group, the ethnic composition is traditionally very diverse. Apatin and Sombor have a Serbian majority, while Bačka Topola and Mali Iđoš have larger Hungarian populations. In Bečej and Subotica, the Serbian and Hungarian populations are nearly equal. The increase in diversity is primarily due to a greater decline in the local majority's ethnic numbers and a lesser decline among minority groups. In the southeastern unit, Serbs constitute the majority in all municipalities except Kovačica, where Slovaks make up the largest ethnic group. Similar to the northern group, the increase in diversity here results from a larger decrease in the majority ethnic group compared to minorities. In the pair of Čoka and Novi Kneževac, Hungarians are the majority in Čoka, while Serbs constitute the majority in Novi Kneževac, alongside a notable Roma presence. The general population decline, including emigration (both municipalities lost more than 20% of their population in the last decade), contributes to this increase in diversity, affecting majority populations to a greater extent than minorities.

Municipalities in category B (less diverse but diversifying) can also be divided into two large contiguous blocks: one in the north and another in the south. The northern block includes the municipalities of Ada, Kanjiža, and Senta, while the southern block comprises Inđija, Novi Sad, Pećinci, Ruma, Sremska Mitrovica, Titel, and Žabalj. In the northern group, Hungarians are in the majority. The increase in diversity here is primarily due to a steady decline in the Hungarian population resulting from emigration, assimilation, and natural decrease, although other ethnic groups are also declining, albeit to a lesser extent. The

southern group has a different ethnic composition, with Serbs in the majority and larger numbers of Roma, Croats, and Hungarians. The increase in diversity is linked to a significant decrease in the number of Serbs (with the exception of Novi Sad), which aligns with national and regional trends (sub-replacement level fertility rates and emigration). Novi Sad's slight diversification is a consequence of the growth of the number of Serbs through immigration and a simultaneous (and even larger) growth of different smaller groups like Russians and others. Although minority groups are also decreasing in number, their decline is much less pronounced. In the municipalities that do not form a territorially homogeneous group, Serbs are the majority everywhere. However, the ethnic composition varies in each case. Specifically, Hungarians are the largest minority in Kikinda, the Roma in Odžaci, and Slovaks in Bačka Palanka. Diversity in these municipalities has increased due to the continuous decline of the Serb population, while the number of minorities has changed less significantly.

Category "C" includes municipalities that are ethnically diverse but exhibit a trend toward homogenization. This category contains far fewer municipalities, such as Kula, Srbobran, Novi Bečej, and Vrbas, which are located along the Serbian-Hungarian contact zone. Plandište is situated in the southeastern region. In these municipalities, Serbs are still the majority, although there are sizable minority populations of Hungarians, Roma, Slovaks, and Croats. The reduction in diversity is attributed to the more significant decline in the number of minority populations compared to the number of Serbs.

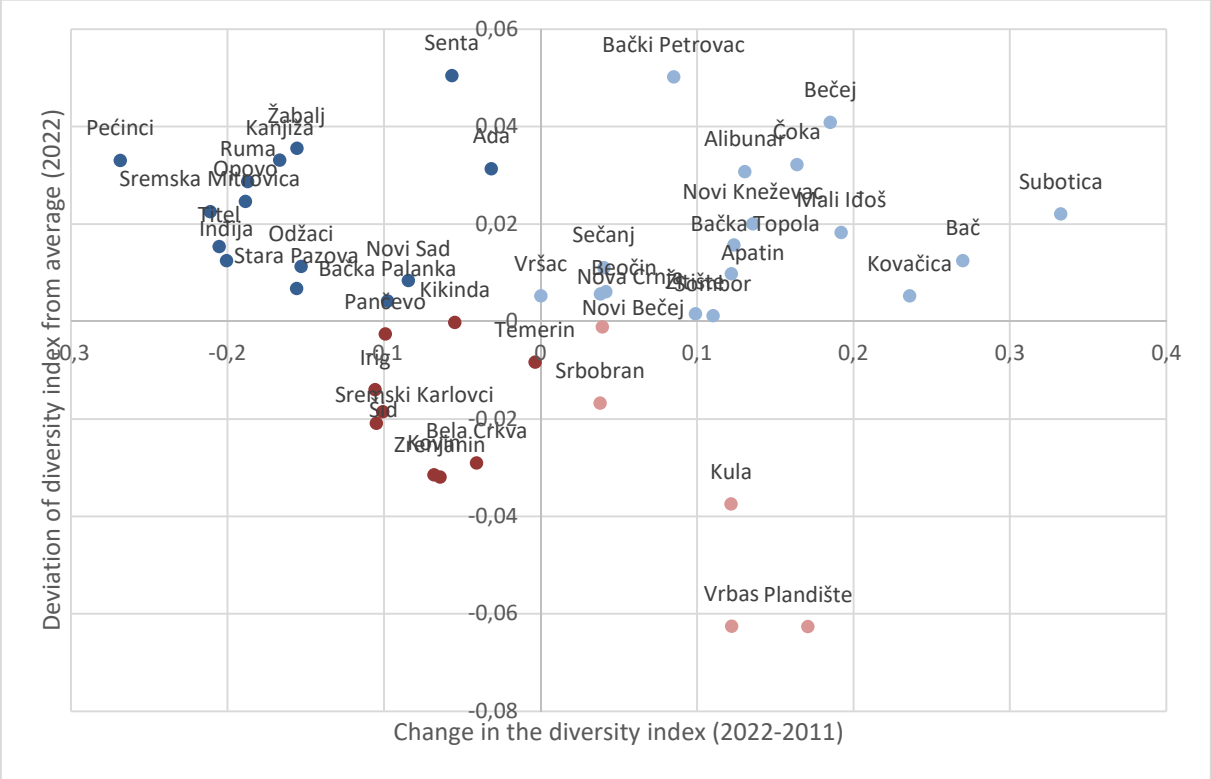
Our final category, "D", features municipalities experiencing continued ethnic homogenization with low diversity. This group consists of a spatially coherent unit located in the southeast along the Danube, including Bela Crkva, Kovin, and Pančevo. Outside this area, there is no spatial connection among other dispersed municipalities: Šid in the southwest, Irig and Sremski Karlovci to the east, Temerin in the interior, and Zrenjanin north of Belgrade. Within the southeastern group, Serbs are the majority ethnic group, while Hungarians, Roma, and Romanians constitute a significant minority. However, their numbers are small in relation to the Serb population. The decline in diversity is primarily due to the decreasing proportion of these minorities. Although the absolute numbers of minorities are declining less than those of Serbs, the proportional decrease is much more noticeable.

Similar trends are occurring in other municipalities, differing only in the declining minority group. In Šid and Temerin, the decline of the largest minority groups – Croats in Šid and Hungarians in Temerin – contributes to homogenization. In Kikinda, the main minority groups are the Hungarians and the Roma, while in Zrenjanin, several ethnic groups, including Hungarians, Roma, Romanians, Slovaks, and Croats, are seeing diminishing numbers,

reinforcing the homogenization trend. Many of these municipalities offer better opportunities: for example, Zrenjanin serves as a relatively large urban center, Pančevo is near Belgrade, and Irig, Sremski Karlovci, and Temerin are close to Novi Sad. As a result, their migration balance is better than the regional average, leading to less emigration and more immigration than typical for the region. Minority communities tend to be older, so natural decline affects them more than the majority population, which is often overrepresented in internal migrations.

There is a territorial connection among the municipalities within the mentioned categories, but the value properties reveal different patterns (Fig. 9).

Figure 9 Relation between the variation in the diversity index and the deviation from the regional average in the districts



Source: Statistical Office of the Republic of Serbia, 2011, 2023.

In municipalities of category “A”, despite most elements showing a higher proximity value regardless of spatial relationship, some stand out as well-separated. For instance, Subotica, which shows the largest deviation from the average, is only closely related in this respect to Bač and Kovačica, located in entirely different parts of Vojvodina. Another example is Bački Petrovac, which markedly differs in its diversity increase from the rest of its category; the closest municipality to it in terms of this value is actually in category “B” (Senta). In category “B”, most municipalities are grouped into a larger cluster, except for a few outliers such as

Senta and Ada, which deviate slightly in a negative direction from the average for Vojvodina but show a high degree of diversification. Additionally, Pećinci shows a considerable negative deviation from the regional average, but demonstrates a high increase in diversity.

Regarding the municipalities in category “C”, although they form a spatially coherent group, it is challenging to place them further apart in terms of their values. Kula, Vrbas, and Srbobran are spatially proximate yet exhibit differing levels of homogeneity. The municipalities within category “D” show relatively similar values with no outliers among them, which is particularly noteworthy given the absence of any spatial connection between the majority of them.

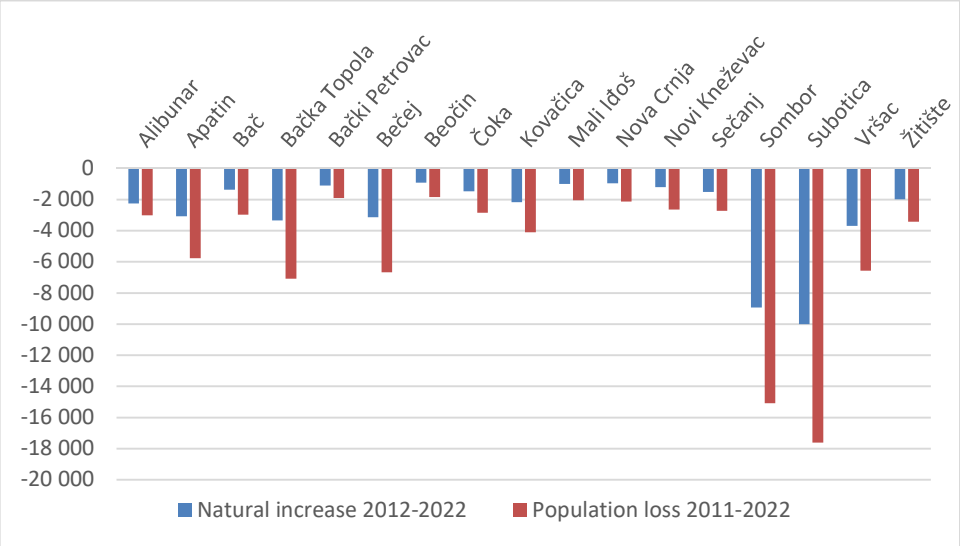
Changes in natural reproduction

The entire territory of Vojvodina is experiencing a population decline, as indicated by natural reproduction figures. Over the last decade, the province's population has decreased by 191,579 people, a significant portion of which can be attributed to natural decrease. Data from 2012 to 2022 supports this assertion; however, the graphs show that natural decrease alone does not fully explain the population gap between the two censuses. This evidence suggests that emigration is also a major factor influencing the demographic changes in the region. Specifically, Vojvodina's population has decreased by 124,705 individuals due to natural decrease, accounting for 65.09% of the overall decline between the two censuses.

In the previous chapter, we examined the relationship between the deviation of the 2022 diversity index from the average and changes in the diversity index from 2011 to 2022 to create certain categories. This section investigates the relationship between natural change and population decline across municipalities within these categories.

In “Category A” municipalities, it is evident that the total natural decrease accounts for only around half of the overall population loss. This is particularly pronounced in the municipalities of Subotica, Sombor, Bačka Topola, and Bečej. In Subotica, natural decrease represents just 56.8% of the ten-year difference; in Sombor, 59.21%; in Bačka Topola, 47.18%; and in Bečej, 47.1%, respectively. These statistics highlight the impact of migration, alongside natural changes, on the overall population size and, consequently, on the ethnic composition of the area (see Fig. 10).

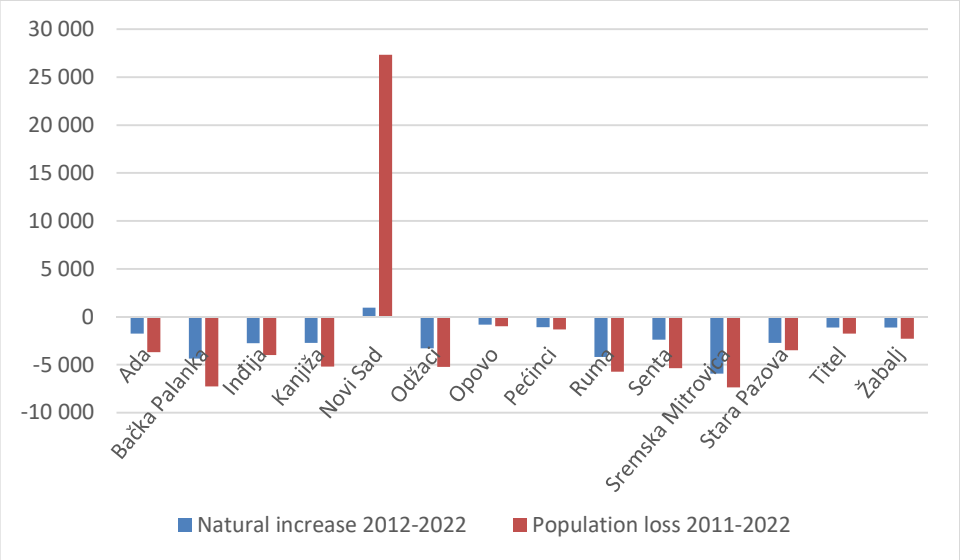
Figure 10 The difference between the natural change (2012-2022) and the population change (2011-2022) in Category A.



Source: Statistical Office of the Republic of Serbia, 2011, 2013-2023.

"Category B" includes municipalities with a diversity index below the provincial average but showing a steadily increasing diversity. The situation here differs significantly from Category A; only half of the municipalities report rates of natural change similar to those observed earlier. There is a substantial variation among municipalities: for instance, in Novi Sad, natural change accounts for only 3.52% of the total population difference, while in Opovo, it represents 81.49%. This clearly illustrates the importance of migration and its effects on both population dynamics and diversity in Novi Sad (see Fig. 11).

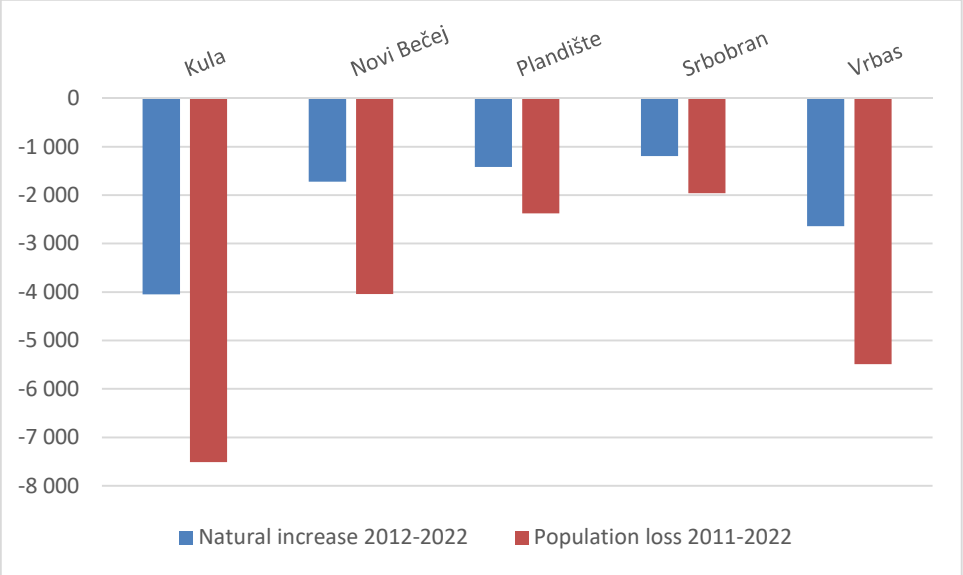
Figure 11 The difference between the natural change (2012-2022) and the population change (2011-2022) in Category B.



Source: Statistical Office of the Republic of Serbia, 2011, 2013-2023

"Category C" contains fewer municipalities than the previous two, characterized by high ethnic diversity but a consistent decrease in that diversity. In these municipalities, as in many from previous categories, natural change accounts for only about half of the overall population decline between the censuses. Notably, this is the case for Novi Bečej, where natural decrease constituted only 42.63% of the population decline, and for Vrbas, which saw a natural decrease of 48.07% (see Fig. 12).

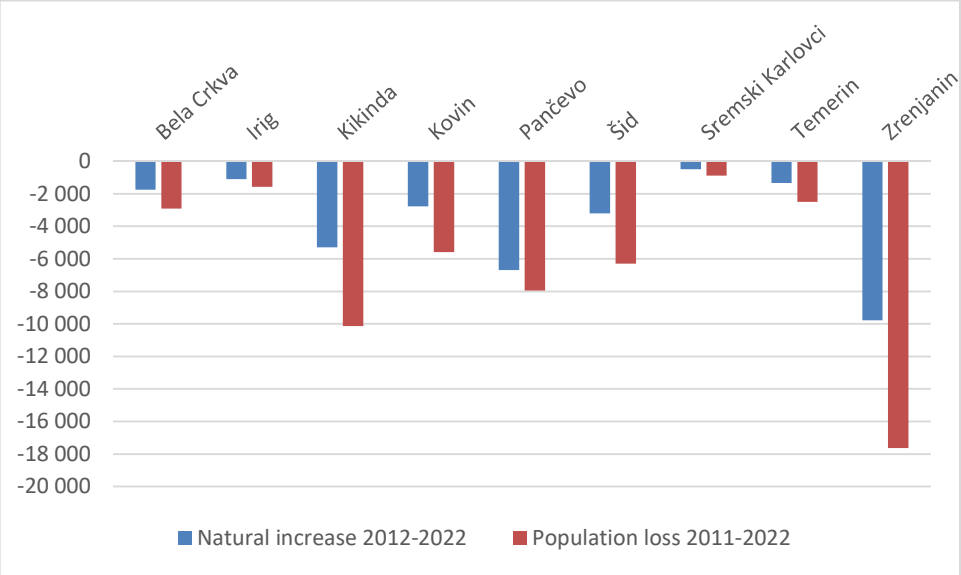
Figure 12 The difference between the natural change (2012-2022) and the population change (2011-2022) in Category C.



Source: Statistical Office of the Republic of Serbia, 2011, 2013-2023.

"Category D" includes municipalities with a low diversity index and ongoing homogenization. The trends observed here resemble those in previous categories, with two exceptions. In Pančevo, natural decrease accounts for 84.1% of the overall population loss, indicating that emigration plays a minimal role in this municipality's decline. In contrast, in Irig natural decrease gives 69.41% of the population loss (see Fig. 13).

Figure 13 The difference between the natural change (2012-2022) and the population change (2011-2022) in Category D.



Source: Statistical Office of the Republic of Serbia, 2011, 2013-2023.

The aforementioned figures illustrate the significant extent of natural decrease across Vojvodina. However, in many cases, these figures only account for around half of the total population decline, with migration serving as another crucial factor. This situation is particularly relevant for minority groups, such as Hungarians. Several media reports have highlighted this issue, some featuring various researchers discussing the depopulation of Vojvodina (Cérna, 2017). Several scholars noted that continuous emigration primarily impacts young people, driven especially by challenges in education and economic opportunities. In the case of further education, the most common reason for emigration was education in Hungarian, as there are few opportunities for this in Serbia (Kincses & Papp, 2020). Sociologist Róbert Badis, during a lecture at the Újvidék Scholars' Club on May 20, 2024, indicated that the decline in the Hungarian population has intensified, increasing from 40,000 in the previous decade to 70,000 in the last ten years. He attributed this decline to three main factors: 45 percent due to natural decrease, 40 percent to emigration, and 15 percent to assimilation. The introduction of dual citizenship after 2011 has been a significant factor facilitating the emigration of a substantial number of Hungarians from Vojvodina. As a result of the emigration of young people, the birth rate in the region has sharply declined, exacerbating the reduction of the ethnic population and contributing to the ethnic homogenization of the area (HHzs, 2023; Kabók, 2013; Vajdasági Magyar Akadémiai Tanács, 2024).

CONCLUSIONS

The ethnic composition of Vojvodina has changed significantly since the last census conducted during the Yugoslav era. The proportions of ethnic minorities have been reduced, and their spatial distribution has also shifted. In the initial phase of the 30-year period under review, processes of homogenization played a crucial role in shaping the region's ethnic landscape. The few municipalities that experienced diversification during this time were predominantly those with minority majorities, primarily due to the immigration of Serbs.

Over the following two decades, more municipalities underwent changes leading to increased diversity, even as the overall proportions of ethnic minorities continued to decline. The diversity index of these municipalities indicates that, at the beginning of the study period, only the southern periphery exhibited low diversity. However, over thirty years, an increasing number of municipalities reached similar diversity levels, causing the area of low diversity to shift northward.

In both the positive and negative changes regarding diversity, certain areas demonstrated deviations from the region's average diversity. Municipalities with higher-than-average diversity are primarily located in the northern part of Vojvodina, presenting a varied landscape where Hungarians or Slovaks may form majorities, but where an increase in diversity is often linked to a decline in these populations. Conversely, there are regions where Serbs are the majority, and their increased diversity stems from a more significant decrease in their numbers. This situation can be exacerbated by ethnic minorities generally having lower fertility rates and higher emigration rates among Serbs.

Lower-than-average diversity regions are mainly situated in the south, where the predominance of Serbs and a limited presence of other ethnic groups contribute to low diversity, with the exception of the Kanjiža municipality, where Hungarians are the majority. By examining the variation in diversity and how municipalities deviate from regional averages, we categorized the municipalities into four broad groups. Analyzing the spatial characteristics of these categories allowed us to define spatially coherent units within each group. Despite some municipalities forming a coherent spatial area, significant differences in values were still evident, particularly in category "C", which comprises only a few municipalities where these discrepancies are pronounced.

Acknowledgement

Research for this publication has been supported by the National Research, Development and Innovation Office (NKFIH) through the OTKA grant #146585 (Hungary and the Western Balkans).

REFERENCES

Alesina, A., & La Ferrara, E. (2004). *Ethnic Diversity and Economic Performance.* Development Working Papers 193, Centro Studi Luca d'Agliano, University of Milano.

Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., & Wacziarg, R. (2003). Fractionalization. *Journal of Economic Growth,* 8(2), 155-194.

Bajmócy, P. (2004). A nemzetiségi és vallási szerkezet változása Magyarországon a XX. században [Change of ethnic and religious structures in Hungary in the 20th century]. In *II. Magyar Földrajzi Konferencia.* (CD-kiadvány). Szeged: SZTE Természeti Földrajzi és Geoinformatikai Tanszék.

Brubaker, R., Barbagli, M., & Ferguson, H. (2009). National homogenization and ethnic reproduction on the European periphery. *Cahiers, 21.*

Cérna, L. (2017). Csökken a vajdasági magyarok lélekszáma – mi lehet a megoldás? [The number of Hungarians in Vojvodina is decreasing – what could be the solution?]. *Hét Nap.* Retrieved from https://hetnap.rs/cikk/Csokken-a-vajdasagi-magyarok-lelekszama-mi-lehet-a-megoldas-24794.html

Collier, P. (2001). Implications of ethnic diversity. *Economic Policy*, 16(32), 127-166.

Dinesen, P. T., Schaeffer, M., & Sønderskov, K. M. (2020). Ethnic diversity and social trust: A narrative and meta-analytical review. *Annual Review of Political Science,* 23(1), 441-465.

Easterly, W., & Levine, R. (1997). Africa's Growth Tragedy: Policies and Ethnic Divisions. *Quarterly Journal of Economics,* 112(4), 1203-1250.

Fearon, J. D. (2003). Ethnic and Cultural Diversity by Country. *Journal of Economic Growth,* 8(2), 195-222.

Hajdú, Z., & Rácz, S. (2024). Does István Bibó's Concept of the "Misery of Small States" Carry a Message for the Western Balkans Today? *Balkanistic Forum,* 33(2)., 102-119.

HHzs. (2023). Egyre csak fogyunk. Badis Róbert szociológussal a tavalyi népszámlálás előzetes adatairól. [With sociologist Róbert Badis on the preliminary data of last year's census]. *Magyar Szó.* Retrieved from https://www.magyarszo.rs/vajdasag/zenta/a.27097/Egyre-csak-fogyunk

Judah, T. (2019). Bye-bye, Balkans: a region in critical demographic decline. *BIRN, Balkan Insight.* https://balkaninsight.com/2019/10/14/bye-bye-balkans-a-region-in-critical-demographic-decline/ (Download: 28 February 2024).

Kabók, E. (2013). Csendes elvándorlás [Quiet emigration]. *Magyar Szó.* Retrieved from https://www.magyarszo.rs/hetvege/a.156913/Csendes-elvandorlas

Kincses, B., & Papp, S. (2020). Examination of the Motivation for Further Education among Hungarian High School Students in Vojvodina. *Deturope,* 12(3), 151–168.

Léphaft, Á., Németh, Á., & Reményi, P. (2014). Ethnic diversity and polarization in Vojvodina. *Hungarian Geographical Bulletin,* 63(2), 135-157.

Mauro, P. (1995). Corruption and Growth. *Quarterly Journal of Economics,* 110(3), 681-712.

Montalvo, J. G., & Reynal-Querol, M. (2005). Ethnic Diversity and Economic Development. *Journal of Development Economics,* 76(2), 293-323.

Montalvo, J. G., & Reynal-Querol, M. (2021). Ethnic diversity and growth: Revisiting the evidence. *Review of Economics and Statistics,* 103(3), 521-532.

Nagy, E., Lux, G. & Timár, J. (2022) „Changing peripheralities and centralities in Central and Eastern Europe: Editorial", *Tér és Társadalom*, 36(3), o. 3–9.

Németh, Á. (2013). Ethnic Diversity and its Spatial Change in Latvia, 1897-2011. *Post-Soviet Affairs,* 29(5), 404-438.

Németh, Á., & Šolks, G. (2012). Alteration of the Ethnic Diversity and Ethnic Segregation Index in Latvia during the First and Second Independence Periods. *The Romanian Journal for Baltic and Nordic Studies,* 4(1), 9-33.

Raduški, N. (2011). Ethnic homogenization of Serbia in the period 1991-2002. Зборник *радова Географског института "Јован Цвијић" САНУ,* 61(2), 37-51.

Rácz, S. (2023). Urban development in Serbia - The economic positions and development processes of major cities. *Deturope,* 15(2), 48–65.

Rácz, S., Egyed, I. (2023). From the "West of the East" to the "East of the West": The postsocialist economic and structural transition of Central and South-Eastern Europe. *Deturope*, 15(2), 9-27

Reilly, B. (2000). Democracy, Ethnic Fragmentation, and Internal Conflict: Confused Theories, Faulty Data, and the "Crucial Case" of Papua New Guinea. *International Security,* 25(3), 162-185.

Reményi, P. (2009). Etnikai homogenizáció a volt Jugoszláviában [Ethnic homogenization in former Yugoslavia]. *Balkán Füzetek, 1. különszám,* 122-129.

Reményi, P. (2010). Some aspects of demographic consequences of the breakup of former Yugoslavia. In Tarrósy, I., & Milford, S. (szerk.), *The Western Balkans: Lessons from the Past and Future Prospects – A View from the Danube Region* (pp. 41-54). Pécs: Publikon Kiadó.

Reményi, P., Gekić, H. & Bidžan-Gekić, A. (2024) „Fertility Trends and Population Policy in the Canton of Sarajevo", *Tér és Társadalom*, 38(1)., 88-109.

Scott, J. (2022) „Hungarian Border Research as a reflection of European integration and regional transformation", *Tér és Társadalom*, 36(3)., 28-46.

Simpson, E. (1949). Measurement of Diversity. *Nature,* 163, 688.

Statistical Office of the Republic of Serbia (1991). СТАНОВНИШТВО ПРЕМА НАЦИОНАЛНОЈ ПРИПАДНОСТИ, ПОПИС 1991. Statistical Office of the Republic of Serbia. Retrieved from https://www.stat.gov.rs/media/3637/stanovnistvo-prema-nacionalnoj-pripadnosti-popis-1991.xlsx

Statistical Office of the Republic of Serbia (2002). Nacionalna ili etnička pripadnost – podaci po naseljima, Popis 2002. Statistical Office of the Republic of Serbia. Retrieved from https://publikacije.stat.gov.rs/G2002/Pdf/G20024001.pdf

Statistical Office of the Republic of Serbia (2011). 2011 Census of Population, Households and Dwellings in the Republic of Serbia Religion, mother tongue and ethnicity. Retrieved from https://publikacije.stat.gov.rs/G2013/Pdf/G20134002.pdf

Statistical Office of the Republic of Serbia (2013). Municipalities and regions of the Republic of Serbia, 2013, 3.9. VITAL EVENTS, 2012. Statistical Office of the Republic of Serbia. Retrieved from https://publikacije.stat.gov.rs/G2013/PdfE/G20132011.pdf

Statistical Office of the Republic of Serbia (2014). Municipalities and regions of the Republic of Serbia, 2014, 3.10. VITAL EVENTS, 2013. Statistical Office of the Republic of Serbia. Retrieved from https://publikacije.stat.gov.rs/G2014/PdfE/G20142014.pdf

Statistical Office of the Republic of Serbia (2015). Municipalities and regions of the Republic of Serbia, 2015, 3.10. VITAL EVENTS, 2014. Statistical Office of the Republic of Serbia. Retrieved from https://publikacije.stat.gov.rs/G2015/PdfE/G20152017.pdf

Statistical Office of the Republic of Serbia (2016). Municipalities and regions of the Republic of Serbia, 2016, 3.10. VITAL EVENTS, 2015. Statistical Office of the Republic of Serbia. Retrieved from https://publikacije.stat.gov.rs/G2016/PdfE/G20162020.pdf

Statistical Office of the Republic of Serbia (2017). Municipalities and regions of the Republic of Serbia, 2017, 3.10. VITAL EVENTS, 2016. Statistical Office of the Republic of Serbia. Retrieved from https://publikacije.stat.gov.rs/G2017/PdfE/G201713044.pdf

Statistical Office of the Republic of Serbia (2018). Municipalities and regions of the Republic of Serbia, 3.10. Vital events, 2017. Statistical Office of the Republic of Serbia. Retrieved from https://publikacije.stat.gov.rs/G2018/PdfE/G201813045.pdf

Statistical Office of the Republic of Serbia (2019). Municipalities and regions of the Republic of Serbia, 3.10. Vital events, 2018. Statistical Office of the Republic of Serbia. Retrieved from https://publikacije.stat.gov.rs/G2019/PdfE/G201913046.pdf

Statistical Office of the Republic of Serbia (2020). Municipalities and regions of the Republic of Serbia, 3.10. Vital events, 2019. Statistical Office of the Republic of Serbia. Retrieved from https://publikacije.stat.gov.rs/G2020/PdfE/G202013047.pdf

Statistical Office of the Republic of Serbia (2021). Municipalities and regions of the Republic of Serbia, 3.10. Vital events, 2020. Statistical Office of the Republic of Serbia. Retrieved from https://publikacije.stat.gov.rs/G2021/PdfE/G202113048.pdf

Statistical Office of the Republic of Serbia (2022). Municipalities and regions of the Republic of Serbia, 3.10. Vital events, 2021. Statistical Office of the Republic of Serbia. Retrieved from https://publikacije.stat.gov.rs/G2022/PdfE/G202213049.pdf

Statistical Office of the Republic of Serbia (2023). Municipalities and regions of the Republic of Serbia, 3.9. Vital events, 2022. Statistical Office of the Republic of Serbia. Retrieved from https://publikacije.stat.gov.rs/G2023/PdfE/G202313050.pdf

Statistical Office of the Republic of Serbia (2023). 2022 Census of Population, Households and Dwellings Ethnicity Data by municipalities and cities. Retrieved from https://www.stat.gov.rs/en-US/oblasti/popis

Taylor, C., & Hudson, M. C. (1972). *The World handbook of Political and Social Indicators.* New Haven, CT: Yale University Press.

Trombitás, T., & Szügyi, É. (2019). Education Language Choice of Hungarian Ethnic Diaspora Communities in Vojvodina (Serbia). *Deturope*, 11(2), 54–74.

Vajdasági Magyar Akadémiai Tanács (2024). A vajdasági magyarok demográfiai jövőképe – Összefoglaló [The Demographic Future of Hungarians in Vojvodina – Summary]. Vajdasági Magyar Akadémiai Tanács. Retrieved from https://vmat.rs/2024/05/26/a-vajdasagi-magyarok-demografiai-jovokepe/

Original scientific paper

THE EVOLUTION OF SME DEVELOPMENT IN THE EU'S CROSS-BORDER COOPERATION: THE EXAMPLE OF DIRECT FUNDING IN THE HUNGARY-CROATIA INTERREG PROGRAMME

Zoltán PÁMER[a], Petra BUTTINGER[b], György MÁRTON[c]

[a] Research Fellow, HUN-REN CERS Institute for Regional Studies, 7621 Pécs, Papnövelde u. 22., pamer.zoltan@krtk.hun-ren.hu
[b] Analyst, Logframe Consulting Office Ltd., 7621 Pécs, Rákóczi út 13/b., buttinger@logframe.hu
[c] Managing director, Logframe Consulting Office Ltd., 7621 Pécs, Rákóczi út 13/b., marton@logframe.hu.

Cite this article: Pámer, Z., Buttinger, P., Márton, G. (2024). The evolution of SME development in the EU's cross-border cooperation: the example of direct funding in the Hungary-Croatia Interreg programme. *Deturope.* 16(3), 82-98.

Abstract

Cross-border cooperation has become an integrated element of the European Union's Cohesion Policy. In line with the strategic objectives, entrepreneurship and innovation have gained importance from period to period. Although cross-border programmes are generally understood as non-profit schemes, direct SME funding appeared already in the 2007-2013 period. On the basis of some Western European examples, a pilot programme was implemented in the Croatia-Hungary border area in the 2014-2020 period that directly supported businesses.

The paper, after providing an overlook on SME development in EU cross-border cooperation, summarises the particularities of the analysed instrument. The paper defines two research questions: sectoral characteristics, specialisation patterns in some types of settlements; and the presence of innovation in the submitted and funded projects. The first question is answered through an analysis of the sectoral and settlement category breakdown of projects, while for the second a simple methodology is presented to measure to what extent innovation was in focus. For the analysis programme level data was used.

The paper's main finding is that, due to the logic of the scheme, innovation was easier to present in the case of more "materialised" sectors, such as wood processing, manufacturing and machine production, leading to higher success rates than in case of the service sector where cooperation between partners was less obvious. Even if the majority of the projects only promoted market entrance instead of innovation, rural areas have shown a higher success rate, demonstrating a relatively balanced spatial structure.

Keywords: cohesion policy, cross-border cooperation, SME development, innovation, Hungary, Croatia

INTRODUCTION: THE EVOLUTION OF INTERREG AND SME DEVELOPMENT IN CROSS-BORDER COOPERATION

Border areas tend to suffer from their peripheral position, isolation from their natural hinterland, which leads to a lack of services, limited demand and supply and a distorted labour market. As Europe is composed of states of various size, a large share of Europe's regions are border regions. Although a significant part of the achievements of EU integration (free movement of goods, services, capital and labour) significantly contributed to the improvement

of the situation of border areas, the networks defined by national economies still play a pivotal role, putting border regions to a less favourable position compared to core areas. Some border areas, in contrast, could gain significant advantages from their border position, being located near some major economic centres of neighbouring countries. In Central and Eastern Europe, the best known such example is the Vienna-Bratislava-Győr triangle, which has transformed the northwest of Hungary into a dynamic zone for cooperation and innovation (Korec, 1998; Rechnitzer, 2014).

The first innovation of European cohesion policy with a focus on border regions was the INTERREG Community Initiative introduced in 1989 (Harguindéguy & Bray, 2009). In the 1994-1999 period the regulation on the European Regional Development Fund (ERDF) foresaw the launching of initiatives and pilot schemes for developing border regions, for the pooling of experience and carrying out innovative measures (EC, 1993). For this period, the INTERREG II initiative set up the pillar system, which made cross-border cooperation a separate pillar, with the highest share of funding. The cross-border pillar ("A") had been strengthened in the 2000-2006 programming period, with the subnational level receiving higher importance in programming, decision-making and monitoring (Harguindéguy & Bray, 2009). The thematic focus was widened: cross-border cooperation was expected to focus on sustainable regional and local development (EC, 1999) in general. In that programming period, although with limited timeframe and funding, the new member states (accessing in 2004) were also able to participate. In the 2007-2013 period "European Territorial Cooperation" (ETC) was declared as 'Objective 3' of Cohesion Policy, meaning cross-border cooperation – replacing the Community Initiative – became a part of mainstream EU structural policy (Pámer, 2011). The "mainstreaming" of Interreg led to the more specific regulation of its thematic focus: entrepreneurship, including SME development and cross-border trade, inter alia, were distinctly mentioned (EC, 2006). The main determinant of the cohesion policy of the 2014-2020 period was the European Strategy for smart, sustainable and inclusive growth ("EU 2020 Strategy"), which considered borders as hindrances to economic growth, innovation and the flow of goods. Therefore, cross-border cooperation received a key importance, as stressed by the strategy in four particular domains: one of them being research and development, improvement of value added and diffusion of technology across the EU (EU, 2010). This approach required the breakdown of EU objectives to the level of member states, and the setting up of single programmes financed by cohesion policy, with measurable indicators. For the 2014-2020 period a separate regulation was established for the European Territorial Cooperation programmes, which further stipulated a thematic focus, whereby

cross-border exchange and cooperation between SMEs were received particular emphasis (EC, 2013).

Cross-border cooperation, besides the promotion of the catching up of cross-border areas, is considered as an important tool of Europeanisation, the practice of multi-level governance, and the exchange of practices (Popescu, 2008). In general, cross-border cooperation is a special tool for transmitting European values, despite being often interest-driven and putting too much focus on funding schemes (Scott, 2013). The funding of Interreg, including cross-border cooperation, has shown a permanent rise since its inception, however a small decrease was envisaged for the 2021-2027 period (Pámer, 2021). Despite the growing amount of funding, there has been a debate about the role of Interreg: whether cross-border cooperation should primarily aim at resolving specific cohesion difficulties of generally undeveloped border regions through the provision of more funding (as in the periods of 2007-2013 and 2014-2020) or rather stimulate the elimination of various obstacles (1994-1999 and 2000-2006), thus enhancing the efficiency of cooperation (Pámer, 2021). This resulted in a swinging approach from period to period. According to a communication by 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), which, for the 2021-2027 period, shows a return to the approach of earlier periods.

Cross-border regional innovation strategies and SME development in border areas

Although global business networks may dominate border areas as well, cross-border business linkages may grow over time and significantly affect the local economy of border areas (Leick, 2012). As a tool for promoting innovation and cooperation, the development of regional innovation strategies (RIS) was a commonly observed phenomenon in the early 2000s, promoting regional integration, the strengthening of regional institutions and multi-level governance. Likewise, the concept of cross-border RISs emerged for the sake of taking advantage of physical proximity – which tends to become less important – in border areas, where the border represents an obstacle and undermines business collaboration (Van den Broek, Benneworth, Rutten, 2019). A cross-border RIS could create synergies and stimulate growth, particularly in knowledge-intensive sectors, thus cross-border RIS might be considered as the most advanced form of cross-border integration. According to Lundquist and Trippl (2013), such regions are characterised by the intensive flow of knowledge and labour, partnerships between academia and businesses, making them a favourable location for attracting investments.

The institutionalisation of cross-border cooperation was a heavily discussed topic in the early 2000s. To improve efficiency and provide a governance framework for cooperation, the establishment of Euroregions had become a common trend since the 1950s. The first such cooperation framework was established in 1958 on the Dutch-German border in the area of Enschelde and Gronau (Scott, 1993), as an example of further cross-border institutions (Perkmann, 2003). The target area of EUREGIO concentrates a large number of institutions that may serve as a basis for SMEs and innovation in cross-border cooperation: businesses, universities, universities of applied sciences, science parks, regional development agencies (Van den Broek, Benneworth & Rutten, 2019). Despite a great deal of scepticism about the sustainability of cooperation in this target area, the EUREGIO proved to be very successful in the institutionalisation and generation of projects under various generations of the Interreg initiative, whereas the Dutch government promoted a more focused cooperation: specialising on technology, in line with the Lisbon Agenda. This led to the establishment of a cross-border centre of excellence (Perkmann, 2005). Besides, it prompted a new approach in Interreg: the direct funding of the stimulation of innovation. The project "Mechatronics for SMEs", funded by the Interreg Programme Germany-Netherlands 2007-2013, as its largest project of 18.4 million EUR, provided direct support to SMEs. The leader of the project consortium was the working body of EUREGIO, Euregio e.V. from Germany. As partners, besides a county (Landkreis) from Germany, a high number of regional education institutions, technology transfer and business support institutions of various forms (public agencies, chambers, foundations, private companies) were involved. This major project funded the cooperation of a total of 257 SMEs in the form of 106 joint innovation projects (Zenker & von Bunnen, 2016). Although funding was directly provided to the SMEs for joint innovation activities, they were supported by a set of various external service providers (technology transfer institutions) being involved as project partners, whereby the supported SMEs could obtain technical assistance. Although the programme proved to be a success in terms of indicators, based on the amount funding allocated, the project has been very challenging from an institutional and administrative point of view. Despite these challenges, the evaluations showed that 50% of the cooperating SMEs were planning to carry on the cooperation (Van den Broek, Benneworth & Rutten, 2019).

Another example of the direct involvement of SMEs in cross-border cooperation was the programme Flanders-Netherlands, which prioritised innovation in the 2007-2013 period. The "Crossroads" project from the Interreg IV programme, seeking to finance cross-border

innovation initiatives, provided 3 million EUR funding, including 50% co-financing, resulting in 21 collaboration projects (Van den Broek, Benneworth & Rutten, 2018). Although the border area consists of the EU's most developed regions, with a strong tradition of business cooperation and innovation, and a complete lack of language barriers, awareness of innovation was insufficient, and the weakness of institutions (OECD, 2013) hindered cooperation. Also, despite physical proximity, businesses considered cross-border partners only in case there was no option for cooperation within their own regions and countries (Van den Broek, Benneworth & Rutten, 2018). As a follow-up step, from the Interreg V-A Belgium-Netherlands programme (2014-2020) over 40% of the budget was allocated to cross-border innovation projects, including research and experimental development, as well as research infrastructure for public and private institutions (Van den Broek, Rutten & Benneworth, 2018). This programme supported collaboration projects of SMEs and research institutions in innovation, SME competitiveness and green energy projects (Knotter, 2018).

Concerning the relationship of cooperation activities and socio-economic development, Basboga (2020) examined several factors in case of various cooperation topics, including SME cooperation. According to his findings, cross-border economic development disparities are encouraging SME cooperation, especially if one of the involved regions is economically strong and new EU member states are involved in the cooperation.

Concerning the border of Hungary, SME cooperation activities were analysed on the Slovakia-Hungary border by Kézai et al. (2022), and from the Interreg point of view by Hakszer (2017). Regarding the narrow target area of the present article, the border area has been investigated by various scholars to date, including Čelan (2016) and Rácz (2017), who described the socio-economic relations, border permeability and cross-border cooperation in a general context, without however touching the issue of cross-border innovation and SME cooperation. Pámer (2019a, 2019b, 2020) provided an in-depth analysis of the implemented EU cross-border instruments, in the context of territorial governance structures, on the basis of the 2007-2013 programme data, which lacked direct SME cooperation instruments.

THE EMPIRICAL RESEARCH: PRESENTATION OF THE ANALYSED SCHEME AND METHODOLOGY

The subject of the empirical analysis is the Interreg V-A Hungary-Croatia 2014-2020 Cross-border cooperation programme, which, from its total ERDF funding of 57.17 million EUR,

has devoted 9.96 million EUR to SME development. This intervention was implemented under the thematic objective "Enhancing competitiveness of small and medium-sized enterprises", with the investment priority of product and service development. From the total allocated funding, 6.5 million EUR was planned to be spent on direct SME support, the rest was dedicated to the operation of the management structure and the provision of support and technical assistance to SMEs.

The SME support scheme has been implemented technically as one operation under the name "Beneficiary Light" (B Light), under the coordination of the Croatian Zagreb-based national SME development agency HAMAG BICRO, which was assisted by a total of seven NUTS 3 regional development agencies from Hungary and Croatia. These bodies were responsible for the promotion of the scheme, and the preparation of the SMEs for application. The selection of the funded SME cooperation projects was carried out through a two-step application system. In the first step, a general description of the project concept was required, afterwards, the pre-selected concepts were requested to submit their detailed project proposal. In sum, four calls were implemented, three using this two-step approach and the final call using a single-step approach. The beneficiaries could be SMEs operating in the programme area: the three NUTS 3 level counties from Hungary and the eight NUTS 3 counties from Croatia (see map on Figure 1).

According to the call, collaboration projects had to focus on joint product, service or technology development, i.e. each project had to provide some joint innovation output. The cooperating partners were expected to play a complementary role in the project: responsible for partitioning the innovation process, being responsible for its different elements, or one partner being responsible for the whole innovation process, while the other one's responsibility was limited to sales and promotion. According to the call, the projects supporting market entrance alone were not supported, however, according to our hypothesis, some of the projects served accessing new markets and not real innovation.

The target set for the number of SMEs involved was 80. Typical bilateral cooperation projects involved at least two SMEs, one from Croatia and one from Hungary. The maximum number of beneficiaries in one cooperation project was four, with at least one company from each side of the border. Altogether 89 projects were submitted by 197 companies. The number of selected projects amounted to 33, implemented by 71 applicant companies, including 36 from Hungary and 35 from Croatia, which shows a very balanced contribution from the two partner countries.

This paper sets the following aims and research questions:

- What kind of sectoral characteristics are detected for the cooperating companies in the border area? Are these sectors concentrated in some selected types of settlements and are there any specialisation patterns within the border area in some specific sectors or industries?
- Although joint innovation was a precondition of application, according to our hypothesis, only a part of the submitted projects targeted real innovation, a significant share of the submitted and funded projects focused on market entrance. Is there a difference between innovation and market entrance-oriented projects and are these distinctions apparent only for the submitted or also for the funded projects?

For the measurement of activities in specific sectors and areas of the border region, the variable of number of applicant and funded companies were used. As the maximum amount of targeted funding per company was set at 180,000 EUR (including 135,000 EUR, 75% EU co-financing) – which was also the modus of the submitted project size – funding, as a variable, does not provide an added value. The data was made available by the programme management body, the Joint Secretariat of the Interreg V-A Hungary-Croatia Cooperation Programme.

Sectoral patterns of SME cooperation in the analysed border area

The border area is characterised as the meeting point of peripheries, particularly from the Hungarian side (Berkes & Dusek, 2023). According to the situation analysis of the Cooperation Programme for the 2014-2020 period, the Hungary-Croatia border area is characterised by a low number of business entities, compared to the national averages, low innovation activity, an above-average representation of the agricultural sector and food industry, and a weak manufacturing industry, which is concentrated in the western part of the border area (Međimurje, Varaždin, Zala). The services sector is dominant in the larger cities, including Pécs and Osijek, however, tourism services are also dominant in some selected tourism areas which are more present on the Hungarian side (Balaton area). Innovation is mostly driven by public R&D institutions (universities) in the larger cities, the participation of the private sector is weak (Interreg V-A, 2015). It is important to point out that neither Hungary for Croatia, nor Croatia for Hungary belongs to the most important trading partners at the national level (Rácz & Egyed, 2023). The border area, particularly from the Hungarian

side, is characterised by lagging counties (Berkes & Dusek, 2023) and an unfavourable education attainment in the immediate border area (Pénzes et al., 2023).

In order to provide a transparent overview of the prevailing sectors in the border area, companies have been grouped according to their core business activity (NACE) and the sector they are targeting in their submitted/selected project, as seen in Table 1. The results of this analysis show that IT development, business consultancy and promotion, as well as manufacturing and machine production altogether amounted to more than 50% of the total applications and the funded SMEs. Out of these, more than half of the manufacturing companies have received funding, while IT development companies have been funded at a considerably lower rate. Although interest was somewhat lower from wood and metal processing companies, a very high share of these businesses have been selected for funding. On the one hand, food industry, as one of the traditional sectors, showed a high interest, but without any single funded project; on the other hand, the similarly traditional clothing manufacturers applied in a very low number, albeit with a 100% success rate. These figures show that manufacturing-type industries were the most compatible with cross-border cooperation and the requirements of the scheme, where the value chain can be clearly defined, which was the key assessment condition. On the contrary, a high level of interest has been observed in the non-materialised sectors such as IT, consultancy and promotion, albeit with a significantly lower success rate.

In order to reveal the location of the applicant and funded cooperating companies, the settlements of the dominantly rural border area have been grouped by the number of inhabitants, based on 2021 data, as follows:

- Category 5: cities with over 90,000 inhabitants (Osijek and Pécs);
- Category 4: cities with over 40,000 inhabitants (Kaposvár, Nagykanizsa, Varaždin and Zalaegerszeg;
- Category 3: towns with above 20,000 inhabitants (altogether eight towns, thereof Požega from Croatia and Siófok from Hungary did not have any project);
- Category 2: towns and municipalities with over 5,000;
- Category 1: towns and municipalities with less than 5,000 inhabitants.

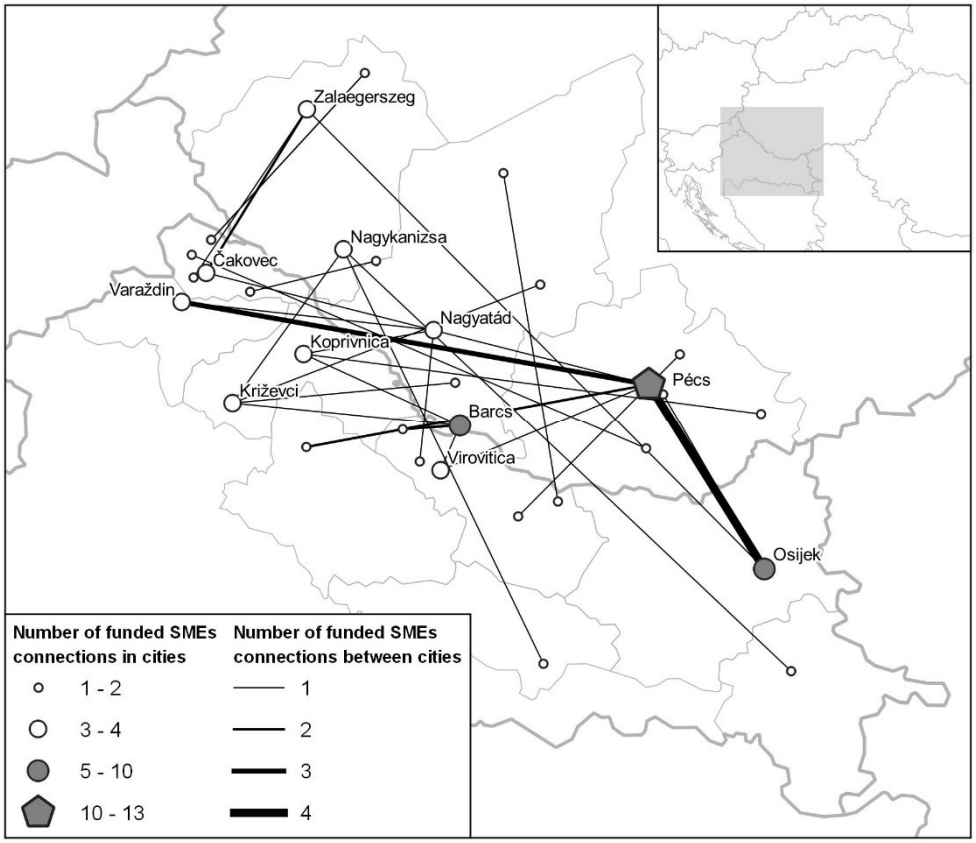
As shown by Figure 1, the largest – Category 1 and 2 – cities were the most active in cooperation. Cooperation was clearly dominated by the city of Pécs in Hungary, while the Croatian side shows a more decentralised approach: besides the city of Osijek in the East, more activity is detected in the more developed Western counties.

Table 1 Distribution and success rate of industries of applicants in the B Light scheme

Industries of applicants	Number of applying SMEs	Number of funded SMEs	Success rate (%)
IT development	43	18	41.86
business consultancy, promotion and communication	32	7	21.88
manufacturing and machine production	27	15	55.56
food industry	13	0	0.00
wood industry	11	7	63.64
retail, wholesale	11	3	27.27
catering and tourism	11	2	18.18
R&D	10	3	30.00
metal processing	9	7	77.78
storage and transport	8	1	12.50
medical	6	2	33.33
agriculture-related	5	1	20.00
waste management	4	2	50.00
construction	4	0	0.00
clothing manufacturer	3	3	100.00
Total	197	71	36.04

Source: programme data, own edition.

Figure 1 Cooperation linkages and intensity of funded SMEs between cities



Source: own compilation.

As revealed by Table 2, although over one-third of the applicant SMEs were from the two major cities, eventually, only a quarter of the funded SMEs were from Osijek and Pécs. Secondary cities (Category 4) have been less represented but slightly better funded. The second most active and the most successful applicants were from the small towns (Category 2), hosting one-third of the funded SMEs. Small municipalities (Category 1) were similarly active and successful to secondary cities. As also demonstrated by Table 2, IT development, business consultancy and, in particular, R&D companies applied mostly from cities, while manufacturing and machine production companies were present from all types of settlements. Food, wood and tourism, however, were more typical for rural settlements. Concerning the most successful applicants in the big cities, medical companies stood out, while metal processing, manufacturing and machine production firms were among the most successful ones in all types of settlements (Table 2).

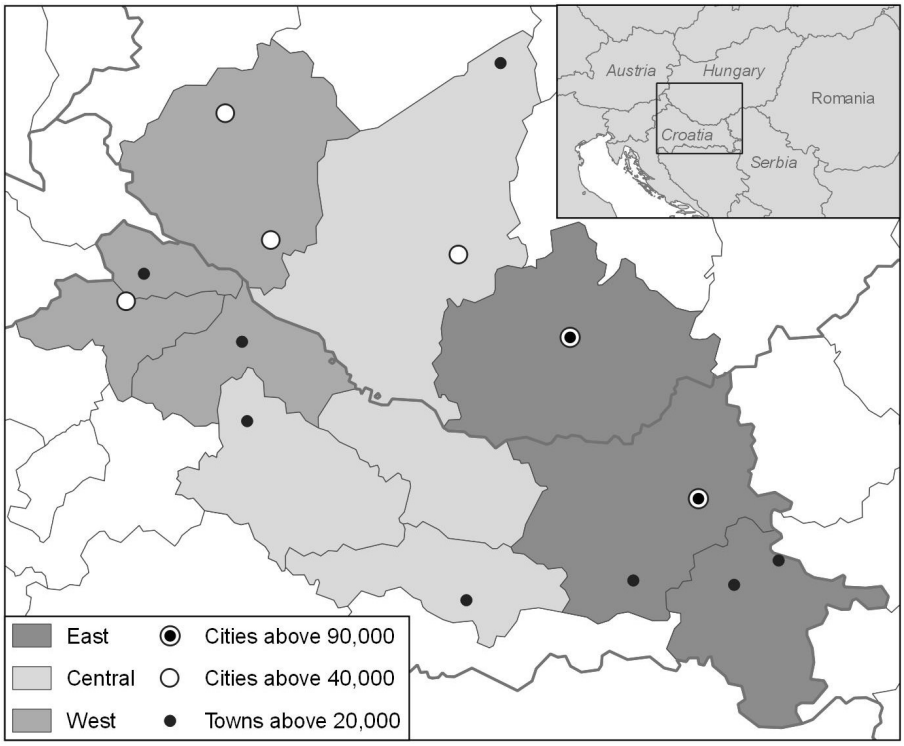
Table 2 Distribution of applications and funded SMEs between settlement categories and their most prevalent industries

Settlement category	SMEs applied (%)	SMEs funded (%)	Most applying	Most successful
Category 5	34.01	25.35	- IT development; - business consultancy, promotion and communication; - manufacturing and machine production; - R&D	- medical
Category 4	12.69	15.49	- IT development; - business consultancy, promotion and communication	- metal processing; - IT development
Category 3	14.72	11.27	- IT development; - food industry	- manufacturing and machine production
Category 2	25.89	33.80	- manufacturing and machine production; - wood industry; - business consultancy, promotion and communication	- metal processing; - wood industry; - manufacturing and machine production; - IT development
Category 1	12.69	14.08	- catering and tourism; - manufacturing and machine production	- manufacturing and machine production
Total	100.00	100.00		

Source: programme data, own edition.

Concerning the territorial distribution of certain industries, the border area has been divided into three zones, which includes one county in Hungary in each zone, plus the eight Croatian counties divided as shown on Figure 2.

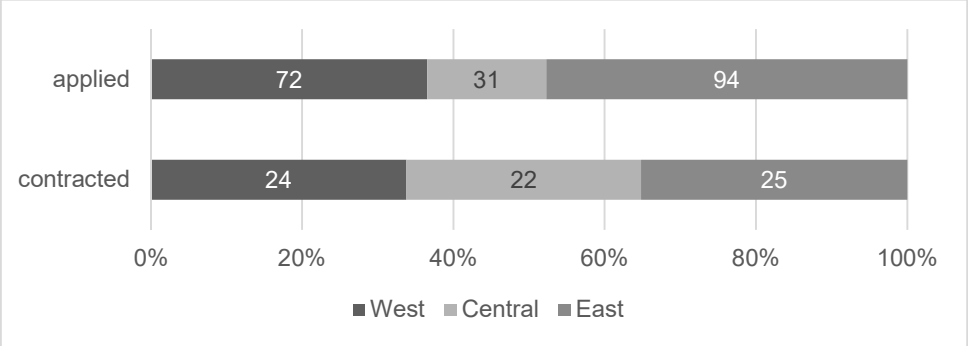
Figure 2 The division of the Croatia-Hungary border area into three zones



Source: own edition.

The three zones differ significantly in terms of their spatial structure. The Western Zone is dominated by a polycentric network of small towns, a high number of SMEs and good transport infrastructure. The Central Zone is the most rural, without significant urban centres and poor cross-border and intra-regional infrastructure. The Eastern Zone, despite including peripheries in both countries, is characterised by the dominance of the two big cities, relatively good cross-border and internal connectivity and a high number of SMEs and public institutions. As Figure3 shows, although SMEs from the Western and Eastern Zone were more active in applying, the distribution of the beneficiary companies shows a surprisingly balanced picture. The most rural Central Zone, which stands out in manufacturing, machine and wood industry, was a more successful applicant than the Eastern Zone where the majority of the IT, business consultancy and promotion companies reside. Some selected sectors, i.e. medical, R&D and education, were only contracted in the Eastern Zone.

Figure 3 The distribution of applicant and contracting companies by border area zones



Source: programme data, own edition.

Innovation vs. market entrance in cross-border SME projects

In order to find out whether the scheme supported real innovation or only cross-border market entrance attempts, the applied and funded projects have been thoroughly analysed, based on their content provided in the project forms and budget, with special attention to the cooperation approach in the different activities of the project partners.

As the scheme primarily focused on innovation, as laid down in the guidelines of the call, innovative projects were more favoured during selection. Besides the innovation element and the approach to cooperation, places of sales were also detailed in the project applications. Although both innovation and sales were subject to evaluation prior to project selection, in order to avoid bias, during the current research all applying projects have been re-evaluated by the authors on the basis of the complete project application forms. According to our hypothesis, although innovation was a must have element of funded projects, a part of the projects served only market entrance without containing a real innovation element. However, being included among the selection criteria, we also assume that projects with a higher innovation ranking were more likely to be selected than those only targeting market entrance.

The classification of projects was carried out by separating them into groups of joint innovation activity-based cooperation and cross-border market entrance-based cooperation. The criteria used for classification were the following:

- In the case of innovation activity-based cooperation projects innovation is the core activity, which is carried out jointly by the project partners. This means that throughout the project description and project activities a clear evidence can be found that the project partners are working together on the innovative character, or the element of the development, complementing each other's activities, providing feedback on each other's work and the decisions are made jointly. The innovation approach is clearly formulated, visions and goals are shared, responsibilities are divided.

- In the case of cross-border market entrance-based cooperation projects partner companies infuse their already existing technologies in creating a new product or service, targeting one of the countries' markets. The level of cooperation on effective innovation is low, linked services are developed in order to gain market competence, or partners provide complementary services to each other. It is also common for such projects to include business cooperation with a clear division of tasks, however, no joint efforts on innovation activity are undertaken, and in many cases, either only one project partner is working on innovation, or an external expert company is contracted to execute the innovation itself.

According to the criteria above, each project has received a ranking in both categories (Table 3).

Table 3 The scores of 'innovative ranking' and 'places and quality of sales'

Score	Innovative ranking	Places and quality of sales
1	No innovation	Clear project plan for entering each other's markets and sales plan explained
2	Innovation on territorial level relevant for project partners	Project creates opportunity for new market entry
3	Innovation on industry level	Product/service sold on international level in a non-neighbouring country
4	Innovation on sectoral level	Demand analysis conducted and explained
5	Disruptive innovation affecting the sector and beyond	High sales potential indicated by a "pre-reservation" from a future customer

Source: own edition.

Depending on which of their two rankings were higher, projects have been grouped into 'innovation projects' and 'business cooperation projects'. As revealed by Table 4, according to the applied methodology, more than 60% of the applied projects belonged to the category of 'business cooperation projects', proving that, even in cases where innovation was the main objective, the majority of projects did not qualify as an 'innovation project'. The average innovation ranking of funded projects was somewhat higher than that of applied ones. The situation is the opposite concerning the places and quality of sales scores, where submitted projects have received higher scores than funded ones.

This and the significantly higher success rate of innovation projects prove that the applied selection criteria was respected, i.e. innovation was prioritised.

Table 4 Average scores of submitted and funded projects from the two evaluation aspects

	Applied	Funded	Success rate (%)
Number of projects	89	33	37.08
Innovative ranking (average score)	2.47	2.52	
Places and quality of sales (average score)	2.62	2.09	
Number of innovation projects	34	21	61.76
Number of business cooperation projects	55	12	26.09

Source: own edition.

LESSONS AND DISCUSSION

Although innovation and SME development had been included among the objectives of Interreg from the very beginning, the first examples of direct SME support in Interreg programmes appeared in the 2007-2013 period, along the borders of the Benelux countries, which opened up new areas for research on cross-border policies. Such cooperation in the 2014-2020 programmes was particularly promoted. As a result of this approach, the analysed B Light Hungary-Croatia 2014-2020 scheme provided direct support to SMEs, which makes it a suitable subject for analysis. Based on the available cooperation activity data, our analysis has shown that certain service sectors (IT, business consultancy, promotion and communication) are rather concentrated in the two big cities, while some specific industrial activities (wood, manufacturing, machine production) are more abundant in smaller towns. The success rate of SMEs in these industries differs significantly: IT development, consultancy and promotion are characterised by lower success rates than industry-oriented projects. This was due to the nature of the scheme: it required a clear presentation of the role of the individual partners in the value chain, which proved to be easier in the case of the material sectors. While in the service sector cooperation appeared to be less obvious, it was at least reflected in the project selection. This, overall, led to a higher success rate in smaller towns, where industrial SMEs are more dominant. This dichotomy of industries and the success rate of companies is reflected in spatial terms as well. While the active and big city-dominated Eastern Zone showed a lower project success rate, the dominantly rural, industry and manufacturing-focused Central Zone contained a higher share of funded SMEs, due to the activity of its companies better fitting the scheme's concept, i.e. cross-border cooperation was easier to demonstrate in the case of physical product-oriented industries than in the service sector. Concerning the presence of innovation in the projects, on the basis of the applied methodology it has been shown that instead of real innovation, the majority of projects

promoted only market entrance to one of the partner countries. However, in general, the selected projects could be considered more innovative than non-selected ones.

Comparing these results with related scholarship on the targeted border area, the analysis of the cross-border SME scheme has yielded several findings. As the study of Pámer (2019a) has demonstrated on the basis of analysis of nonprofit schemes in the 2007-2013 programming period, from a cross-border cooperation point of view Hungary is a rather centralised country, as, on the one hand, the majority of activities and funding is concentrated in the big cities, particularly in Pécs; on the other hand, the majority of investments were implemented in the small towns and municipalities, for which cross-border cooperation presents a real added value. Croatia, due to its strong county-level institutions, has shown a relatively decentralised structure: alongside the relatively strong Osijek, the county seats and secondary towns showed the highest activity. In this context, the currently investigated SME scheme revealed a strikingly different picture, as the nature of the innovation-oriented SME scheme rather supported the manufacturing companies, which were able to better demonstrate the added value of cooperation and are often located in the more peripheral areas. Overall, this has resulted in a much more balanced spatial structure of cooperation activities, somewhat counterbalancing the spatially more concentrated nonprofit projects. Thus, a well-tailored SME scheme may be a suitable tool for enhancing cooperation in the peripheries as well.

Acknowledgements

Research for this publication has been supported by the National Research, Development and Innovation Office (NKFIH) through the OTKA grant #146585 (Hungary and the Western Balkans).

REFERENCES

Basboga, K. (2020). A Theme-based Analysis of the Intensity of Cross-Border Cooperation Across Europe, Journal of Borderlands Studies, DOI: 10.1080/08865655.2020.1833230

Berkes, J., & Dusek, T. (2023). The socio-economic performance of the Hungarian NUTS3 regions between 2010-2020. *Deturope,* 15(2), 85-108.

Čelan, J. T. (2016). An analysis of the latest trends of the complex development of the Croatian-Hungarian border area. *Hungarian Geographical Bulletin,* 65(1), 43-56.

EC (1993). Council Regulation (EEC) No 2083/93 of 20 July 1993 amending Regulation (EEC) No 4254/88 laying down provisions for implementing Regulation (EEC) No 2052/898 as regards the, European Regional Development Fund. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31993R2083&qid=1682326993211 (24.04.2023).

EC (1999). Regulation (EC) No 1783/1999 of the European Parliament and of the Council of 12 July 1999 on the European Regional Development Fund. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31999R1783 (24.04.2023).

EC (2006). Regulation (EC) No 1080/2006 of the European Parliament and of the Council of 5 July 2006 on the European Regional Development Fund and repealing Regulation

(EC) No 1783/1999. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02006R1080-20100618 (24.04.2023).

EC (2010). Communication from the Commission "Europe 2020 – A European Strategy for smart, sustainable and inclusive growth". https://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007%20-%20Europe%202020%20-%20EN%20version.pdf (24.04.2023).

EC (2013). Regulation (EU) No 1299/2013 of the European Parliament and of the Council of 17 December 2013 on specific provisions for the support from the European Regional Development Fund to the European territorial cooperation goal. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1299 (24.04.2023).

Hakszer, R. (2017). A 2007-2013-as Magyarország-Szlovákia Határon Átnyúló Együttműködési Program regionális aspektusai, megvalósításának tapasztalatai. *Tér és Társadalom,* 31(1). 107-123. doi:10.17649/TET.31.1.2791.

Harguindéguy, J.-B., & Bray, Z. (2009). Does cross-border cooperation empower European regions? The case of INTERREG III-A France – Spain. *Environment and Planning C: Government and Policy*, 27, 747-760.

Interact (2019). Territorial approach post 2020. Input to Transitioning. 09-10 December 2019, Frankfurt/Main, DE, Bernard Schausberger. Retrieved January 21, 2021, from http://www.interact-eu.net/download/file/fid/18497.

Interreg V-A (2015). Interreg V-A Hungary-Croatia Co-operation Programme 2014-2020, approved EN – Hungary-Croatia. Retrieved June 16, 2022, from http://www.huhr-cbc.com/uploads/editors/Cooperation%20Programme%20Interreg%20V-A%20Hungary-Croatia%20EN%20approved.pdf

Kézai, P. K., Dömötör, M., & Fekete, D. (2022). Economic Development Opportunities in the Hungarian-Slovakian Cross-Border Area – Szigetköz and Csallóköz (Žitný ostrov) According to Development Documents and Local Stakeholders Perceptions. *Deturope,* 14(1), 87-110.

Knotter, S. (2018). Impactevaluatie Interreg V Vlaanderen-Nederland, Eindrapport. IDEA Consult, Antwerpen.

Korec, P. (1998). Transformation of the Border transport system in the Vienna-Bratislava-Györ region. *European Planning Studies,* 6(5), 599-609. DOI: 10.1080/09654319808720483

Leick, B. (2012). Business Networks in the Cross-border Regions of the Enlarged EU: What do we know in the Post-enlargement Era? *Journal of Borderlands Studies,* 27(3), 299-314. DOI: 10.1080/08865655.2012.750952

Lundquist, K.-J., & Trippl, M. (2013). Distance, proximity and types of cross-border innovation systems: A conceptual analysis. *Regional Studies,* 47(3), 450-460.

Molema, M. (2018). Bright Ideas, Thick Institutions. Post-industrial Development Theories as Drivers of Cross-border Cooperation. *Journal of Borderlands Studies,* 36(1), 59-75, DOI: 10.1080/08865655.2018.1496467

OECD (2013). Regions and Innovation: Collaborating Across Borders (OECD Revie). OECD. doi:10.1787/9789264205307-en

Pámer, Z. (2011). The possibilities of implementing the European Grouping of the Territorial Cooperation in South Transdanubia. In Ágh A., Kaiser T., & Koller B. (Eds.), *The New Horizons of the Cohesion Policy in the European Union: the Challenge of the Danube Strategy* (pp. 176-194). Budapest: Blue Ribbon Research Centre King Sigismund College.

Pámer, Z. (2019a). How governance counts? Comparative analysis of activity and funding patterns of Central European cross-border cooperation programmes. *EUROPA XXI,* 35, 2018. 111-126.

Pámer, Z. (2019b). Magyarország és Horvátország határon átnyúló együttműködésének vizsgálata a két ország területi kormányzási rendszerének tükrében. *Tér és Társadalom,* 33(2), 149-166.

Pámer, Z. (2020). Uloga teritorijalnog upravljanja u prekograničnoj suradnji, na primjeru IPA programa Mađarska-Hrvatska 2007-2013. *Podravina,* 19(37), 153-161.

Pámer, Z. (2021). Tackling the measurement of cross-border cooperation intensity: an empirical example on the Hungary-Croatia border. *Deturope.* 13(2), 125-138.

Perkmann, M. (2003). Cross-border Regions in Europe. Significance and Drivers of Regional Cross-border Cooperation. *European Urban and Regional Studies,*10(2), 153-171. SAGE Publications.

Perkmann, M. (2005). *The emergence and governance of Euroregions: the case of EUREGIO on the Dutch-German border.* Working paper on line. Institut Universitari d'Estudis Europeus, Barcelona.

Pénzes, J., Papp, I., Apáti, N., & Kiss, J. P. (2023). Border areas and educational attainment – Long-term analysis of Hungary for the period between 1960 and 2022. *Deturope,* 15(2), 109-128.

Popescu, G. (2008). The conflicting logics of cross-border reterritorialization: Geopolitics of Euroregions in Eastern Europe. *Political Geography,* 27, 418-438.

Rácz, S. (2017). Main characteristics of Hungarian-Croatian political relations and Cross-Border Co-operations. *Geographica Pannonica,* 21(1), 54-67.

Rácz, S., & Egyed, I. (2023). From the "West of the East" to the "East of the West": The postsocialist economic and structural transition of Central and South-Eastern Europe. *Deturope,* 15(2), 9-27.

Rechnitzer, J. (2014). A győri járműipari körzetről szóló kutatási program. *Tér és Társadalom,* 28(2), 3-10.

Scott, J. W. (1993). The institutionalization of transboundary cooperation in Europe: Recent development on the Dutch-German Border. *Journal of Borderlands Studies,* 8(1), 39-66. DOI: 10.1080/08865655.1993.9695433

Scott, J. W. (2013). Territorial Cohesion, Cross-border Co-operation and the EU's Political Identity: A Brief Observation. In Pálné Kovács, I., Scott, J., & Gál Z. (Eds.), *Territorial Cohesion in Europe – For the 70th anniversary of the Transdanubian Research Institute* (pp. 73-84). Pécs: Institute for Regional Studies, CERS HAS.

Van den Broek J., Benneworth, P., & Rutten, R. (2018). Border blocking effects in collaborative firm innovation. *European Planning Studies,* 26(7), 1330-1346. DOI: 10.1080/09654313.2018.1476470

Van den Broek, J., Benneworth P., & Rutten R. (2019). Institutionalization of cross-border regional innovation systems: the role of university institutional entrepreneurs. *Regional Studies, Regional Science,* 6(1), 55-69. DOI:10.1080/21681376.2018.1562367

Van den Broek, J., Rutten, R., & Benneworth, P. (2018). Innovation and SMEs in Interreg policy: too early to move beyond bike lanes? *Policy Studies.* DOI: 10.1080/01442872.2018.1539225

Zenker A., & von Bunnen, P. (2016). European Territorial Cooperation Work Package 11 – Ex post evaluation of Cohesion Policy programmes 2007-2013, focusing on European Regional Development Fund (ERDF) and the Cohesion Fund (CF). European Commission, Directorate-General for Regional and Urban Policy.

Original scientific paper

ECONOMIC AND DEMOGRAPHIC DYNAMICS IN CENTRAL EUROPEAN BORDER REGIONS BETWEEN 2014-2020

Gábor LADOS[a], Dávid NAGY[b], Réka HORECZKI[c]

[a] Research Fellow, HUN-REN CERS Institute for Regional Studies, 7621 Pécs, Papnövelde u. 22., lados.gabor@krtk.hun-ren.hu
[b] Research Fellow, HUN-REN CERS Institute for Regional Studies, 7621 Pécs, Papnövelde u. 22., nagy.david@krtk.hun-ren.hu
[c] Senior Research Fellow, HUN-REN CERS Institute for Regional Studies, 7621 Pécs, Papnövelde u. 22., horeczki.reka@krtk.hun-ren.hu

Cite this article: Lados, G., Nagy, D., Horeczki, R. (2024). Economic and demographic dynamics in Central European border regions between 2014-2020. *Deturope.* 16(3), 99-120.

Abstract

In our study, we present the main characteristics of economic and population dynamics in border regions in Central Europe. In the analysed area, regime change, and later EU accession have activated and deepened horizontal cross-border interactions within and outside the region, often in order to access EU funds. A number of principles and development methods aim at reducing territorial disparities and thus the negative effects of borderlessness. Democratic local and regional structures, as well as local and regional cooperations with common interests along borders, further deepen the decentralisation process. The reduction of development disparities and the catching-up of underdeveloped regions often concern border regions. The aim of the study is to describe the inequalities (in economic and demographic situation) of Central Europe's regions, highlighting the best-performing and the worst ranked regions in demographic dynamics.

Keywords: Central Europe, border, demography, territorial disparities

INTRODUCTION

The main objective of the European Union's (EU) regional development and cohesion policy is to reduce territorial disparities between Member States and between regions (EC, 2024). To reduce the disparities between the centre and the periphery, the EU mainly supports rural areas or regions lagging behind (in terms of some economic or social indicators). There exists a significant dissonance between the objectives and outcomes of cohesion policy; despite measurable achievements, as the complex approach used by the EU has its territorial limits, and presumably there is a territorial scale at which this approach can be optimally applied (Finta & Horeczki, 2023). One of the main characteristics of these peripheral areas is their low degree of urbanisation, the absence of large cities and extensive agglomerations, and the predominance of small towns and villages. Natural handicaps, remoteness from transport and commercial routes, security and political situation may all contribute to their disadvantaged

status. This type of development can be seen as determinate – throughout history, developed centres and underdeveloped peripheries have always been found (Lux & Horváth, 2018). Most of the peripheral, disadvantaged areas are border areas (Pike et al., 2023), and the diversity of each area is associated with a number of problems: demographic studies show increasing emigration, ageing and depopulation.

Since 1992, net immigration has accounted for a larger share of population growth in the European Union than natural increase. The population change in the EU-27 is positive and is on an upward trend (from 1.4 ‰ in 2011 to 2.1 ‰ in 2019); with the exception of the years 2020 and 2021, which are negative in all respects (see Eurostat database demo_r_gind3). However, according to the latest population projections, the population is expected to decline from 2026 onwards, mainly due to the mortality rate caused by Covid-19 (EC, 2024). The decline is currently specific to the South and East and particularly affects the mainly rural and economically disadvantaged territorial units. In the villages and small towns of the macro-region, the population structure is suffering (ageing, unemployment, increasing Roma population) and traditional economic activities are in decline (fewer and smaller enterprises in border areas, high unskilled rate and high number of participants in public works programmes) (Scott, 2012). An ageing and declining population means a potential loss of local values and cultural heritage (Hidalgo del Espino & Horeczki, 2022). The number of people living below the poverty line is increasing year by year (EC, 2024).

We may ask whether these statements are correct for all European regions. Are they capable of adapting, of setting themselves on a new development path, or is historical determination stronger in their case? We started our research in the border regions of Central Europe (CE), first analysing the demographic trends for the period 2014-2020. Our aim is to identify the positive and negative anomalies in the border regions and to show the spatial variation in population change.

THEORETICAL BACKGROUND

Since the 1990s, European spatial planning and regional studies have shown a sustained interest in border regions and have also intensively studied the border regions of Central Europe (Lentz et al., 2009; Michalek & Zarnekow, 2012; Scott, 2012; Sohn, 2014; Noferini et al., 2020). The underdeveloped European cross-border regions suffer not from a lack of resources, but from their inefficient use, which is caused by the existence of borders. These borders remain an obstacle to attracting external resources and to the emergence and

development of economic cooperation (Capello et al., 2018). This can be seen as one of the characteristics of border regions: isolation, especially where natural borders also make interoperability difficult; and another general factor: dependency - which can be manifested by shifts in the centre of gravity or by the excessive reinforcement of centre-regions. In many contexts, peripherality and borderland are linked (Baranyi, 1999), and areas that are at the edge of state borders and play a separating role can often be described as disadvantaged. This is confirmed by the location of the beneficiary areas in Hungary, where the majority of the micro-regions to be developed under the complex programme are border areas (Pénzes, 2015). Peripherality can also develop not only at the national level, but also at the macro-regional or large regional level (Gorzelak, 2009; Illés, 2002). When the marginalisation process interacts with the quality of the local economy, it is also reflected in the age structure, employment, the number and composition of businesses and competitiveness. The local economy can be weakened, and so can the quality of services in settlements. The worst-case scenario is the disappearance of business-based services, increasing the proportion of income in the municipality that can be generated solely from the central budget and weakening the population's ability to sustain itself. In somewhat peripheral settlements, these problems are cumulative, with additional costs for residents and businesses in terms of travel, commuting, transport and maintaining a decent standard of living. Centralisation can be a solution for the central budget, especially in small settlements, where the burden of maintaining and providing public services is increasing (Pálné Kovács, 2014). Over time, this situation could be followed by further social and economic backwardness, with the demographic spiral appearing unstoppable. Lower real wages and fewer job opportunities in the peripheries (Siskáné Szilasi et al., 2017) can lead to the mobility of the younger, more creative population, the ageing of the region and thus a decline in the number of births (Tóth et al., 2024). A permanent decline in population thus reinforces the dependency situation and leads to further marginalisation (Bański et al., 2018; Tagai et al., 2018).

Previous negative demographic forecasts for border counties appear to be confirmed (Hablicsek & Tóth, 2009; Tagai & Lennert, 2023). At the same time, current prognoses for rural areas until 2051 also anticipate a population decline in remote rural areas, which is caused by climate change in addition to socio-economic processes (Lennert, 2019). Besides geographical distance and accessibility, the domestic literature also includes delimitations based on indicators measuring complex economic development (Lőcsei & Szalkai, 2008). One of the most active periods of border research was precisely the wave of EU enlargement in 2004. This is the time when the importance of borders was reassessed, and the idea of

cross-border development emerged. Border regions have a specific and prominent place in EU development policy. In the delimitation of border regions, the dilemma naturally occurred as to whether the NUTS 3 territorial level is suitable for defining border regions, since territorial units that only touch the national borders for a short stretch are perceived as border regions, while other territorial units in the buffer zone of the borders but not directly connected to them are not included. The border area includes the border line and the border belt, not only on land, but also on water surfaces, rivers and lakes. Each country can determine the depth of the border area separately (Shabani & Koteski, 2022). The conceptualisation and exact definition of borders can be done by defining km-bands depending on the area of the country: Hajdú (1988) defined it as 20-50 km; according to the EU definition, border regions are defined as areas located within 25 km of the border (Eurostat, 2018); or 100 km for countries with larger areas; Krajkó (1988) considered it appropriate to define a band of 30-35 km; Nagy (2013) defined it in border counties; Mitrică et. al. (2017) dissolved the zones in border sub-regions. The list can of course be continued depending on country borders and study ages. In identifying the border area, the permanence, the past and the permeability of the border must also be taken into account. The more permeable the border, the larger the area of the diffusion effect. Conversely, the more closed the boundary, the greater the area of the restrictive effect. The transport facilities and infrastructure of border crossing points that allow for the establishment of border connections are also important. The intensity and quality of border traffic and the presence of a major settlement with a strong border connection are also important. Since each border area is different, no general delimitation can be justified (Dokoupil & Havlíček, 2002). In the present study, in order to ensure the availability of statistical data, the most practical solution (aggregation of data at this level was available for all the countries studied) was adopted, considering border counties (NUTS 3 border regions) when referring to border areas. A narrower delimitation of border regions, using data at the level of municipalities, may be justified (for example, when examining specific border sections as a case study), but is not applicable for the present study.

Border regions account for almost one third of the population and less than 30% of EU GDP. They face a number of challenges in terms of infrastructure, job creation and demography, and thus a common problem for border regions is population retention (Tóth et al., 2020). Demographic challenges in the Central European region are further exacerbated, with significant differences between border and non-border regions in EU countries that joined before and after 2004 (EC, 2017). The role of borders has become a way of connecting nations, which is consistently applied both in the field of security policy (Vas, 2017) and aid

policy (Pámer, 2018) (e.g. in Interreg Europe programmes). The need for cross-border cooperation is reflected in the main problem areas: project-based or strategically organised. Cross-border partnerships are of particular importance in Central Europe, as most of the territories have been areas of transition between states over the last century (Hajdú, 2023), promoting partnerships, therefore, can strengthen all economic, social and cultural aspects by making borders interoperable; moreover, they can become a pillar of territorial cohesion (Faludi, 2018).

DATA AND METHODS

The geographical framework of the INTERREG Central Europe programme is an optimal platform for the analysis of rural cross-border areas. The historical features and development trajectory of the macro-region forecast a number of similarities, such as declining demographic conditions. In recent years, we have seen that this region is a net emitter of population, not only ageing, but also suffering from permanent emigration. Our analysis, based on EUROSTAT data, has revealed that the most vulnerable populations in the Central European area are mainly those of the border regions. In the macro-region under study, marginalisation is becoming increasingly serious, not only in individual municipalities but also within social groups. Our analysis covers the Interreg Central Europe programme area, nine countries of Central Europe (for two countries not the whole area): Austria, Czech Republic, Hungary, Croatia, Northern Italy, Eastern Germany, Poland, Slovakia and Slovenia. The area covers almost a quarter of the EU territory, with a population of over 148 million (one third of the EU population) and a GDP of almost €4.5 billion, one third of the total EU GDP. The programme area includes seven major cities with a population of over 1 million: Berlin, Vienna, Budapest, Milan, Munich, Prague, Warsaw. 44% of the population live in transition areas (NUTS 3 territorial unit), 30% in urban areas and 26% in rural areas (Interreg Central Europe, 2022). The geographical framework of the area covered by the programme is a suitable framework for analysing the CE countries, with the majority of areas being rural and several types of macro-regional border regions (EU internal borders before and after the 2004 enlargement, Schengen border area, EU external borders). Our studies are carried out at NUTS 3 levels (in order to study the dynamics as accurately as possible), with a total of 457 units in the sample area.

The data used for the analysis was based on the Eurostat database and related to population change (e.g. population size, emigration, live births and deaths) and GDP (e.g. total territorial

GDP measured in euro exchange rate and purchasing power parity). The period of the study is 2014-2020, justified by data gaps: before 2014, most Polish NUTS 3 regions had missing data on net migration and natural increase, presumably due to earlier changes in the NUTS system. We did not wish to fill these data gaps (e.g. by arithmetic averaging), so the disadvantages of the database modified the time frame of our analysis. On the other hand, due to the Interreg area, we are able to track changes in population trends for the 2014-2020 programming period, which further justifies the study of the selected period.

Regarding the time frame of the research, annual averages were used to exclude the bias of outliers in individual years. The overall values for the five years provided an opportunity for comparison with previous studies and to compare trends.

In accordance with the main question of the research, the analysis examined what territorial processes can be identified in the Central European region, which regions can be described as having positive and/or negative population processes. For this purpose, we used various indicators measuring spatial concentration, such as the Dual Index, the Herfindahl-Hirschman Index, the Hoover Index, as well as descriptive statistical indicators (e.g. relative dispersion). For the dual indicator (D), the average of the two subsets of the data series, the above-average (xm) and the below-average (xa) units, is compared, more precisely the above-average part is divided by the below-average part. The value of the indicator can be a number from 1 upwards, it is a dimensionless indicator, the higher the value, the greater the inequality (Dusek & Kotosz, 2017).

$$D = \frac{x_m}{x_a}$$

The Herfindahl-Hirschman (HHI, also known as the concentration) index (K) measures the concentration of natural characteristics (e.g. population, total GDP) between different territorial units (xi). Its values range from 1/n (where 'n' denotes the number of units of analysis) to 1, but when measuring it as a percentage, it can take values between 0 and 10 000, depending on the number of units of analysis. In our study, we have chosen the latter formula for ease of interpretation. An indicator above 0.6 (in percentage form 6000) indicates a strong concentration (Nemes Nagy, 2005).

$$K = \sum_{i=1}^{n} \left(\frac{x_i}{\sum_{i=1}^{n} x_i} \right)^2$$

The data were also analysed using the Hoover index, which also refers to the degree of inequality between socio-economic phenomena. The value, expressed as a percentage, expresses the percentage of one phenomenon (x) that needs to be reallocated between territorial units in order to have a spatial distribution equal to the value of the other characteristic (f) (Dusek & Kotosz, 2017). The set of values for this index varies between 0 and 100. The higher the value, the greater the inequality. Although the index can also be used for specific data (e.g. GDP per capita), for ease of comparison with the indicators presented earlier, the Hoover index is also calculated for non-specific values of population and GDP.

$$H = \frac{\sum_{i=1}^{n} \left| \frac{x_i}{\sum_{i=1}^{n} x_i} - \frac{y_i}{\sum_{i=1}^{n} y_i} \right|}{2}$$

We used these indicators to characterise spatial inequalities in the population, not income or other economic differentials, so we did not use weighted values in our analyses.

RESULTS

Economic situation in Central Europe in the period before the crises

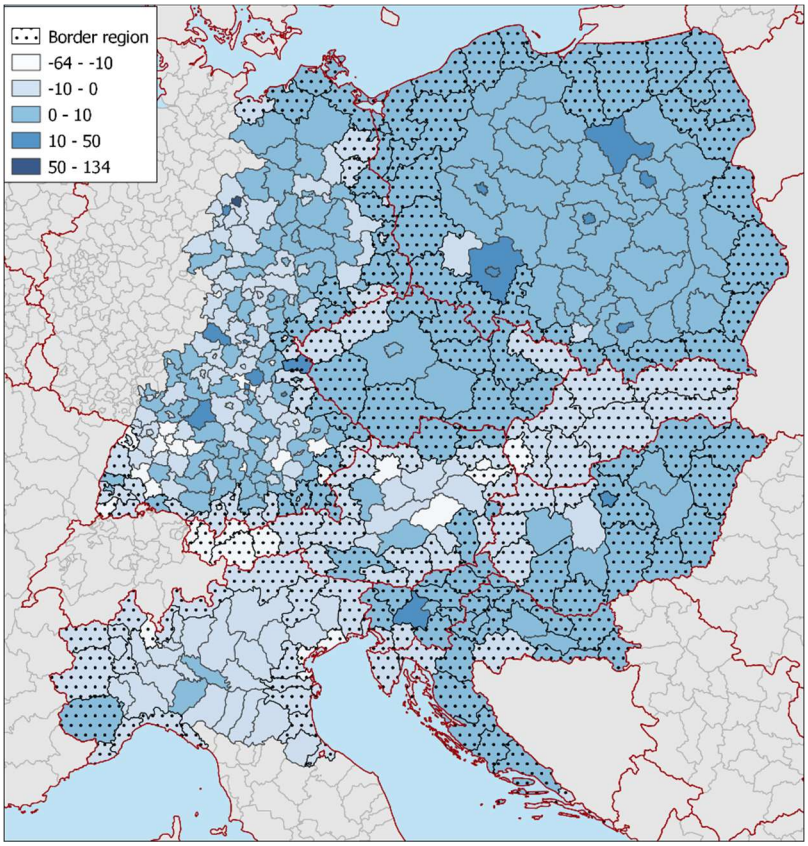
The most frequently used measure of economic development is GDP, the regional values of which show how high the economic and income disparities are not only within the EU but also within individual countries (Fig. 1). Austria and Slovenia have the highest values in the region, together with the Bratislava region. In Romania, the Western region, centred on Timisoara, and the Central region already show similar levels of development to the Central Transdanubia region in Hungary. The regions with the poorest economic performance are the regions along the external borders: the territorial units with Ukraine and Serbia. Support programmes can help these rural and border regions to catch up and increase their competitiveness at both regional and macro-regional level. In the planning and design of development and support policy interventions, the choice of the instrument and method that can substantially facilitate the achievement of development objectives is not indifferent.

This is particularly true in the case of border regions, which are even more sensitive to the differentiation of interventions, since they are characterised by deficiencies in many areas (human capacity linked to governance, the activity and initiative of local society, lack of internal financial and external development resources, etc.) which can be addressed by specific development methods. It is therefore particularly important for the development of rural and border areas that the instrument used should be able to respond to local needs, help to strengthen local governance capacity and contribute to a more efficient use of development resources. The 9th Cohesion Report has shown that cohesion policy has been able to further reduce disparities between regions, which is clearly visible when looking at the evolution of regional GDP over the last twenty years, but also very visible when looking at the last six years (EC, 2024). With two exceptions (Burgenland and Nord-East), the regions of the extended Central-European area (with the Romanian border regions) have grown above the EU average over the last two decades. The majority of regions have achieved growth below the national average, but the capital and metropolitan regions are forecast to grow above both the EU and national averages. The report's presentation of the growth rate from 2001 onwards is somewhat misleading, as it includes both pre-accession funds and EU and other development policy funds received since then.

In terms of economic and demographic conditions, an East-West divide can be identified in the region under review; typically, the eastern regions are experiencing a permanent decline, and the population of the western regions is stagnating or growing at a minimal rate. There are a number of factors that influence the retention of the population, the most important being the economic situation. The most commonly used indicator to measure national income and performance is GDP (Gross Domestic Product). Per capita values of this indicator include data on the population of a given region, allowing a comparison of the actual performance of a given region and trends in population change. (In the context of cohesion policy, GDP is used as a primary economic development factor, with the use of other indicators being left to a later phase of the research.) There is a noticeable correlation between persistent population loss and lower economic output. The GDP per capita of the Central European regions compared to the EU-27 average again shows the West-East slope. In the Eastern regions, the urban core areas are highly developed, with the region's capitals standing out. For the EU's external borders, the vast majority of these regions are below 75% of the EU average. The correlation with demographic conditions is twofold. On the one hand, there is an outward migration from less developed to more developed areas, which is associated with a loss of resources in lagging regions. It is necessary to take account of the fact that depopulation has a

positive effect on GDP per capita, but even this cannot compensate for the income and development of the various areas. The lack of competent human resources is typically one of the most significant limiting factors for positive change (Teveli-Horváth & Varga, 2023). The map of the change of GDP per inhabitant (PPS) in percentage points of the EU27 average (Fig. 1) illustrates the difference in the regions' relative economic position in a particular period. GDP in the Eastern regions shows an upward trend in the second half of the 2010s, with a catching-up path forecast. The year 2020, however, has seen a variable decline, eroding the results of previous years. This effect was more pronounced in the high-base provinces, especially in the regions most dependent on tourism.

Figure 1 Change in GDP per capita (PPS) in percentage points of the EU27 average between 2014 and 2020

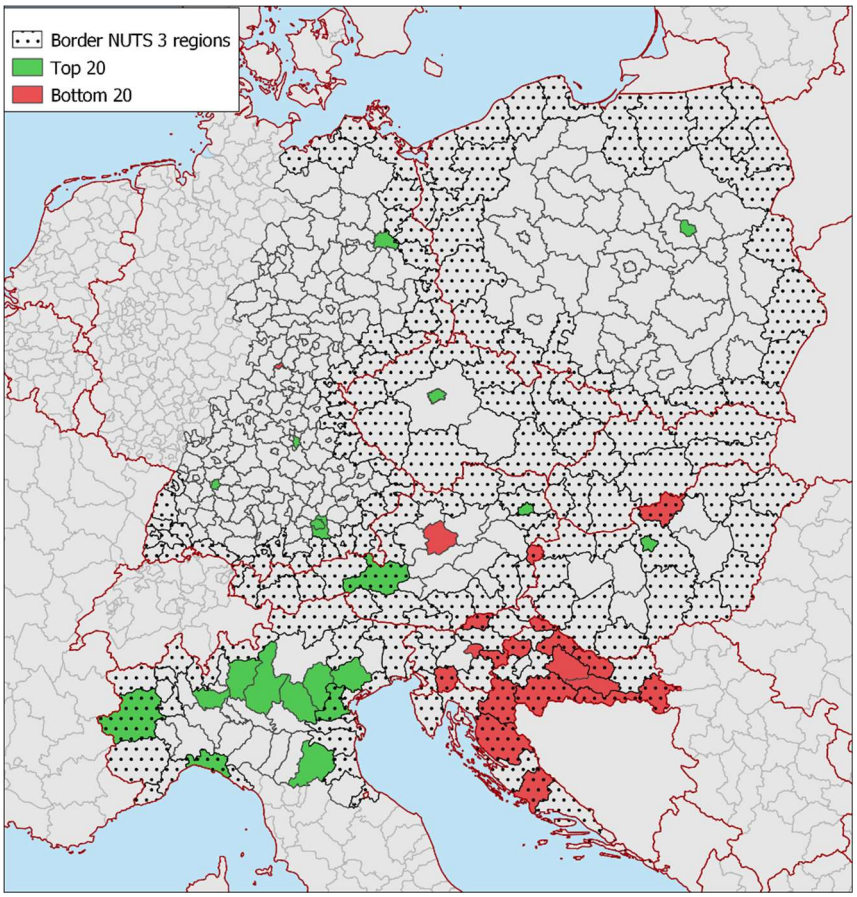


Source: own editing based on Eurostat (nama_10r_3gdp)

The emergence of the Covid-19 epidemic in 2019 and the closures and shutdowns in 2020 have played a key role in the decline of the hospitality and tourism-related sectors. A particularly interesting area of research has been the newly established internal border checkpoints, which have restricted the daily flow of labour, raising a number of problems (see the case of the agglomeration of Bratislava in Hardi et al., 2023). Covid was expected to significantly hinder the economic and demographic relations between CE border regions.

According to a recent relevant analysis of the NSKI (2023) the effects of Covid on cross-border mobility were not so dramatic, however a more careful cross-border behaviour was projected in 2020 (Megyesi & Péti, 2022). Metropolitan areas in the East have proved resilient, with existing inequalities widening, but the decline in more developed regions has compensated for this. Slovakia, Austria and Northern Italy suffered the largest economic and population decline in 2020. In these regions, high rates of population ageing and health risks, as well as the temporary stagnation of tourism, caused serious problems. On average, there was no significant drop in GDP over the period under review, with only some regions in Germany (Eisenach -8.71%, Freising -4.53%) and Northern Italy (Venice -6.68%, Genoa -5.74%) showing a decline of around 5-10%. The most favourable changes were seen in the Polish (Wroclawski 35.01%, Ciechanowski 35.63%) and Czech (Pardubický kraj 31.75%, Královéhradecký kraj 33%) regions, with GDP growth of 30-40% despite a drastically declining year in 2020 (Fig. 2).

Figure 2 The 20 strongest and weakest NUTS 3 regions in terms of the average GDP per capita between 2014 and 2020



Source: own editing based on Eurostat (nama_10r_3gdp)

The 20 best (in green) and worst ranked regions (in red) are shown in Fig. 3. The best ranked areas in terms of economic capacity are the metropolitan areas, the capital cities and the

tourism-preferred regions of Northern Italy. The top scoring includes 4 border regions (three of which are on the Italian border and one Austrian region), on the other side, all except two of the 20 regions with the worst average score in the period are border regions. In terms of both economic and demographic situation, the Croatian counties are a depressed area.

Demographic trends in Central Europe

Of the 457 NUTS3 territorial units examined, 216 are affected by depopulation, but in different relations: 105 are affected by both natural depopulation and emigration. Only 4 regions were identified where natural increase and emigration occurred simultaneously during the period under review: all in Poland. 107 regions experienced immigration in addition to natural decrease, but even this could not compensate for the decrease (mainly in Germany, Italy and Austria). In the capital regions and regions typically located in the western half of the area, on the other hand, population growth is already taking place, most notably in Germany, Italy, Austria and Slovenia, where there is a high rate of emigration despite the natural decrease. The worst-off areas are mostly located in border areas. Although border regions have a very diverse demographic profile, the entire eastern part of the study area is also a Schengen – partly EU – external border, where daily commuting is greatly restricted by border controls. Border demarcation seems to be associated with negative demographic trends mainly at the eastern and southern borders, i.e. Polish, Slovakian, Hungarian and Croatian borders, while the borders between the internal borders of the Schengen area (e.g. Czech-German, Austrian-Slovenian, Austrian-German) are experiencing population growth, partly due to international migration (Lados & Brucker, 2023) and partly due to suburbanisation processes. Poor demographic indicators can be found in mountain areas in general (e.g. the Aosta Valley in Italy, East Tyrol and Carinthia in Austria, or the Carpathian Mountains in Slovakia and Poland), but also in the eastern Bohemian (Olomouc, Moravia-Silesia) and Polish Silesian areas. At the same time, we have noticed that, in some regions, longer-term cooperation can help to retain people in their home region (Suchaček & Urminský, 2024; Tóth-Kaszás et al., 2022).

Looking at the migration gap, natural and total population change separately, the best and worst performing NUTS 3 territorial units clearly show the differences between metropolitan and deprived areas. In general, the areas with the best population change indicators are located in metropolitan agglomerations and in well performing economic districts (e.g. Stredoceský kraj – CZ, Gdanski – PL, Pest county – HU, or Wiener Umland/Nordteil – AT), while areas with the lowest indicators are typically located in border areas (including the external EU borders) (e.g. Vukovarsko-srijemska zupanija – HR, Pozesko-slavonska zupanija – HR, or Békés county – HU).

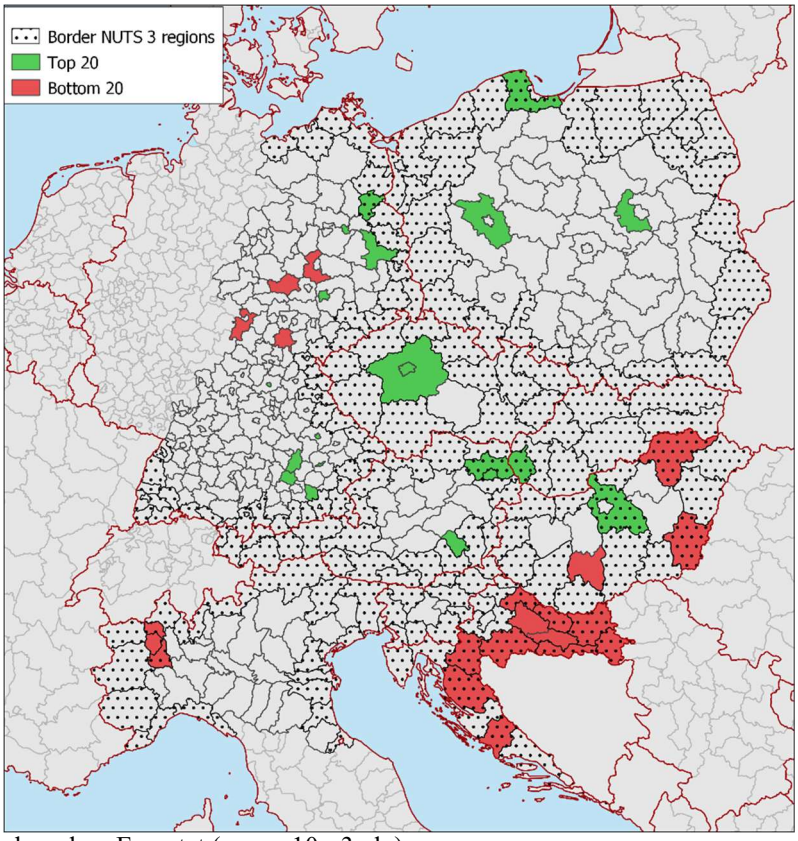
Table 1 Number of NUTS 3 regions based on categories of population change by country (2014–2020)

Country/ Population dynamic	**Total NUTS 3**	**Type 1**	**Type 2**	**Type 3**	**Type 4**	**Type 5**	**Type 6**
		Population decline			Population increase		
		Out–migration and natural population decline	Out–migration and natural population increase	Immigration and natural population decline	Out–migration and natural population increase	Immigration and natural population decline	Immigration and natural population increase
Austria	35	6	0	5	0	9	15
Czechia	14	4	0	3	0	4	3
Croatia	21	17	0	1	0	3	0
Poland	73	45	4	2	4	6	12
Hungary	20	11	0	5	0	4	0
Germany	227	16	0	57	1	115	38
Italy	47	3	0	31	0	12	1
Slovakia	8	3	0	0	3	2	0
Slovenia	12	0	0	3	0	6	3
Central Europe	***457***	***105***	***4***	***107***	***8***	***161***	***72***

Source: authors' own calculation based on Eurostat (demo_r_gind3)

Covid-19 and digitalisation have caused a major revolution, especially in metropolitan areas with good infrastructure and government support for moving out of the city. Holiday resorts, initially functioning as weekend or second homes, have emerged as permanent residences (Gonzales–Leonardo et al., 2020). Thus, the main factor of territorial development in the region can be identified as the population turnover within the settlement hierarchy, which can be described as urban sprawl: the transformation of small and medium–sized towns, villages (below 1,000 inhabitants), and the inflow of urban services (Rácz, 2022). The rings around the capital have strengthened in the region, with the Czech Republic and Hungary showing the most visible change, being the top 20 growing areas in the macro–region. The most obvious difference is that while Budapest is steadily losing population and Pest county is growing, Prague and Stredocesky kraj are gaining population collectively and steadily. Among the 20 regions with the lowest scores, the majority are border regions, while among the top 20, only a few border regions are identified as attractive destinations, either due to the presence of metropolitan areas (Pest county, Bratislava–Vienna axis) or their significant economic performance (Województwo Pomorskie).

Figure 3 The 20 and bottom 20 NUTS 3 regions in terms of population change between 2014 and 2020

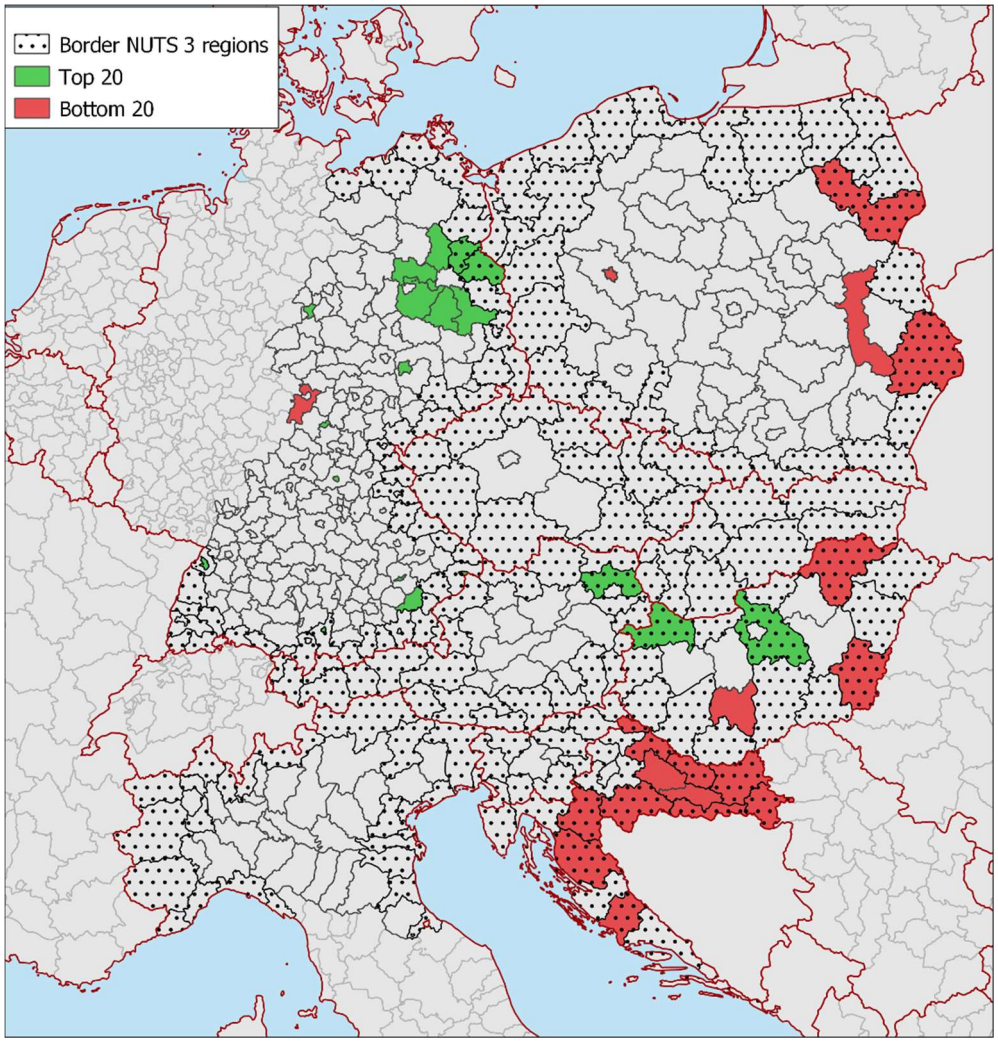


Source: own editing based on Eurostat (nama_10r_3gdp)

Central Europe, where the majority of countries have been facing a persistent population decline since the socialist period (Fiala et al., 2018; Opačić & Crljenko, 2004), is facing a serious sustainability challenge in the upcoming period. Such population decline is the result of very low fertility rates and natural shrinkage. Migration flows within Europe are dominated by the countries that joined the EU in 2004 and afterwards. The extension of EU rights and the possibility of free movement of labour have intensified the already existing east–west and northward movements (Lados, 2018; Moreh, 2014). Our analysis has shown that the population of the border regions is the most vulnerable in the Central European region. Almost without exception, the external borders of the European Union have negative values. Poland and Croatia have similar values due to migration, with a surge in emigration both at the time of EU membership and upon Schengen accession. In the study area, the proportion of areas that have achieved population growth due to natural reproduction was negligible, while emigration is also present. One of these NUTS 3 regions is the Kosicky kraj (Kosicky Region) in Slovakia (Fig. 5). Some research suggests that the trend is linked to higher fertility rates of the local ethnic minority (Pregi & Novotný, 2022). There are persistent negative demographic trends in Eastern Croatia (Fig. 4), which has been characterised by population decline since

the 1990s. The trends in Eastern Croatia are likely rooted in the casualties and migratory losses generated by the Balkan wars, other insecurities and hostile acts led to massive outmigration from the area (Opačić & Crljenko, 2004; Reményi et al., 2024). The unfavourable age structure, the emigration of young and educated people, and regional population concentration paint a negative picture. The reasons for this are seen by Croatian researchers mainly in economic problems. Although the region is endowed with a number of natural and social resources, these are not being exploited efficiently. Agriculture and public services predominate, while manufacturing and high value–added modern services are less developed. The share of inactive, unemployed and agricultural workers is high (Lončar & Marinković, 2015; Rácz, 2019). Eastern countries in the region are more affected by emigration and immigration than Western countries.

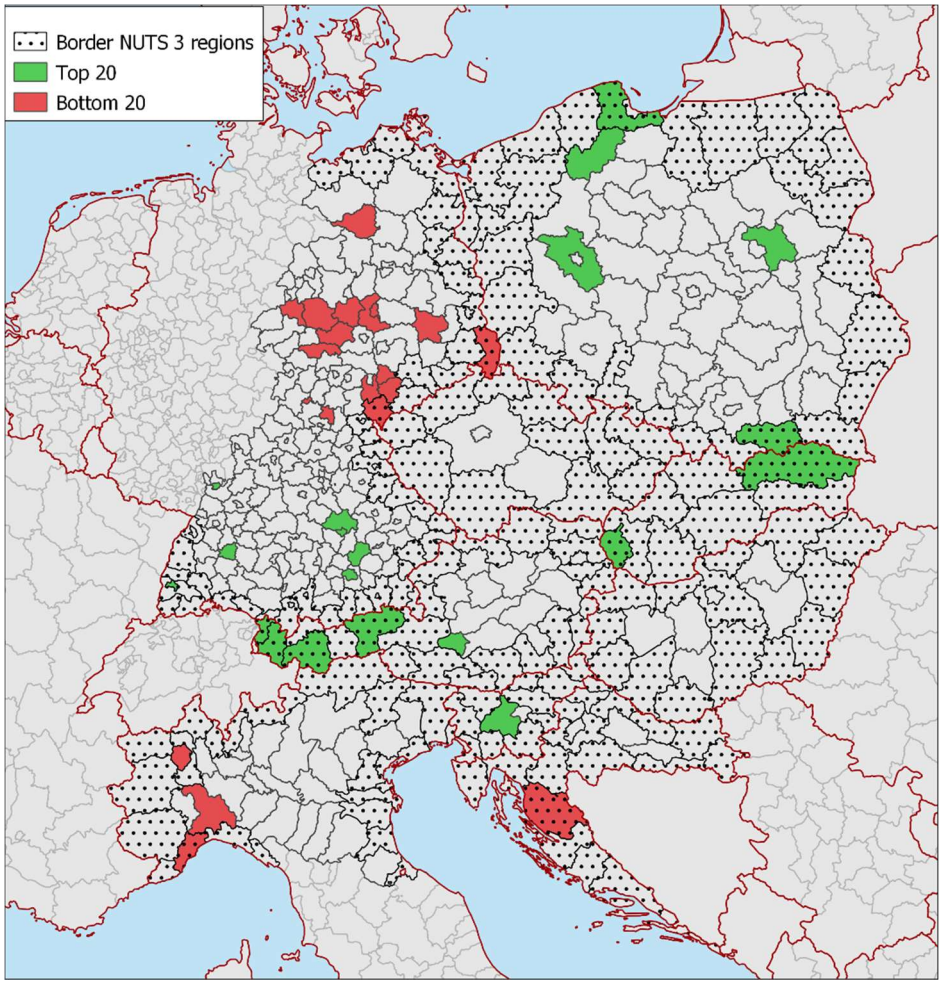
Figure 4 The 20 strongest and weakest NUTS 3 regions in terms of the migration balance between 2014 and 2020



Source: authors' own calculation

The best–performing areas in terms of natural increase during the period under study are found in the areas around large cities (Fig. 5), where population growth has been driven by suburbanisation and rural–urban migration. On the other hand, the worst–performing include the Alpine areas of Austria (e.g. Tiroler Oberland, Rheintal–Bodenseegebiet – 3.3-3.2 ‰), where population growth is driven by tourism. The Eperjes district (Presovsky kraj – 3.4‰) in the Eastern Slovakia region shows a slightly different trend. Although, like the Kassa district, Eperjes is also affected by emigration, the natural increase is partly due to ethnic reasons (Nestorová Dická, 2021). However, due to the loss of human capital, population growth has not been accompanied by economic growth, so the region's population retention capacity may be questionable in the future (Pénzes et al., 2023). In the Central European region under study, most NUTS 3 areas (370 out of 457, 81%) are characterised by natural decrease, which is in line with general European trends.

Figure 5 The 20 strongest and weakest NUTS 3 regions in terms of the natural population change between 2014 and 2020



Source: authors' own calculation

The areas with the worst values do not stand out from the rest, while the areas with an average annual natural decrease of 9 ‰ are at the bottom of the list, the most notable being the Leipzig-Dresden axis mentioned above, as a region with a uniform negative image, which already showed similar trends before the period under analysis (Lentz et al., 2009).

DISCUSSION AND CONCLUSION

The social and economic fault lines within Europe are creating a high degree of polarisation, which is hampering the development of (mainly) rural areas, the sustainability of individual landscapes and the prosperity of local societies. The macro-region under study has a very diverse administrative structure, with a network of settlements of different sizes and functions, the nodes of which are generally urban settlements with a larger population and a dominant position in the socio–economic–regional division of labour. These nodes are the main bases of population concentration (Rácz & Egyed, 2023). For Central Europe, capital cities, regional centres and metropolitan areas are in a privilaged position in terms of both internal and external migration. The social and market prestige of capitals within the country has clearly increased. NUTS 2 regional centres along the borders and NUTS 3 county capitals and small regional centres are also in a special position as centres of internal and cross–border (mainly national) migration flows.

The current rate of population decline raises many questions about the future of the Central European macro–region. The decline is no longer accepted as a possible scenario but as an actual scenario. The latest policy recommendations already see smart shrinkage, levelling off and population retention as a positive development. The economic risks arising from the depopulation of certain areas can also cause regional and national problems; thus, the next stage of our research would look in detail at the economic disparities in the region. After mapping the problems of the macro–region, we will propose development policy solutions and a spatial development model for the underdeveloped rural and border areas. The recommendations for reducing territorial disparities would first be used to strengthen tourism cooperation in border areas.

Highlighting the areas near the border and away from the border, the results show contrasting trends (Table 2). In the border areas, some indicators (e.g. Relative Spread, Dual Index, HHI Index) show opposite trends, while stagnation and some concentrations are also indicated between 2014 and 2020, but the Hoover Index also points to a reduction in spatial disparities. Areas that are further away from the border show a stronger concentration in the

previous indicators, but the Hoover index here also indicates a reduction in spatial disparities. For both categories, the results are presumably strongly influenced by administrative delimitation, with capital cities and other regional centres showing a higher concentration of the respective indicator. This is particularly true in border regions, where a few large cities (e.g. Vienna, Budapest, Bratislava) have a stronger influence on the results. Taking all this into account, the results obtained should be considered with appropriate limitations. Based on our current results and previous research, we assume that the social and economic cleavages that have emerged within Europe are creating a high level of polarisation.

Table 2 Changes in spatial concentration indicators between border and non–border areas in Central Europe (2014-2020)

Concentration/ Area	Border regions				Non–border regions			
	Population		GDP		Population		GDP	
	2014	2020	2014	2020	2014	2020	2014	2020
Highest value	3176180	3265327	160165	172 309	3421829	3669491	118519	156035
Lowest value	31672	32838	387,56	457	20450	20251	599	696
Average	353822	355857	7527	8 682	293479	297532	7978	9404
Relative spread	8,9	9,1	21,2	19,8	11,6	12,3	14,8	16,5
Ratio of highest to lowest value	100,3	99,4	413,3	377,3	167,3	181,2	197,9	224,3
Dual indicator	3,8	3,9	5,2	4,9	4,5	4,5	5,4	5,6
HHI index	93,1	94,3	198,8	180,6	95,9	98,5	139,2	150,5

Source: based on Eurostat (deo_r_gind3; nama_10r_3gdp) database

The study shows that border regions have a very diverse demographic profile, which can differ depending on the type of border. Different dynamics can be observed in the Eastern and Southern regions, which are also the external borders of the European Union, in the border regions of the new Member States that joined in 2004 and the old Member States, as well as in the border regions of the old Member States. Overall, this area has been steadily losing population, but for some countries a minimal average increase can be observed over the period under review (2014-2020). Half of the region is suffering from population decline and a quarter from both natural decrease and emigration. The population decline is explained by low birth rates, high emigration rates, ageing, a large number of ethnic minorities (Roma minority) and a relatively poorer economic position.

The population dynamics of the historically more developed German–Czech–Austrian areas are more positive, with natural increase and emigration prevailing in large parts of the regions. The situation is particularly grave in the Croatian voivodships, the Hungarian counties and the Polish voivodships, where the extremely high emigration rate is accompanied

by low birth rates and economic performance. In terms of population dynamics, the west–east gradient has remained unchanged, with these negative demographic trends being exacerbated further east or south. The NUTS 3 territorial units of Poland, Croatia and Hungary on the EU's external borders are experiencing significant depopulation, with a few exceptions, and, in addition to natural depopulation, emigration.

The study of the spatial differentiation of certain spheres of socio–economic development is considered a classical research direction in several disciplines – economic geography, regional science, border studies, demography, etc. In these disciplines, we study the spatial location and positioning of economic forces, population and labour movements, and demographic characteristics in different regions. In some cases, these analyses are carried out in isolation from each other and are unable to reveal the general laws underlying the spatial organisation of society. Thus, in addition to exploring the characteristics of border regions, the study attempts to show whether there has been a concentration or a fragmentation of the countries under study over the last few years. A more detailed examination of each area will be carried out in the next stages of the research.

The study identifies areas with population trends that are unfavourable, but it should be noted that the NUTS 3 territorial level only allows for a partial analysis. Unfortunately, the current level of analysis hides further spatial disparities, and more detailed territorial data (e.g. at district or municipality level) and further studies are needed to delimit more precise results (e.g. actual peripheries).

Acknowledgement

Project no. 146586 (financed under the K-24 funding scheme) and 135185 (financed under the K–22 funding scheme) have been implemented with the support provided by the Ministry of Culture and Innovation of Hungary from the National Research, Development and Innovation Fund.

REFERENCES

Bański, J., Degórski, M., Komornicki, T., & Śleszyński, P. (2018). The delimitation of areas of strategic intervention in Poland: A methodological trial and its results. *Moravian Geographical Reports,* 26(2), 84-94.

Baranyi, B. (1999). A "periféria perifériáján" – a határmentiség kérdőjelei egy vizsgálat tükrében az Északkelet-Alföldön ["In the Periphery of Periphery" – the Question-Marks of Borderness Reflecting to a Research in the North-eastern Part of the Great Plan]. *Tér és Társadalom,* 13(4), 17-44.

Berkes J., & Dusek, T. (2023). The socio-economic performance of the Hungarian NUTS3 regions between 2010 and 2020. *Deturope,* 15(2), 85-108. https://doi.org/10.32725/det.2023.014

Capello, R., Caragliu, A., & Fratesi, U. (2018). Measuring border effects in European cross-border regions. *Regional Studies,* 52(7), 986-996. https://doi.org/10.1080/00343404.2017.1364843

Dokoupil, J., & Havlíček, T. (2002). Border and border region: theoretical aspects, identification and determination. *Acta Universitatis Carolinae, Geographica*, 37(1), 27-44.

Dusek, T., & Kotosz, B. (2017). *Területi statisztika* [Territorial Statistics]. Budapest: Akadémiai Kiadó.

EC=European Commission (2017). *Boosting Growth and Cohesion in EU Border Regions*. https://ec.europa.eu/regional_policy/sources/communication/boosting_growth/com_boosting_borders.pdf (2022.05.15)

EC=European Commission (2024). *Ninth report on economic, social and territorial cohesion.* https://ec.europa.eu/regional_policy/information-sources/cohesion-report_en (2024.05.15)

Eurostat (2018). *Methodological manual on territorial typologies*. 2018 edition. Luxembourg: European Union. https://ec.europa.eu/eurostat/documents/3859598/9507230/KS-GQ-18-008-EN-N.pdf (2024.10.15.)

Faludi, A. (2018). Cross-Border Cooperation – Subverting Sovereignty? In Scott, J. W. (Ed.), *Cross-Border Review, European Institute of Cross-Border Studies – Central European Service for Cross-border Initiatives* (pp. 7-22). Budapest: CESCI.

Fiala, T., Langhamrová, J., Pechholdová, M., Ďurček, P., & Šprocha, B. (2018). Population Development of Czechia and Slovakia After 1989. *Demographie*, 60(3), 202-218. https://csu.gov.cz/docs/107508/0c4fca57-a5c3-cb8f-f377-b5dca9fd1ef7/13005318q3_202-218.pdf?version=1.0 (2024.10.15.)

Finta, I., & Horeczki, R. (2023). Vidékfejlesztési programok jellegzetességei a perifériikus térségekben [The characteristics of rural developmentbprogrammes in peripheral regions]. *Tér és Társadalom,* 37(3), 53-76. https://doi.org/10.17649/TET.37.3.3504

González-Leonardo, M., Rowe, F., & Fresolone-Caparrós A. (2022). Rural Revival? The Rise in Internal Migration to Rural Areas During the COVID-19 Pandemic. Who Moved and Where? *Journal of Rural Studies,* (96), 332–342. https://doi.org/10.1016/j.jrurstud.2022.11.006.

Gorzelak, G. (2009). Regional Development in Central and Eastern Europe. In Blokker, P., & Dallago, B. (Eds.), *Regional Diversity and Local Development in the New Member States* (pp. 43-62). London: Palgrave Macmillan.

Hablicsek, L., & Tóth, P. P. (2009). A határ menti megyék demográfiai potenciálja és munkaerő-piaci helyzete. [Demographic potential and labour market situation of the countries located along the borders of Hungary]. *Demográfia,* 52 (2-3), 206-243.

Hajdú, Z. (1988). Az államhatárok és a határ menti területek politikai földrajzi kutatása. [Political geography of state borders and border areas]. In Erdősi, F., & Tóth, J. (Ed.), *A sajátos helyzetű térségek terület és településfejlesztési problémái* [The spatial and urban development problems of special areas]. (pp. 39-41). Pécs-Budapest: MTA Regionális Kutatások Központja –TS-2/2 Programiroda,

Hajdú, Z. (2023). *Államosodási folyamatok a Kárpát-medencében a XX. században* [Processes of statism in the Carpathian Basin in the 20th century]. Budapest: Typotex Kiadó

Hardi, T., Nárai, M., & Uszkai, A. (2023). The impact of COVID-19 on life in a cross-border agglomeration of Bratislava. *Deturope, 15 (2),* 129-153. https://doi.org/10.32725/det.2023.016

Hidalgo Del Espino, B., & Horeczki, R. (2022). Innovative and Sustainable Cultural Heritage for Local Development in the Face of Territorial Imbalance. *ACE: Architecture City and Environment* 17 (50), 11374. https://doi.org/10.5821/ace.17.50.11374

Horeczki, R., Molnár, E., & Pirisi, G. (2023). Population dynamics of the Hungarian small towns in the light of censuses. *Deturope,* 15(2), 66-84. https://doi.org/10.32725/det.2023.013

Interreg Central Europe (2022). https://www.interreg-central.eu/wp-content/uploads/2023/01/Interreg-CENTRAL-EUROPE-Programme-2021-27-8.zip (2023.02.16)

Illés, I. (2002). Borders and cross-borders co-operation in the countries of Central and South-Eastern Europe. *Südosteuropa,* 51(4-6), 289-302.

Krajkó, G. (1988). Határ menti térségek kutatási vonatkozásai [Research aspects of border regions]. In Erdősi F., & Tóth J. (Eds.), *A sajátos helyzetű térségek terület- és településfejlesztési problémái* [The spatial and urban development problems of special areas]. (pp. 152-157). Pécs-Budapest: MTA Regionális Kutatások Központja – TS-2/2 Programiroda.

Lados, G. (2018). *A Magyarországra történő visszavándorlás társadalomföldrajzi vizsgálata* [Geographical aspects of return migration to Hungary]. Szeged: Szegedi Tudományegyetem, Földtudományok Doktori Iskola.

Lados, G., & Brucker, B. (2023). Az Európai Unión belüli és harmadik országbeli migráció Magyarországon [Migration within the European Union and from third countries in Hungary]. In Koós, B. (Ed.), *Területi folyamatok Magyarországon 2021-2023. Területi riport (2)* [Territorial trends in Hungary 2021-2023. Territorial report (2)]. (pp. 41-63). Budapest: HUN-REN Közgazdaság- és Regionális Tudományi Kutatóközpont, Regionális Kutatások Intézete.

Lennert, J. (2019). A magyar vidék demográfiai jövőképe 2051-ig, különös tekintettel a klímaváltozás szerepére a belső vándormozgalom alakításában [Demographic scenarios for the Hungarian rural areas with consideration to the effects of climate change]. *Területi Statisztika* 59(5), 498-525. https://doi.org/10.15196/TS590503

Lentz, S., Herfert, G., & Bergfeld, A. (2009). The German-Polish border region from a German perspective-quo vadis? In Strubelt, W. (Eds.), *Guiding Principles for Spatial Development in Germany* (pp. 1-27). Berlin-Heidelberg: Springer.

Lončar, J., & Marinković, V. (2015). Analysis of socio-economic indicators in the context of the regional development of Eastern Croatia. *Hungarian Geographical Bulletin 64* (4), 327-344. https://doi.org/10.15201/hungeobull.64.4.7

Lőcsei H., & Szalkai, G. (2008). Helyzeti és fejlettségi centrum-periféria relációk a hazai kistérségekben [Location and development centre-periphery relations in Hungarian sub-regions]. *Területi Statisztika*, *48* (3), 305-314.

Lux, G., & Horváth, G. (2018). *The Routledge Handbook to Regional Development in Central and Eastern Europe*. London-New York: Routledge.

Megyesi, Z., & Péti, M. (2022). Nemzetközi mobilitási magatartás és lehetséges járványhelyzeti jövője a Kárpát-medencei magyarság körében [Exploring international mobility patterns and the post-COVID trends of international mobility in Hungary and in the ethnic Hungarian communities of the neighbouring countries of Hungary, 2020] *Területi Statisztika,* 62(6), 698-731.

Michalek, J., & Zarnekow, N. (2012). Application of the rural development index to analysis of rural regions in Poland and Slovakia. *Social Indicators Research,* 105, 1-37.

Mitrică, B., Mocanu, I., Dumitraşcu, M., & Grigorescu, I. (2017). Socio-economic disparities in the development of the Romania's border areas. *Social Indicators Research,* 134, 899-916.

Moreh, C. (2014). A decade of membership: Hungarian post-accession mobility to the United Kingdom. *Central and Eastern European Migration Review* 3(2), 79-104.

Nagy, E. (2013). Factorial analysis of the territorial disparities on the southern part of the Romanian-Hungarian border. *Forum Geografic,* 12(2) 125-131.

Nemes Nagy, J. (ed.) (2005). *Regionális elemzési módszerek* [Regional analysis methods]. ELTE Regionális Földrajzi Tanszék, MTA-ELTE Regionális Tudományi Kutatócsoport, Budapest.

Nestorová Dická, J. (2021). Demographic changes in Slovak Roma communities in the new millennium. *Sustainability*, 13(7), 3735. https://doi.org/10.3390/su13073735

Noferini, A., Berzi, M., Camonita, F., & Durà, A. (2020). Cross-border cooperation in the EU: Euroregions amid multilevel governance and re-territorialization. *European Planning Studies* 28(1), 35-56.

NSKI (2023). Gazdasági, társadalmi és mobilitási hatások kutatás a covid19 járvány második évében: Kelet- és Közép-Európa [Economic, social and mobility impacts research in the second year of the COVID19 epidemic: Eastern and Central Europe], NSKI Kutatási jelentés, Budapest, 2023. https://nski.hu/admin/data/file/20231114/kutata-si_jelente-s_gazdasa-gi,-ta-rsadalmi-e-s.pdf

Opačić, V. T., & Crljenko, I. (2004). Demographic Trends and Border Traffic as indicators of (Non)existing Transborderregion in Croatian-Hungarian Border Area. *GeoAdria*. 9(1), 73-88.

Pálné Kovács, I. (2014). *Jó kormányzás és decentralizáció.* Székfoglaló előadások a Magyar Tudományos Akadémián [Good governance and decentralisation. Inaugural lectures at the Hungarian Academy of Sciences]. Magyar Tudományos Akadémia, Budapest https://real-eod.mtak.hu/9774/1/Palne_PRESS.pdf (Last visited: 15.10.2024).

Pámer, Z. (2018). How governance counts? Comparative analysis of activity and funding patterns of Central European cross-border cooperation programmes. *EUROPA XXI,* 35, 111-126.

Pénzes, J. (2015). A kedvezményezett térségek lehatárolásának aktuális kérdései [Current issues in the delimitation of beneficiary areas]. *Területi Statisztika.* 55(3), 206-232.

Pénzes, J., Papp, I., Apáti, N., & Kiss, J. P. (2023). Border areas and educational attainment – Long-term analysis of Hungary for the period between 1960 and 2020. *Deturope,* 15(2), 109-128. https://doi.org/10.32725/det.2023.015

Pike, A., Béal, V., Cauchi-Duval, N., Franklin, R., Kinossian, N., Lang, T., Leibert, T., Mackinnon, D., Rousseau, M., Royer, J., Servillo, L., Tomaney, J., &Velthuis, S. (2024). 'Left behind places': a geographical etymology. *Urban and Regional Horizons,* 58 (6), 1167-1179. https://doi.org/10.1080/00343404.2023.2167972

Pregi, L., & Novotný, L. (2019). Selective migration of population in functional urban regions of Slovakia. *Journal of Maps* 15(1), 94-102.

Rácz, S. (2019). Development Processes of Regional Centres in Central and Southeast Europe – From State Socialism to Dependent Market Economies. *Deturope,* 11(2), 92-100. https://doi.org/10.32725/det.2019.017

Rácz, S. (2022). Közép- és Délkelet-Európa az ezredforduló óta [Central and South-Eastern Europe since the millennium]. In Nemes Nagy, J., & Pálné Kovács, I. (Eds.), *A regionalizmus: az elmélettől a gyakorlatig: Illés Iványra emlékezve 80. születésnapja alkalmából* [Regionalism: from theory to practice: in memory of Iván Illés on the occasion of his 80th birthday]. (pp. 59-71). Pécs: IDResearch Kft; Publikon.

Rácz, S., & Egyed, I. (2023). From the "West of the East" to the "East of the West": The post-socialist economic and structural transition of Central and South-Eastern Europe. *Deturope,* 15(2), 9-27. https://doi.org/10.32725/det.2023.010

Reményi, P., Gekić, H., & Bidžan-Gekić, A. (2024). Fertility Trends and Population Policy in the Canton of Sarajevo, *Tér és Társadalom,* 38(1), 88-109. https://doi.org/10.17649/TET.38.1.3543.

Scott, J. W. (2012). European politics of borders, border symbolism and cross-border cooperation. In Wilson, T. M., & Donnan, H. (Eds.), *A companion to border studies* (pp. 83-99). Chichester: Wiley-Blackwell.

Shabani, E., & Koteski, C. (2022). Definition of state border, border line, border belt, border area and border crossing. *International Journal of Economics, Management and Tourism*. 2(1), 105-115.

Siskáné Szilasi, B., Halász, L., & Gál-Szabó, L. (2017). A magyar fiatalok erősödő kivándorlási szándékának kiváltó okai és jellemzői [Reasons and characteristics of the Hungarian youth'sincreasing emigrational intentions]. *Tér és Társadalom,* 31(4), 131-147.

Sohn, C. (2014). Modelling cross-border integration: The role of borders as a resource. *Geopolitics,* 19(3), 587-608.

Suchaček, J., & Urminský, J. (2024). Polish Sceptics and Czech Optimists: Perception of the Development within Euroregion Beskydy. *Tér és Társadalom,* 38(1), 12-31. https://doi.org/10.17649/TET.38.1.3510

Tagai G., & Lennert J. (2023). A magyarországi demográfiai válság nyomában – a népességfogyás aktuális kérdései szélesebb kitekintésben [In the wake of the demographic crisis in Hungary – a broader perspective on current issues of depopulation]. In Koós B. (Ed.), *Területi folyamatok Magyarországon 2021-2023. Területi riport (2)* [Territorial trends in Hungary 2021-2023. Territorial report (2)] (pp. 12-40). Budapest: HUN-REN Közgazdaság- és Regionális Tudományi Kutatóközpont, Regionális Kutatások Intézete.

Tagai, G., Bernard, J., Šimon, M., & Koós, B. (2018). Two faces of peripherality: labour markets, poverty, and population dynamics in Hungary and Czechia. *Regional Statistics* 8 (2), 19-45.

Teveli-Horváth, D., & Varga, V. (2023). A magyar kreatív fiatalok lakóhelyválasztási preferenciái és annak változása a COVID-19 fényében [Housing preferences of the Hungarian creative youth and its challanges in the light of COVID-19 – results from a longitudinal focus groups study]. *Tér és Társadalom,* 37(1), 71-91. https://doi.org/10.17649/TET.37.1.3414

Tóth, B., Vida, G., Lados, G., & Kovács, Z. (2020). The potentials of cross-border tourism development in the Lower-Tisza Valley. *GeoJournal of Tourism and Geosites*, 28(1), 360-375. https://doi.org/10.30892/gtg.28128-475

Tóth, G., Kincses, Á., & Kovács, M. (2024). A termékenység térbelisége Magyarországon, 2021 [Spatial analysis of the total fertility rate in Hungary, 2021]. *Területi Statisztika,* 64(1), 30-50.

Tóth-Kaszás, N., Keller, K., Péter, E., Lelkóné Tollár, I., & Németh, K. (2022). Együttműködések fenntarthatósága a határ mentén: egy szlovén-magyar turisztikai kezdeményezés esetleírása és elemzése [Sustainability of cooperation along the border – case study and analysis of a Slovenian-Hungarian tourism initiative]. *Tér és Társadalom,* 36 (1), 100-117. https://doi.org/10.17649/TET.36.1.3286.

Vas, G. Z. (2017). A változó határbiztonság Európában. [The evolving nature of border security in Europe]. *Hadtudományi Szemle,* 10(2), 163-175. https.//epa.oszk.hu/02400/02463/00035/pdf/EPA02463_hadtudomanyi_szemle_2017_2_163-175.pdf

Original scientific paper

A REVIEW OF THE LITERATURE ON CROSS-BORDER COOPERATION IN EUROPE

József FOGARASI[a,b]

[a] Professor, Óbuda University, Keleti Károly Faculty of Business and Management, 1084 Budapest, Tavaszmező u. 17., fogarasi.jozsef@kgk.uni-obuda.hu
[b] Full Professor, Partium Christian University, 410209 Oradea, str. Primăriei nr. 27, fogarasi@partium.ro

Cite this article: Fogarasi, J. (2024). A review of the literature on the cross-border cooperation in Europe. *Deturope*, 16(3), 121-144.

Abstract

Cross-Border Cooperation (CBC) has become a cornerstone of European Union regional policy, promoting integration and addressing disparities across border regions. This paper critically examines the motivations, patterns, and outcomes of CBC initiatives in Europe, focusing on the interplay between normative drivers, such as shared cultural values, and instrumental motivations, such as access to Interreg funding. By synthesizing theoretical perspectives with empirical evidence, the study uncovers regional heterogeneity in CBC practices, highlighting East-West and North-South dynamics as well as differences between Old and New Member States.

The research identifies both enabling factors and structural barriers to effective CBC. While institutionalized forms of cooperation often facilitate sustainable development and knowledge transfer, challenges such as administrative inefficiencies, cognitive distances, and funding-driven initiatives frequently undermine long-term effectiveness. The analysis also emphasizes the untapped potential of CBC in addressing strategic policy challenges, including sustainability, innovation, and rural development.

The findings have significant policy implications. To enhance the effectiveness of CBC, policymakers must align funding mechanisms with strategic regional goals, foster local governance capacities, and address structural disparities in cross-border collaboration. By proposing actionable recommendations, this paper contributes to the discourse on designing more effective and inclusive CBC frameworks, offering insights for academics and practitioners seeking to improve the integration and resilience of Europe's border regions.

Keywords: cross-border cooperation, institutionalized cooperation, non-institutionalized cooperation, CBC in agriculture and forestry

INTRODUCTION

Cross-Border Cooperation (CBC) is a pivotal component of the European Union's regional development strategy, designed to transform border regions into dynamic socio-economic spaces and promote European integration. Defined by the Interreg program as a means to "fill the gaps" in regional disparities (Leibenath, 2008), CBC aims to foster collaboration across national boundaries by addressing shared challenges and leveraging mutual opportunities. Despite its significance, the effectiveness and sustainability of CBC initiatives remain

contested, with outcomes often shaped by diverse historical, institutional, and socio-economic factors (Perkmann, 2003; Svensson, 2014).

The academic discourse highlights CBC's dual role as both a practical tool for solving cross-border issues and a symbolic driver of European identity. For example, normative motivations, such as shared cultural values and historical ties, often coexist with instrumental drivers like financial incentives or policy requirements (March & Olsen, 1989; Svensson, 2014). However, this duality can lead to tensions where partnerships are driven more by funding availability than by genuine collaborative objectives. These challenges underscore the importance of critically examining the motivations and mechanisms underlying CBC initiatives.

This paper contributes to the field by synthesizing theoretical insights with empirical evidence to provide a nuanced analysis of CBC in Europe. It emphasizes regional heterogeneity, exploring the significant contrasts between Old and New Member States as well as East-West and North-South dynamics (Bufon & Markelj, 2010). While many studies have focused on specific border regions, this research adopts a broader perspective, analyzing both institutionalized and non-institutionalized forms of cooperation and their implications for governance, knowledge transfer, and sustainable development (Perkmann & Sum, 2002; Van Den Broek & Smulders, 2013).

The novelty of this study lies in its focus on under-researched aspects of CBC, such as its potential in advancing sustainable practices in agriculture, forestry, and rural development. By addressing these dimensions, the research identifies structural barriers, such as administrative inefficiencies and cognitive distances, that limit the effectiveness of CBC (Lundquist & Tripple, 2013). It also highlights the need for more robust policy frameworks that balance financial incentives with the strategic goals of fostering regional integration and innovation.

This study offers significant policy implications. Enhancing local governance capacities, fostering institutional innovation, and aligning funding mechanisms with long-term regional objectives are critical to unlocking the full potential of CBC. By integrating these elements, policymakers can design more effective and sustainable cooperation models. The following sections examine the historical evolution of borders, analyze empirical findings, and propose actionable recommendations for strengthening CBC frameworks across Europe.

BORDERS AND REGIONS

The analysis of Cross-Border Co-operation (CBC) is rooted in the larger domain of border studies that approaches the investigation of border regions from a multitude of aspects

applying cross-disciplinary theoretical and empirical methods (Brunet-Jailly, 2022). The plethora of papers focusing on country-border studies from a multitude of cross-disciplinary aspects, has greatly enriched the literature, yet 'obscured what a border is' (Johnson et al., 2011). Since it is not our goal to search for a 'best' definition or create a synthesis of existing ones, we start by surveying some 'common sense' approaches rooted in different disciplines from geographical-historical to economic-institutional-social and even psychological.

The past two centuries were characterized by the obsession with borders, the domination of national states, national economies and societies. Whilst in the nineteenth century, Europe experienced a process of territorial consolidation, leading to the creation of large countries, the end of the First World War broke up the Ottoman, Austro-Hungarian and Tsarist empires into a large number of smaller states. The heydays of national states were between the 1920s and 1970s, an era characterized by protectionism and development closed within borders (Anderson et al., 2005). The 1990s brought a new series of emerging new countries with the dissolutions of the Soviet Union, Yugoslavia and Czechoslovakia, creating 12,880 km of new borders in CEEC (O'Dowd, 2003). Bufon and Merkelj (2010) present a typology of borders, based on their *location*. Thus, one may differentiate between Western European, Central European and Eastern European borders. Western European borders are characterized by so called 'old borders', many of which existed before the actual modern state was created. This is where early forms of CBC were manifested first – as mostly bottom-up initiatives meant to solve actual policy challenges – thus, Western Europe may be labeled as the '*Region of regions'*. In Central Europe borders are the results of the two World Wars. Thus, historical regions do not match state borders, cross-border links are motivated by existing ethnic and socio-cultural ties. Importantly, 'these cross-border areas do not fit the administrative spaces, rather match the previously existing historical regions; also, they do not enjoy any institutional support from the local or state authorities, which at times even resent cross-border cooperation because of unresolved issues between the neighboring states that were caused by the partition processes' (Bufon & Merkelj, 2010). Central Europe thus can be labeled as '*Regions within regions*'. Eastern Europe is characterized by a mix of 'old' and 'new' borders which are less developed and less populated compared to the central state than their Western and Central European counterparts. Here border regions possess 'very limited possibilities of creating more intense forms of cross-border cooperation and (re)integration'. A self-describing name would be '*Regions under reconstruction*'. To emphasize the scale of disruption caused by the two World Wars, it took 57 years to reach the same level of cross-border flows in people, capital and commodities as in 1913 (O'Dowd, 2003). The change in

perception began with the accession to power of neoliberal politicians in Western Europe, who viewed borders as market distortions, even if the classical barriers to trade such as quotas and tariffs were not implemented (the impact of borders in empirical works is often modeled as increased 'distance'). Perhaps O'Dowd (2003) is the one who emphasizes the recent evolution of European borders in the most intuitive way: the initial borders as barriers perception is transformed to *borders as bridges* then *borders as resources* and *borders as symbols of identity*.

CROSS-BORDER COOPERATION

Definitions and historical evolution

For the evolution of formal CBC in Europe, two different perspectives were promoted by the Council of Europe and the European Commission. The scheme put forward by the Council favored integration based on a 'more legalistic approach', which was less successful than the pragmatic and economically oriented approach within the EU's regional policy (Perkmann, 2003). European regional policy is based on Article 158 of the Treaty establishing the European Community. Thus, the CBCs discussed here, with a few exceptions, are Commission promoted models under the auspice of its regional development policy. The definitions of CBC are not simple, as emphasized by some authors (e.g. Lundquist and Tripple, 2013), who argue that due to the involvement of several nations, partnership between public and also private actors, and a strong reliance on networking – it is a 'grey zone' process between civil and public law combined with formal and informal networks of all possible actors including citizens, townships, companies, universities, cultural organizations or public utility providers. Possibly, the simplest definition is given by Perkmann and Sum (2002): 'A CBR - i.e. *Cross-Border Region* - is a territorial unit that comprises contiguous sub-national units from two or more nation states'. Eibler et al. (2014) quote the Association of European Border Regions listing the following principles for defining CBC: partnership, subsidiarity, joint CBC development or cooperation, as well as the existence of joint regional or local structures, and own sources of co-funding. A different (political) perspective is highlighted by Johnson (2009), namely that cross-border cooperation is becoming a key policy tool for localities and other territories that 'strive to become global'. The traditional approach of neoclassical economics in border studies (i.e. borders acting as barriers to trade by widening physical distance and the concept of asymmetrical relations such as commuter labor flows between Germany and Poland), is supplemented in Perkmann and Sum (2002) by

a combination of inter- and post-disciplinary perspectives such as anthropology and psychology (analyzing the subjective determinants of CBC). It would be wrong to presume that cross-border regions are governed in a traditional, 'territorial sense', instead they are governed in a networked manner on at least two levels (Perkmann & Sum, 2002): the micro-level, where integration depends on the proliferation of personal and/or social and/or economic relationships; and the meso-level with the involvement and cooperation between public, private and other bodies (e.g. NGOs). The latter emerges when common cross-border interest arises, and actors take advantage of regionalization and globalization processes. Many of these, however, only appear as a response to the policy and financial incentives of the European Commission. A more formal definition is provided by Perkmann (2003): 'cross-border cooperation can be defined as a more or less institutionalized collaboration between contiguous subnational authorities across national borders.' Operationalizing the definition, the following four criteria emerge: (i) main actors are always public authorities, (ii) the cooperation between subnational actors on both sides of the border is not governed by international law, (iii) CBC's main purpose is 'problem-solving in a broad range of fields of everyday administrative life' and (iv) CBC 'involves a certain stabilization of cross-border contacts'.

In the light of Perkmann's (2003) definition above, it would be misleading to consider only physical distance when discussing the concept of regional proximity, leading to CBC. The 'proximity school' (Lundquist & Tripple, 2013), distinguishes three main types of proximity: *physical proximity* (the geographical dimension – the essence of agglomeration, transaction costs and transportation economies), *functional* (innovation capacity and performance) and *relational proximities* (the non-tangible characteristics such as shared norms, similar institutions, mutual understanding and trust, technological collaboration and knowledge exchange). The relation or balance between the proximities listed above is rather complex. Lundquist and Tripple (2013) use a combination of different proximities, to define three stages of cross-border integration: *weakly integrated systems*, *semi-integrated systems* and *strongly integrated systems*. Physical distance and some institutional barriers between cooperating entities are relatively easy to break down, the *cognitive distance* – including cultural, traditional and linguistic barriers are much more persistent. The pioneers of CBC emerged in the industrial Rhine basin to respond to local needs (such as land-use planning, pollution, industrial decline, trans-border commuting) less than 15 years after the termination of the Second World War. The showcase of European CBC is the EUREGIO established in 1958 with its own cross-border office since 1971, and in continuous evolution ever since. A

number of further Rhine basin regional cooperation followed involving Dutch, German, Belgian, Swiss and French border regions. Regio Basiliensis, established in 1962 is a tri-national cooperation between Baden-Württemberg, Basel and Southern Alsace. By looking at a map, it is easy to understand why cooperation between these regions was not top-down instrumental links based, these regions were culturally and economically linked way before modern Switzerland, Germany and France emerged, moreover, a significant share of inhabitants speak a common German, Alemannic dialect (O'Dowd, 2003). The EUREGIO is still the subject of several border studies or CBC papers. According to Perkmann (2007b), the success is due to three factors. First, *political mobilization*, with a view to creating a joint political regional platform capable of leveraging higher level authorities in order to attract attention and resources (Church & Reid, 1996). Second, *governance building* at the intersection of local networks (e.g. authorities) and vertical networks (higher-level authorities). And finally, *strategic unification* 'inspired by a shared vision around building a 'functional unit' … for cross-policy measures in 'all spheres of life''. After the end of the Cold War, in the 1990s, and later on, with the accession of the New Member States (NMSs), another favorable condition of cross-border cooperation emerged as a result of which currently practically all intra-European border regions are part of some kind of CBC. Consequently, CBC has been extending, more than 70 cross-border regions were active in the 2000s in Europe according to the Association of European Border Regions (AEBR), these function under names such as 'Euroregions' (more than 150 at that time), 'Euregios' or 'Working Communities' (Perkmann & Sum, 2002). The number of cross-border-regions and Euroregions in the 2020s has increased to around 100 and 209, respectively (AEBR, 2023; Kaucic & Sohn, 2022). All European borders (internal or external) form part of at least one Euroregion, with more than two-thirds located along the southern and eastern borders (Svensson, 2014). It is important to note (as discussed further), that Euroregions are not legal personalities, the typical Euroregion is created by separate national institutions on both sides of the border, according to local (state) law, linked through an international treaty that creates the Euroregion in question. This process and the lack of own legal personality is often seen as their main weakness (Husák, 2010). In spite of that, Euroregions are relevant organizations, which can stimulate the soft institutionalization of re-territorialization and can be perceived as complementary to conventional state-level intervention (Noferini et al., 2020). There is a likely tendency for the standardization of Euroregions (their set up, management, policy implementation) by becoming more similar across Europe. Two parallel legal tools were introduced by the EU and the Council of Europe, i.e. the European Grouping of Territorial

Cooperation (EGTC) and the European Euroregional Co-operation Grouping (ECG). Medve-Bálint and Svensson (2013) note that these tools are indirectly pushing Euroregions towards standardization. Thus, during the 2007-2013 programming period, member states *could* use EGTC for the management of EU funds dedicated to CBC, whilst in 2014-2020, 'these institutions *should*, where appropriate, be involved' (Medve-Bálint & Svensson, 2013, pp. 16). Whilst the differences across border regions providing opportunities for complementarities and synergies are the bases of CBC, the heterogeneity of regions, more precisely, the magnitude and character of their heterogeneity with respect to cross-border regions has a strong impact on the possibilities and the probability of the emergence of an integrated socio-economic region (Lundquist & Triple, 2013).

Non-institutionalized cooperation

It would be misleading to imagine CBC only as project or fund based and institutionally governed. On the one hand, informal economic border activities (co-operations) are highlighted by Xheneti et al. (2012), emphasizing the impact of EU enlargement on Informal Entrepreneurial Activities (IAEs) on soft and hard borders using qualitative interview data. Since the majority of border regions in NMSs are economically deprived regions characterized by low purchase power, IAEs were encouraged to take advantage of the border location (from 1990 onwards until the enlargement process). Contrary to previous studies, formal cross-border-cooperation at firm level - but without the institutional and financial background provided by EU policies - is emphasized by Huber (2003) analysing the determinants of CBC for Austrian firms with partners from Central and Eastern European Countries (CEECs). The post-1990 opening of the formerly state-run CEEC economies prompted a mutually beneficial internationalization (e.g. in 1998, 30% of Austria's FDI was directed to CEECs). By using firm level data, Huber in his paper applies an appropriate econometric analysis to identify the factors that affect firms' decision to engage in CBC. Results emphasize a positive relationship between firm size, previous experience with cooperation, level of business integration with the partner and decision to cooperate, and a (weak) negative relationship in certain cooperation forms when distance to the closest potential partner is considered. CBC between professional organizations (police, fire brigades, emergency health services, etc.) is discussed in Princen et al. (2014), who argue that national differences in legal, organizational and cultural backgrounds are overcome by 'street-level professionals' looking for solutions to actual pragmatic problems. Somewhat similarly, yet with different conclusions, as an example where regional cooperation is far below its

potential, a recent paper by Svensson (2016) illustrates the role of CBCs – defined as 'primarily responding to policy problems that cannot be dealt with effectively within the national context' – in effective health policy across Euroregions. The conclusions however are disappointing, as the analysis relying on surveys conducted among city mayors within 6 Euroregions suggest frustration, for *institutional inappropriateness* and *cognitive distances* hamper delivering effective health policy.

Aspects of Cross-Border Cooperation – economic and political geography perspective

Sohn et al. (2009) discuss the cross-border integration of metropolitan areas (an example of CBC not relying on the cooperation of geographically marginalized regions) from aspects rooted in economic geography. Three demographically comparably-sized areas are studied: the regions around Geneva, Luxembourg and Basel – all small metropolitan centers which however play a higher role due to hosting European, international institutions and global multinational companies and strong knowledge bases. Luxembourg is in the historic core of the European integration process, and along with Geneva, is predominantly characterized by tertiary activities, whilst Basel has a strong secondary sector. Yet there are major differences between how Luxembourg and the Swiss cities organize their cross-border regions. Most notably, in Luxembourg there is no metropolitan sized organization, whilst Geneva and Basel developed original forms of governance that promote the international character of the metropolitan centers. Given the differences among these regions, the authors conclude that 'there does not necessarily have to be a link between the intensity of socio-economic interactions and the extent of the cooperation instigated by the territorial institutions' (Sohn et al., 2009).

Aspects of cross-border co-operation – conflict amelioration

Whilst most papers reviewed – whilst admitting deficiencies – are optimistic, or at worst, neutral with respect to CBC, McCall (2013) discusses the issue from a radically different perspective: to what extent the CBC in the EU and its role in conflict amelioration may be questioned in the presence of 'dark globalization'. According to the paper, the concept of 'cross-border cooperation and the reconfiguration of borders from hard security barriers to places for contact and communication appears to belong to the 'naïve pre-2001 era' in the light of global threats such as terrorism or illegal migration'. McCall (2013) argues that CBC is 'integral to conflict amelioration' since it works for loosening the national state's grip on borders and promotes inter-cultural and inter-communal relations. Whilst there were no armed

conflicts within the EU or along its external borders at the time the paper was published (the recent Ukraine conflict and pressure generated by illegal immigration are however excellent examples underpinning the argumentation of the paper), he proceeds by highlighting ethno-national and cultural (at present) 'dormant' issues including those between Estonia and Russia, Cyprus, Ireland, Hungary and Ukraine, or even between Flemish and Walloon communities in Belgium. Despite some developments, the national possession of territory – a tangible, physical and durable asset – delimited by borders consolidated by victories, still defines identity and national interests that are often incompatible on the two sides of the border. Mirwaldt (2010) employs social psychological contact theory to uncover factors influencing citizens' relations across borders. Using as an empirical example the Czech-German CBC (Saxon and Bavarian regions) – both characterized by high levels of interaction – the author demonstrates that Saxons have a more favourable attitude towards Czechs than average Germans, whilst Bavarian attitudes are less favourable than elsewhere in Germany.

Aspects of cross-border cooperation – knowledge transfer

A number of papers focus on learning and innovation transfer through CBC, e.g. Weidenfeld (2013) examines the role of cross-border tourism in innovation and knowledge transfer. Valkering et al. (2013) use the example of the Sustainable Urban Neighbourhoods (SUN) INTERREG project in the Meuse-Rhine Euroregion to identify the main factors supporting cross-border *learning networks*. Van den Broek and Smulders (2015) discuss innovation transfer through CBC from an institutional perspective. Whilst institutions are expected to provide stability, the existence of national borders embed actors on both sides of the frontier in a *multi-level institutional architecture* designed to deal with possible institutional gaps. However, institutional arrangements and policy tools can promote networking activities to intensify cross-border cooperation in cases of an existing potential mismatch between potential partners (Van den Broek et al., 2018). Raposo et al. (2014) employ data of 61 Spanish – Portuguese CBC small and medium enterprises to assess the impact of local and cross-border cooperation on innovation and performance. They found that cooperation has positive impacts on company innovation rates, and 'the final cross-border firm model demonstrates a strong predictive capacity of the overall performance of small and medium sized companies engaged in such cooperation' (Raposo et al., 2014). There is growing interest in environmental-related knowledge transfer oriented cross-border cooperation facilitating environmental cohesion (Varjú, 2016), although the limited number of partners and the spatial density of linkages can render the extension of environmental networks difficult.

Aspects of cross-border cooperation – networking

Church and Reid (1996) focus on the involvement of local urban and regional authorities in international networking and the competition between local and national politics, illustrated by CBC. The paper discusses in detail the *political economy* of cooperation (political and institutional theory) using as an example 3 UK-French sea border cooperation networks emerging from small-scale cooperative forms such as town twinning and relying on the economic effects of the Channel Tunnel – yet EU support appears to be the main force driving the operationalization and extension of these cooperating networks. Svensson (2015) employs *social capital theory* that originates from a combination of *social network analysis* (SNA) and qualitative analysis to assess the quality of local government contact networks in CBC. Using the metrics from SNA and some newly developed ones, the paper uses *communication data* of local actors to reveal the social networks along the two sides of the border. The results are somewhat disappointing from an integration point of view. Accordingly, even the well-functioning Euroregions are far from true political integration. By further analyzing contact networks, the study demonstrates a correlation between the number of contacts between local municipalities on both sides of the border, and the nature (quality) of CBC networks. Weak ties however may be considered an *opportunity*, as discussed by González-Gómez and Gualda (2014), in a paper that also applies SNA to analyze the nature of contact networks of professionals working in CBC and the consequences on the institutional CBC. They analyze two qualitatively different border regions, Andalusia, Algarve and Alentejo (AAA) and South Finland - Estonia (SFE). The main difference between border relations is that in AAA border relations were less frequent, and where they existed, they were work-related, whilst in SFE professionals had border ties 'based both on personal or informal reasons like family or friendships, and on more formal reasons that emerged from work relations'.

Aspects of Cross-Border Cooperation – agriculture and forestry

There is a surprising scarcity of literature with respect to CBC in agriculture and forestry, indicating a *research gap* in this area. Van Den Broek and Smulders (2013) analyse the cross-border innovation system using the case-study of the Venlo (Netherlands) and Niederrhein (Germany) regions where CBC in agriculture (more precisely horticulture) is predominant. The co-operation is based on the 'Greenport' status of Venlo, on the Dutch side, with an advantage in horticulture and food industry, and Kreisen, on the German side, where – unlike the Niederrhein Bundesland's automotive industry-based economy – the horticulture sector is among the most significant ones. Thus, the focus is on the analysis of innovation systems in

agriculture and horticulture from an innovation and educational point of view, by identifying institutional gaps, the reason for their existence, and the role of agency. The main conclusion is 'that *polity* and *policy* still play an important role and that actors engaging in cross-border cooperation often make use of the European level to overcome the problems related to its respective institutional gaps' (Van Den Broek & Smulders, 2013). Cross-border cooperation in animal health control is discussed by Hop et al. (2014), illustrated by the Dutch-German border region as an empirical example. The point of departure is the growing specialization in agricultural production (e.g. the increased role of Dutch piglet production that is exported to fattening farms in Germany) and the intensification of cross-border trade. However, this process results in increased risk of cross-border infectious animal disease transfer, which, in turn, requires effective cross-border cooperation between countries' public administration (e.g. veterinary services). The authors present a comprehensive long-term cross-border cooperation framework to reduce the financial and economic consequences of possible outbreaks, whilst not disturbing trade relationships. Stojanović and Manić (2009) analyse the possibilities for Serbia to use cross-border cooperation to enhance rural development through agritourism. According to their conclusion: 'differences that exist with respect to ethnic and national characteristics can be used in cross-border areas, the Old Mountain between Bulgaria and Serbia and the Upper Danube region between Serbia, Croatia and Hungary' (Stojanović & Manić, 2009). An example not strictly of cross-border cooperation, but rather a CBC-fuelled (and supported by the IPA Cross-border Cooperation Program) research in the context of the Serbian-Hungarian border region, is provided by Fiala et al. (2014) analysing drought severity and its effect on agricultural production in the border zone.

Contó et al. (2013) present the I.S.C.I. INTERREG financed project where cooperation is aimed to establish technology-innovation incubators in the Apulia (Italy) and Corfu (Greece) regions that will form a network to support the internationalization of agro-food SMEs in the regions – and attempts to map the characteristic and predominant internationalization patterns of local agro-food small companies. The paper takes a first step in this direction by running a survey, then analyzing the data with respect to 5,331 agro-food enterprises located in the Apulia region. The research of Contó et al. (2014) focuses on possibilities of cooperation and the strategies of regional wine industry (a very competitive sector) players. Accordingly, traditional marketing strategies are not sufficient (Knickel, 2021), emphasis should rather be placed on encouraging consumers to 'live' the ethnic, national, cultural, gastronomic, environmental, historical etc. aspects of wine production through wine routes, wine events.

Research topics in CBC related to agriculture include environmental issues, land-use management and tourism. Since border regions are often neglected by central governments and are thus underdeveloped, they have often managed to better preserve the traditional landscape and cultural resources and assets valued by tourism. Cross-border tourism has been greatly promoted both by the Council of Europe and the European Commission. As examples, the Council has initiated the European Cultural Routes program already in 1987 (The Viking Routes, Jewish Heritage Routes, Santiago de Compostella Pilgrim Routes) whilst the EU launched, for example, the European City of Culture initiative. Timothy and Saarinen (2013) emphasize the importance of scale with respect to the results of CBC collaborative efforts in tourism. Wieckowski (2013) discusses the 'eco-frontiers', i.e. the mountainous borderlands of Central Europe, from a Polish perspective. Trillo-Santamaría and Paül (2016) use the example of the Geres-Xurés transboundary biosphere reserve located on the Portuguese–Spanish border to show (amongst other findings) that the 'continuing importance of the border in shaping the land-use planning and management in the area' accounts for the less than desirable functioning of the transboundary protected area. From a similar perspective, Spyra (2014) analyzes land-use strategies in three Czech-Polish euroregions in Upper Silesia, conducting interviews with management representatives.

Another aspects of CBC that relate to agriculture are the cross-border or rather transnational agricultural cooperatives (Bijman et al., 2012). A transnational cooperative may emerge in four different ways (Nilsson & Madsen, 2007). The first and most typical is when a national cooperative recruits members in a neighbouring country, the second is through acquisitions whereby a cooperative purchases a firm in a different country and 'invites foreign suppliers to become members' – as observed in the case of the Dutch Campina dairy cooperative. The third possibility is to form a new cooperative society based on transnational membership, and fourth, cross-border mergers of existing national cooperatives. Nilsson and Ollila's (2009) focuses on the latter case, and concludes that the heterogenous institutional structures and legal frameworks render the merger process difficult. This is particularly true of the top management acts as the driving force behind the merger, usually having weak connections to the members. Without quoting actual project examples, Winkel et al. (2013) mention the priorities of the forest sector with respect to participation in CBC supported by INTERREG. These are 'promotion of sustainable forest management, efficiency in private forestry and the use of wood and wood-based products as renewable resources'. Stevanov et al. (2013) describe and analyze the consultation process on forest biomass and sustainable forest management with actors in a CBC context, between Serbia and Croatia.

Classification and drivers of cross-border cooperation

According to Lundquist and Tripple (2013), at least three criteria may be used to classify CBCs. First, the '*geographical scope*', i.e. the size of cooperation (euroregions vs. working communities or transnational co-operations). Second, and most importantly, the '*cooperation intensity*', i.e. the strategic capacity and autonomy of the governing organization. And finally, the *function of actors* involved, i.e. whether local or regional entities are predominant. Terlouw (2012) discusses some contradictions between *individual* cross-border behavior (introducing the term 'border surfers') and *territorial* cross-border governance, and questions the hypothesis that cross-border governance is necessary for improved cross-border relations. The study shows that 'unintended consequences of EU planning practice of stimulating cross-border cooperation sometimes hinder the emergence of cross-border governance' (Terlouw, 2012).

According to Perkmann (2007a), two different drivers of CBC can be identified. First, *market-driven integration* which is based on increasing social economic relationships or reactivation of historically existing relationships (good examples of market-driven cooperation can be found where significant cross-border differences prevail that can be economically exploited, such as in the case of labor costs, as demonstrated by the German-Polish CBCs). Second, *policy-driven integration* which is based on building cooperative partnerships between public and other bodies, sharing common (local) interests. Most EU CBCs are driven by the latter, focusing on building '*meso-level*' policy institutions.

The literature identifies factors underlying the effectiveness of cooperation. As an example, Sarmiento-Mirwaldt and Roman-Kamphaus (2013) found five such factors:

- Regional and local self-government - stronger rather than weak local governments are more likely to set up successful territorial cooperation;
- Legal background – or sometimes the lack of legal basis, since CBCs stand on vaguely defined bases from this point of view;
- Socio-economic factors – including welfare and development gaps along the border, or weakly developed infrastructure;
- Funding – insufficient funds, since there are no '*genuinely common budgets*', thus, spending decisions are cumbersome, whilst EU funds necessitate heavy administration;
- Culture – regional versus national identity, widespread language skills and, importantly, similar administrative culture.

Perkmann (2003) concludes that 'CBC is more likely to be effective in countries with a strong tradition of communal autonomy' whilst they are less functional in 'politically charged

situations' that characterize, for example, South Tyrol – Land Tirol – Trentino, or in more general, the New Member States.

EMPIRICAL RESEARCH AND IMPACT ANALYSIS OF CROSS-BORDER COOPERATION

A major issue of evaluation from the practitioners' point of view is the lack of *comparable methods* to assess the impact of CBCs, more precisely, the impact of Interreg funds on the objectives of CBC. Based on the literature review, papers attempting to go beyond generalities when discussing the results of programs use (deep or semi-structured) interviews targeting mostly public administration employees responsible for cooperation (see Kézai et al., 2022). Few papers conduct interviews among the border population with respect to their attitude regarding the programs (e.g. Decoville and Durand, 2019). Another way to assess the functioning of CBC is to monitor the (number) of still active projects after the termination of community funding.[3] However, none of these approaches are actually capable of determining whether the funds were well spent, given the complexity of planned impacts and the difficulties to quantify intangibles (open-mindedness, cultural, behavioral attitude changes among the border population). Despite the existence of quantitative assessment methods (Khmeleva, 2022;) the problem evaluators are facing is the *lack of secondary data* ready for analysis. In all cases where CBC is to evaluated, the lion's share of the work is collecting relevant data from many sources (e.g. firms, individuals) and compiling them into datasets. However, EU level mandatory impact assessments procedures are available, such as the Strategic Environmental Impact Assessment, Environmental Impact Assessment and the Impact Assessment, where the first two target the environmental dimension of rural development, while the latter evaluates the economic and social impacts of public funds. Recognizing this need, Medeiros (2015) proposes to evaluate some of the more important goals of CBC, namely barrier effect removal and territorial capital valorization, using a *Territorial Impact Assessment* (TARGET_TIA) approach. Eibler et al. (2014) analyze the strengths and weaknesses of CBC through the example of Groenmetropol region (formerly the cradle of European industrial development) with German, Dutch and Belgian stakeholders that developed from the Meuse-Rhine Euroregion. As its name suggests, its main aim is to remove the scars of industrialization after the exhaustion of the natural resources of the

[3] Which, in most cases at least when CEE regions are considered, results in a rather discouraging picture. Of the 30 CBC projects that involved Hungarian partners, almost all terminated immediately after the funding ended – see 'winning and dining' critique in the text.

region, by pushing for a more touristic (green) and economic future. Ciok and Raczyk (2008) undertake the assessment of the impact of Interreg IIIA at the Polish-German border, whilst Deppisch (2008) seeks to explain the factors influencing governance in cross-border microregions whether these emerge only as a response to Interreg. The conclusions are somewhat disappointing since it appears that population centers do not attract CBC, whilst Interreg rather than 'common urgent problems' are the drivers of cooperation. The final conclusion is that 'it is questionable whether the Euregio 'Via Salina' contributes to the original aims of Interreg IIIA at all' (Deppisch, 2008). Generalizations on a European scale are illusory when one considers the multitude of individual cases set in very different historic, geographic and institutional backgrounds – to name just a few. Harguindéguy and Bray (2009) assess the impact of CBC through Interreg programs from the aspect of whether these programs empower regional institutions or not. Based on a review of institution-building and institutional entrepreneurship literature, they look into whether Interreg indeed shifted from 'a policy *for* the regions to a policy *by* the regions' – as expected by the Commission. Using French and Spanish Interreg examples, they reveal large differences in the level of transition from a state-centric scheme to regionalism, explained by a number of factors, most notably, the pre-existing level and commitment of regional institutions. The authors conclude that Interreg facilitated the empowerment of regional institutions only in cases where a previous decentralization policy was conducted at domestic level, and where pre-existing programs created a consistent and competent regional leadership.

CROSS-BORDER COOPERATION IN NEW MEMBER STATES

The literature highlights the very different way CBC functions in New Member States (NMSs), with differences partly explained by the more turbulent historical and institutional evolutionary path. This region was the cradle of nationalism leading to world wars, the fall of empires and the emergence of nation-states with substantial minorities. The borders here were re-designed several times in the past 100 years, moreover, the bulk of the twentieth century was spent behind the iron curtain. The paranoid philosophy of communism definitely ruled out any western type CBC until 1989. *Border loosening* but by no means opening, first occurred between Hungary and Austria's Burgenland province to facilitate the travel of locals across the border, followed by the establishment of the Alps-Adria Working Community in 1978, that incorporated parts of Austria, Germany, Italy and Yugoslavia (Turnock, 2002). The tri-lateral Czechoslovakian-Polish-German cross-border cooperation 'Neisse-Nisa-Nysa' was

founded in 1991 at the beginning of the transition period in Central and Eastern Europe. The next episode in cross-border cooperation occurred during the transition period, and in 1994, CEE countries bordering EU member states could opt for the CBC component of the Phare Programme. Turnock provides a more detailed account of this process in his works (e.g. Turnock, 2002). With the accession of the NMSs in 2004 and 2007, the length of the EU's internal borders almost doubled (Knippschild, 2011). Generally speaking, papers have found that effective cooperation in CEECs is usually more difficult to achieve (Sarmiento-Mirwaldt & Roman-Kamphaus, 2013), due to historical mistrust (Versailles and Trianon peace treaties closing the First World War and the post-Second World War-forced population exchanges/deportations), and the absence of regional traditions (more like regraded regionalism in the form of territorial separation – e.g. Slovakia under the Mečiar government). In addition, local or regional governments are/were powerless entities. One of the earliest papers focusing on CBCs in the Central and Eastern European space is by Turnock (2002) reviewing the trend of opening the formerly impermeable CEEC borders, and the role Interreg plays in this process (Böhm, 2021). Since regional policy in the region was weak or non-existent, CBC contributed 'significantly to the cohesion and it is also a good indicator of stability in the region'. Further, the paper concludes that the impact of cooperation is more pronounced in the northern part of CEEC than in the Balkan region, with implications upon accession rounds.

Table 1 Incentives for local cross-border cooperation in Central Europe

Incentives for local cross-border cooperation	*Objective*	*Normative*
Local	Need to overcome economic decline Common environmental problems Pooling local resources	Will to participate in European integration ('return to Europe') Presence of historical socio-cultural and economic ties Distinct regional identity Common ethnic background
External (national or transnational)	Availability of transnational funds (PHARE CBC, INTERREG) Availability of national financial support Established legal framework (ratified Madrid Convention; bilateral treaties)	Advocacy work of transnational organizations (AEBR, Committee of Regions, European Commission) Learning from best practices or models of other cross-border initiatives Supportive policy of the central government

Source: Medve-Bálint (2013), Table 7.1, pp. 151.

Medve-Bálint (2013) summarizes the incentives (Tab. 1) and obstacles (Tab. 2) of local cross-border cooperation in the case of CEECs (Czech Republic, Poland, Hungary and Slovakia) formerly separated by 'hard borders'. The paper uses NUTS3-level data of borderland local government participation rate and Interreg IIIA funds available per administrative unit, and finds a statistically significant correlation (albeit with large variance) between the share of local governments participating in CBC and Interreg funds available per local government.

Table 2 Obstacles for local cross-border cooperation in Central Europe

Obstacles to local cross-border cooperation	*Objective*	*Normative*
Local	Fierce competition for resources Lack of sufficient own funds Lack of know-how and management skills Language barriers	Historical tensions, conflicts (border as symbol of identity and distinction) Existing stereotypes and prejudice towards the population across the border Fear of competition (labour market, property market) posed by the other side
External (national or transnational)	Lack of established legal framework for cross-border cooperation Inappropriate external financial resources Incompatible political-administrative structures Lack of supportive bilateral governmental agreements	Unsupportive policies of the central government Intergovernmental conflicts Governmental fear of losing territorial integrity

Source: Medve-Bálint (2013), Table 7.2, pp. 153.

The paper concludes that mainly due to historical reasons, in this part of Europe, a *combination of objective and normative incentives* supported on both local and national level is needed for institutionalized CBC. In the absence of non-financial incentives, not even intensive and persistence external (EU) funding can generate viable CBC. Knippschild (2008) analyzes inter-urban cooperation across the German-Polish-Czech border triangle, and concludes that *differences in administrative systems* hamper cooperation. Husák (2010) analyzes the *typology* of CBC projects from two perspectives, the number of successful projects and their financial allocation in the 2004-2006 programing period and the first two and a half years of the 2007-2013 programming period in the South Bohemia region. Project types were classified as cultural-social and other types (that include infrastructure, environment, tourism, education), whilst applicants were categorized as local administration, regional administration, NGOs, universities and research institutions. In both periods, the share of supported cultural-social projects is above 50%, but when the financial allocation is

considered, infrastructural projects are leading. On the other hand, whilst the vast majority of projects implemented are hosted by local actors, when the share of financial allocation is considered, regional actors are the most successful. Knippschild (2011) finds that after 7 years of EU membership and the removal of physical border barriers through Schengen integration, and despite the top-down political encouragement and availability of funds, the intensity of Czech and Polish CBCs is lagging behind. Thus, in the Polish-Czech-German border region, the lack of competence, experience and knowledge with respect to CBC with the municipalities and regions involved is the main reason for underperformance. The paper concludes that institutional capacity among the cooperating partners is 'crucial'. In a similar vein, Sarmiento-Mirwaldt and Roman-Kamphaus (2013) attempt to analyse the effect of different (contextual) backgrounds on CBC governance, through the example of two co-operations, set up at the same time, along the Polish-German and Polish-Slovakian borders, using data from the 2000-2006 and 2007-2013 programming periods. The authors argue that in order to analyze CBCs, a simple listing of positive and negative background conditions is not sufficient, the comparison of different programs is crucial. Thus, Poland and Slovakia are culturally, linguistically closer to each other without negative historical memories, and already existing cross-border networks. The situation along the Polish-German border is quite the opposite (Tölle, 2013). When *three dimensions of policy effectiveness* – definition, implementation and innovation – are considered, the paper concludes that the Polish-Slovak CBC was 'far more successful in terms of policy definition and implementation', whilst the major policy innovation was conceived in the Polish-German cooperation, nonetheless, the 'lack of historical cross-border networks and common culture of cooperation' inspired policy-makers to create new structures. Dimitrov et al. (2003) uses a sample of 291 manufacturing firms (30 closed questions) collected in 2001 to analyse the current status, limits, prospects and policies of CBC on a multilateral level in Albania, Bulgaria and the Republic of North Macedonia. It has to be noted that this region is affected by a friction over minorities and different levels of development. *Barriers* to CBC were collected in seven large groups: infrastructure, conditions of border crossings, trade conditions, financial conditions, lack of supportive assistance, general conditions – such as level of corruption, political variables, inflation, and finally, the language barrier. The conclusions of the paper are that whilst the intensity of cross-border relations of firms located in the area is higher than the national average, the East-West direction is developing faster than intra-East CBC.

CBC SWOT analysis aimed at forecasting scenarios is discussed in great detail by Gasparini and Del Bianco (2011), who elaborated an analytical framework, followed by a

detailed application, based on a large number of variables of *internal and external dimensions* of 22 CBCs in the Balkans and Eastern Danube countries. The most negative dimension of the SWOT is the state of public administrations – 'there is no decision-making power delegated to local authorities by central governments', followed by the lack of economic factors facilitating CBC, level of training of personnel, and finally, significant economic and institutional obstacles. The question of what happens after local governments get involved in Euroregions, whether they become *policy entrepreneurs* in the *Perkmann sense*, is assessed through the example of three Euroregion initiatives along the Slovakian-Hungarian border by Medve-Bálint and Svensson (2013). Two significant conclusions emerge. First, the *diversity* of CBCs in terms of their capacity to act as policy entrepreneurs depends on whether their primary focus is on the economic dimension or on common ethnic grounds (Hungarian in this case). Second, with respect to the long-term *stability* of Euroregions, the authors warn 'that setting too ambitious or too vaguely formulated organizational goals for cross-border initiatives may lead to getting the membership ineffective".

Pámer (2021) investigated the intensity of cross-border cooperation by using a very simple and transparent indicator relying on five factors: physical proximity, joint activities, organizational compatibility, financial balance and investment orientation. The empirical analysis of the Hungarian-Croatian cross border cooperation shows that thematic concentration does have an added value, e.g. cooperation between the small and medium enterprises (SMEs) has intensified, as SMEs are working together on the development of the same product or service.

CONCLUSIONS

The findings of this study underscore the multifaceted nature of CBC and its pivotal role in European regional policy. While CBC has facilitated significant progress in fostering integration, its effectiveness is often undermined by structural and institutional barriers. This paper highlights the need for policies that move beyond funding-driven cooperation to establish genuinely collaborative frameworks grounded in shared regional objectives.

The first critical insight is the need for policy frameworks that transcend administrative and financial barriers without becoming the primary motivation for cooperation. The observed funding-driven nature of many CBC initiatives points to a misalignment between policy intent and on-ground realities. Policymakers should prioritize mechanisms that incentivize cooperation based on shared regional goals rather than financial imperatives, fostering a genuine commitment to collaborative governance.

Secondly, the study identifies regional heterogeneity – manifested in East-West and North-South divides, as well as differences between Old and New Member States – as a crucial determinant of CBC outcomes. Policies must therefore adopt a tailored approach, recognizing the unique socio-economic, cultural, and institutional contexts of border regions. This implies moving beyond a one-size-fits-all model and incorporating region-specific capacity-building programs, particularly in New Member States where institutional legacies and historical mistrust often hinder effective collaboration.

Another key implication is the role of institutional capacity and local governance. Stronger regional and local governments are more likely to initiate and sustain meaningful CBC initiatives. Policies should thus focus on enhancing local governance structures, providing technical assistance, and fostering cross-border institutional networks. This would not only empower regional actors but also create a more balanced distribution of responsibilities and resources among stakeholders.

Furthermore, the study reveals the underutilized potential of CBC in addressing broader policy challenges such as sustainability, knowledge transfer, and conflict amelioration. Policymakers should integrate CBC into strategic planning for areas like environmental management, innovation, and rural development. For instance, CBC in agriculture and forestry can serve as a platform for promoting sustainable practices and mitigating cross-border risks such as disease outbreaks and climate impacts.

Lastly, the findings highlight the importance of improving the evaluation and impact assessment mechanisms for CBC. The lack of robust, standardized metrics hinders the ability to measure the true effectiveness of these initiatives. The adoption of comprehensive evaluation frameworks, such as Territorial Impact Assessments, would enable a more nuanced understanding of CBC's contributions to regional development.

In conclusion, this study calls for a recalibration of CBC policies that not only address administrative and financial barriers but also leverage the unique strengths and address the specific challenges of border regions. By fostering institutional innovation, enhancing local governance, and integrating CBC into broader policy objectives, the European Union can transform its border regions into thriving hubs of cooperation and development.

REFERENCES

Anderson, J., O'Dowd, L., & Wilson, T. M. (2005). Why study borders now? In Anderson, J., O'Dowd, L., & Wilson, T. M. (Eds.), *New Borders for a Changing Europe. Cross-border Cooperation and Governance* (pp. 1-129. Taylor & Francis E-Library.

AEBR (2023), Cross-border cooperation in Europe. Association of European Border Regions, https://www.aebr.eu/

Bijman, J., Pyykkönen, P., & Ollila, P. (2012). *Support for Farmers' Cooperatives; EU synthesis and comparative analysis report Transnational Cooperatives*. Wageningen: Wageningen UR.

Brunet-Jailly, E. (2022). Cross-border cooperation: a global overview. *Alternatives*, 47(1), 3-17.

Van den Broek, J., & Smulders, H. (2013). The evolution of a cross-border regional innovation system: An institutional perspective. Paper submitted to the Regional Studies Association European Conference, Tampere 2013.

Van den Broek, J., & Smulders, H. (2015). Institutional hindrances in cross-border regional innovation systems. *Regional Studies, Regional Science*, 2(1), 116-122.

Van den Broek, J., Rutten, R., & Benneworth, P. (2018). Innovation and SMEs in Interreg policy: too early to move beyond bike lanes? *Policy Studies.* DOI: 10.1080/01442872.2018.1539225

Böhm, H. (2021). Five Roles of Cross-border Cooperation Against Re-bordering. *Journal of Borderlands Studies*, 38(3), 487-506.

Bufon, M., & Markelj, V. (2010). Regional policies and cross-border cooperation: New challenges and new development models in Central Europe. *Revista Română de geografie Politică*, 12(1), 18-28.

Ciok, S., & Raczyk, A. (2008). Implementation of the EU Community Initiative INTERREG IIIA at the Polish-German border: An attempt at evaluation. In Leibenath, M., Korcelli-Olejniczak, E., & Knippschild, R. (Eds.), *Cross-border Governance and Sustainable Spatial Development* (pp. 33-50). Berlin, Heidelberg: Springer-Verlag.

Church, A., & Reid, P. (1996). Urban Power, International Networks and Competition: The example of Cross-border Cooperation. *Urban Studies*, 33(8), 1297-1318.

Church, A., & Reid, P. (1999). Cross-border co-operation, institutionalization and political space across the English Channel. *Regional Studies*, 33, 643-655.

Contó, F., Antonazzo, A. P., Fiore, M., & La Sala, P. (2013). The "ISCI" project and the internationalization patterns of SMEs in the local agro food industry: The case of Apulia region. *Business Systems and Economics*, 3(1), 7-23.

Contó, F., Vrontis, D., Fiore, M., & Thrassou, A. (2014). Strengthening regional identities and culture through wine industry cross border collaboration. *British Food Journal*, 116(11), 1788-1807.

Decoville, A., & Durand, F. (2019). Exploring cross-border integration in Europe: How do populations cross borders and perceive their neighbours? *European Urban and Regional Studies*, 26(2), 134-157.

Deppisch, S. (2008). Social capital and other main influences on governance processes in cross-border micro-regions: The case of the Austrian-German Euregio 'Via Salina'. In Leibenath, M., Korcelli-Olejniczak, E., & Knippschild, R. (Eds.), *Cross-border Governance and Sustainable Spatial Development* (pp. 67-86). Berlin, Heidelberg: Springer-Verlag.

Dimitrov, M., Petrakos, G., Titev, S., & Tsiapa, M. (2003). Cross-border Cooperation in Southeastern Europe. *Eastern European Economics*, 41(6), 5-25.

Eibler, L., Gilcher, E., & Ziener, K. (2014). Cross-border cooperation. The Example of the German-Dutch-Belgian Border Region "Groenmetropol". In Ceasar, B., & Pallagst, K. M. (Eds.), *PlanIt! European Cross-border Cooperation: EU instruments as drivers of convergence?* (1), 49-61.

Fiala, K., Blanka, V., Ladányi, Z., Szilassi, P., Benyhe, B., Dolinaj, D., & Pálfai, I. (2014). Drought severity and its effect on agricultural production in the Hungarian-Serbian cross-border area. *Journal of Environmental Geography*, 7(3-4), 43-51.

Gasparini, A., & Del Bianco, D. (2011). *Strategies and Euroregions for Cross-border Co-operation in Balkan and Danube European Countries. An analysis of Strength, Weaknesses, Opportunities and Threats*. Gorizia: Institute of International Sociology of Gorizia.

González-Gómez, T., Gualda, E. (2014). Cross-border networks in informal and formal cooperation in the border regions Andalusia-Algarve-Alentejo and South Finland-Estonia. *European Planning Studies*, 22(7), 1407-1424.

Harguindéguy, J. B., & Bray, Z. (2009). Does cross-border cooperation empower European regions? The case of INTERREG III-A France- Spain. *Environment and Planning C: Government and Policy*, (27), 747-760.

Hop, G. E., Mourits, M. C. M., Oude Lansink, A. G. J. M., & Saatkamp, H.W. (2014). Cross-border Collaboration in the Field of Highly Contagious Livestock Diseases: A General Framework for Policy Support. *Transboundary and Emerging Diseases*, 61, 300-315.

Huber, P. (2003). On the determinants of Cross-border Cooperation of Austrian Firms with Central and Eastern European Partners. *Regional Studies*, 37(9), 947-955.

Husák, J. (2010). Regional policy of the European Communities and cross-border cooperation within the South Bohemia Region. *Agricultural Economics (AGRIECON)*, 56(6), 292-300.

Johnson, C. M. (2009). Cross-border regions and territorial restructuring in Central Europe. *European Urban and Regional Studies*, 16(2), 177-191.

Johnson, C., Jones, R., Paasi, A., Amoore, L., Mountz, A., Salter, M., & Rumford, C. (2011). Interventions on rethinking 'the border' in border studies. *Political Geography*, 30, 61-69.

Kaucic, J., & Sohn, C. (2022). Mapping the cross-border cooperation 'galaxy': an exploration of scalar arrangements in Europe. *European Planning Studies*, 30:12, 2373-2393,

Kézai, K. P., Dömötör, M., & Fekete, D. (2022). Economic Development Opportunities in the Hungarian-Slovakian Cross-Border Area – Szigetköz and Csallóköz (Žitný ostrov) According to Development Documents and Local Stakeholders Perceptions. *Deturope*, 14(1), 87-110.

Khmeleva, G. A., Kurnikova, M. V., Nedelka, E., & Tóth, B. I. (2022). Determinants of Sustainable Cross-Border Cooperation: A Structural Model for the Hungarian Context Using the PLS-SEM Methodology. *Sustainability* 14, 893.

Knickel, M., Neuberger, S., Klerkx, L., Knickel, K., Brunori, G., & Saatkamp, H. (2021). Strengthening the Role of Academic Institutions and Innovation Brokers in Agri-Food Innovation: Towards Hybridisation in Cross-Border Cooperation. *Sustainability*, 13, 4899.

Knippschild, R. (2008). Inter-urban Cooperation in the German-Polish-Czech Triangle. In Leibenath, M., Korcelli-Olejniczak, E., & Knippschild, R. (Eds.), *Cross-border Governance and Sustainable Spatial Development* (pp. 101-115). Berlin, Heidelberg: Springer-Verlag.

Knippschild, R. (2011). Cross-Border Spatial Planning: Understanding, designing and Managing Cooperation Processes in the German-Polish-Czech Borderland. *European planning Studies*, 19(4), 629-645.

Leibenath, M. (2008). Exploring the gaps: Sustainability as a challenge for cross-border governance in Central Europe. In Leibenath, M., Korcelli-Olejniczak, E., Knippschild, R. (Eds.), *Cross-border Governance and Sustainable Spatial Development* (pp. 1-14). Heidelberg: Springer-Verlag.

Lundquist, K. J., & Tripple, M. (2013). Distance, Proximity and Types of Cross-Border Innovation Systems: a Conceptual Analysis. *Regional Studies*, 47(3), 450-460.

March, J. G., & Olsen, J. P. (1989). *Rediscovering Institutions*. New York: Free Press.

McCall, C. (2013). European Union Cross-Border Cooperation and Conflict Amelioration. *Space and Polity*, 17(2), 197-216.

Medeiros, E. (2015). Territorial Impact Assessment and Cross-Border Cooperation. *Regional Studies*, Regional Science, 2(1), 97-115.

Medve-Bálint, G. (2013). Incentives and obstacles to cross-border cooperation in post-communist central Europe. In Bellini, N., & Hilpert, U. (Eds.), *Europe's Changing Geography* (pp. 145-170). London: Routledge.

Medve-Bálint, G., & Svensson, S. (2013). Diversity and development: Policy entrepreneurship of Euroregional initiatives in Central and Eastern Europe. *Journal of Borderland Studies*, 28(1), 15-31.

Mirwaldt, K. (2010). Contact, conflict and geography: What factors shape cross-border citizen relations? *Political Geography* 29, 434-443.

Noferini, A., Berzi, M., Camonita, F., & Durà, A. (2020). Cross-border cooperation in the EU: Euroregions amid multilevel governance and re-territorialization, *European Planning Studies*, 28(1), 35-56.

Nilsson, J., Madsen, O. Ø. (2007). Issues in cross-border mergers between agricultural co-operatives. *Journal of Co-operative Studies*, 40(3), 27-38.

Nilsson, J., & Ollila, P. (2009). Strategies and structures in European dairy co-operative industry. *Journal of Co-operative Studies*, 42(2), 14-23.

O'Dowd, L. (2003). The changing significance of European borders. In Anderson, J., O'Dowd, L., & Wilson, T. M. (Eds.), New Borders for a Changing Europe. Cross-border Cooperation and Governance (pp. 13-36). London: Routledge.

Pámer, Z. (2021). Tackling the measurement of cross-border cooperation intensity: an empirical example on the Hungary-Croatia border. *Deturope,* 13(2), 125-138.

Perkmann, M. (2003). Cross-border regions in Europe. Significance and drivers of cross-border cooperation. *European Urban and Regional Studies*, 10(2), 153-171.

Perkmann, M. (2007a). Policy entrepreneurship and multilevel governance: a comparative study of European cross-border regions. *Environment and planning C: Government and Policy*, 25, 861-879.

Perkmann, M. (2007b). Construction of New Territorial Scales: A Framework and Case Study of the EUREGIO Cross-border Region. *Regional Studies*, 41(2), 253-266.

Perkmann, M., & Sum, N. (2002). Globalization, regionalization and cross-border regions: scales, discourses and governance. In Perkmann, M., & Sum, N. (Eds.), *Globalisation, regionalization and cross-border regions*. Basingstoke: Palgrave Macmillan.

Princen, S., Geuijen, K., Candel, J., Folgerts, O., & Hooijer, R. (2014). Establishing cross-border cooperation between professional organisations:Police, fire brigades and emergency health services in Dutch border regions. *European Urban and Regional Studies*, 23(3), 497-592.

Raposo, M. L., Ferreira, J. J., & M., Fernandes, C. I. (2014). Local and cross-border SME cooperation: Effects on innovation and performance. *Revista Europea de Dirección y Economía de la Empresa*, 23, 157-165.

Sarmiento-Mirwaldt, K., & Roman-Kamphaus, U. (2013). Cross-border cooperation in Central Europe: a comparison of culture and policy effectiveness in the Polish-German and Polish-Slovak border regions. *Europe-Asia Studies*, 65(8), 1621-1641.

Sohn, C., Reitel, B., & Walther, O. (2009). Cross-border metropolitan integration in Europe: the case of Luxembourg, Basel and Geneva. *Environment and Planning C: Government and Policy*, 27, 747-760.

Spyra, M. (2014). The feasibility of implementing cross-border land-use management strategies: a report from three Upper Silesian Euroregions. *iForest – Biogeosciences and Forestry*, 7, 396-402.

Stevanov, M., Ostoic, S. K., Vuletic, D., & Orlovic, S. (2013). Consultation process on forest biomass and sustainable forest management: How knowledge mobilization in the cross-border region of Croatia and Serbia worked? *Periodicum Biologorum*, 115(3), 435-445.

Stojanović, Ž., & Manić, E. (2009). Sustainable rural development and cross-border cooperation. *Glasnik Srpskog geografskog drustva*, 89(2), 43-64.Svensson, S. (2014). Forget the policy gap: why local governments really decide to take part in cross-border cooperation initiatives in Europe. *Eurasian Geography and Economics*, 54(4), 409-422.

Svensson, S. (2015). The bordered World of cross-border cooperation: The determinants of local government contact networks within Euroregions. *Regional & Federal Studies*, 25(3), 277-295.

Svensson, S. (2016). Health policy in cross-border cooperation practices: The role of Euroregions and their local government members. Territory, Politics, Governance, published online in January 2016, DOI: 10.1080/21622671.2015.1114962.

Terlouw, K. (2012). Border surfers and Euroregions: Unplanned cross-border behavior and planned territorial structures of cross-border governance. *Planning Practice and Research*, 27(3), 351-366.

Timothy, D. J., & Saarinen, J. (2013). Cross-border Cooperation and Tourism in Europe. In Costa, C., Panyik, E., & Buhalis, D. (Eds.), *Trends in European Tourism Planning and Organisation*, Channel View Publication.

Tölle, A. (2013). National planning systems between convergence and Incongruity: Implications for cross-border cooperation from German-Polish perspective. *European Planning Studies* 21(4), 615-630.

Trillo-Santamaría, J.M., Paül, V, (2016). Transboundary protected areas as ideal tools? Analyzing the Geres-Xurés transboundary biosphere reserve. *Land Use Policy*, 52, 454-463.

Turnock, D. (2002). Cross-border cooperation: A major element in regional policy in East Central *Europe. Scottish Geographical Journal,* 118(1), 19-40.

Valkering, P., Beumer, C., de Kraker, J., & Ruelle, C. (2013). An analysis of learning interactions in a cross-border network for sustainable urban neighbourhood development. *Journal of Cleaner Production*, 49, 85-94.

Varjú, V. (2016). Environmental cohesion across the Hungarian-Croatian border. *Glasnik Srpskog geografskog drustva,* 96(1), 81-92.

Weidenfeld, A. (2013). Tourism and cross border regional innovation systems. *Annals of Tourism Research*, 42, 191-213.

Wieckowski, M. (2013). Eco-frontier in the mountainous borderlands of Central Europe. The case of Polish border parks. *Journal of Alpine Research|Revue de géographie alpine*, 101(2), 1-13.

Winkel, G., Aggestam, F., Sotirov, M., & Weiss, G. (2013). Forest Policy in the European Union. In Pülzl, H., Hogl, K., Kleinschmit, D., Wydra, D., Arts, B., Mayer, P., Palahí, M., Winkel, G., & Wolfslehner, B. (Eds.), *European Forest Governance: Issues at Stake and the Way Forward* (pp. 52-63). European Forest Institute.

Xheneti, M., Smallbone, D., & Welter, F. (2012). EU enlargement effects on cross-border informal entrepreneurial activities. *European Urban and Regional Studies*, 32(314), 314-328.

***DETUROPE** – THE CENTRAL EUROPEAN JOURNAL OF REGIONAL DEVELOPMENT AND TOURISM*
Vol. 16 Issue 3 2024 *ISSN 1821-2506*

Original scientific paper

TOWARDS A EUROPEAN MODEL OF SPATIAL PLANNING: AN ATTEMPT TO GRASP THE INTELLECTUAL CONTENT OF EUROPEANISATION AS REFLECTED IN EUROPEAN SPATIAL PLANNING DOCUMENTS

Géza SALAMIN[a]

[a] Associate Professor, Corvinus University of Budapest, 1093 Budapest, Fővám tér 8., geza.salamin@uni-corvinus.hu

Cite this article: Salamin, G. (2024). Towards a European model of spatial planning: an attempt to grasp the intellectual content of Europeanisation as reflected in European spatial planning documents. *Deturope.* 16(3), 145-171.

Abstract

The study contributes to the debate on the Europeanisation of spatial planning by attempting to identify the intellectual content of the EU-level orientation towards the transformation of spatial planning systems and practices of Member States. The paper analyses relevant European-level spatial-planning-related policy documents to reveal the directions of the Europeanisation of domestic planning systems. This paper argues that the EU-driven spatial planning changes can be captured in a limited number of dimensions. Based on content analysis of European-level documents on urban policy, territorial cohesion and spatial development, the author proposes the EUropean Model of Spatial Planning (EMP) as a theoretical framework for EU-motivated changes. EMP includes the five dimensions in which the EU motivates (directly or indirectly) changes in national spatial planning systems: 1. Influence on the content of plans (European objectives and topics); 2. Influence on the geography of planning (new spaces); 3. Influence on policy logic (comprehensive planning); 4. Influence on process and roles (territorial/urban governance); and 5. Influence on planning instruments (soft and integrating forms). The case of the changes in Hungarian spatial planning practice is briefly overviewed to illustrate the potential use of EMP.

Keywords: spatial planning, Europeanisation, territorial governance, European Union, Central and Eastern Europe, European spatial planning, Hungary

INTRODUCTION

It is often stressed that territorial and urban planning shifts over time in a chameleon-like fashion, adapting to changing circumstances (e.g., Freestone, 2001; Faludi 2011). The twenty-first century is witnessing a significant transformation in how spatial planning looks and functions. We can attribute this primarily to changes in the socio-political structures that are responsible for the planning function and the related forms of governance that are occurring in the context of the global changes of our time (e.g., the globalising economy, environmental sustainability challenges, technological change) or along the lines of current paradigms and

ideologies that reflect these. For EU Member States (MS), many of these impulses for change in spatial planning systems are due to the EU context. When trying to identify the European landscape, one can find rich literature about European spatial planning dynamics of the last decades. These dynamics have resulted in significant change even in the essential function and forms of planning. In a previous study, we made an effort to develop a framework for describing various practices of spatial planning in a comparable way based on an analysis of the respective European planning literature (Salamin, 2023). In that work, the European spatial planning trends were captured according to four processes that appear in the planning literature as distinct, trending topics: first, the prominence of more flexible and multi-actor *governance* in contrast to more hierarchical and regulatory government (see Getimis, 2012; Van Well & Schmitt, 2016; Schmitt & Wiechmann, 2018; Knickel et al., 2021; Berisha et al., 2021). Second, the appearance of *new spaces* of planning, which are often soft spaces with fuzzy boundaries that are also related to the increasingly multi-scalar character of planning systems (see Faludi, 2013; Gänzle & Kern, 2016; Zimmerbauer & Paasi, 2020, etc.). Third, the impact of the EU, i.e. *Europeanisation*, which influences the understanding, instruments and spaces, and scales and methods of spatial planning – and has been widely discussed by authors in planning studies. All these processes may be associated with the fourth issue: *post-modern*, post-structuralist philosophy (multiple interpretations and narratives, relational space, etc.) (Allmendinger, 2000, 2016; Haughton et al., 2010).

The current paper deals with the influence of the EU on the changes in national spatial planning practices, referred to in this paper as the Europeanisation of spatial planning, adopting the approach of influential authors (on the introduction of the phenomenon, see Böhme & Waterhaut, 2008; Cotella & Janin, 2011; Faludi, 2014, 2019; on measuring its implementation see Stead, 2013; Evers & Tennekes, 2016; Purkarthofer, 2018; Salamin, 2018; Berisha & Cotella, 2024). It is noteworthy that this method of the Europeanisation of spatial planning can be detected even in European countries outside the EU, such as the Western Balkan countries (Berisha & Cotella, 2024) or Switzerland and Norway (Salamin, 2018). This study *aims* to contribute to a better understanding of the Europeanisation process of spatial planning by focusing on possible directions of change motivated by EU processes. The paper is primarily based on an analysis of the content of nine European-level documents, aiming to identify their intellectual messages with regard to the national spatial planning systems and practices of MS. The hypothesis of the research is that the directions of various EU influences explicitly affecting the spatial planning systems of the MS can be summarized in a handful of coherent messages, which are captured in the contents of EU-level spatial

development related strategic documents. The results of these analyses are synthesised into the EUropean Model of Spatial Planning (EMP), which outlines the characteristics of a hypothetic ideal spatial planning to support further empirical analysis. The formulation of spatial planning ideals as a framework for empirical analysis has significant precedents in European planning research. The first comprehensive comparative study of national spatial planning systems, the European Compendium of Spatial Planning Systems and Policies published in 1997 (CEC 1997) introduced the ideal models of the four European planning traditions: land use management, regional economics, urbanism, and comprehensive integrated planning models. As Nadin and Stead noted (2013), these traditions were developed as ideal types and applied in the study as measures against which to compare the actual state of affairs in the MS. The advantage of such ideal types is that, as the categorisation is not exclusive – one national planning system can be affiliated with multiple ideal types, and its relation to them can be measured – this approach can tackle the multidimensional character of planning systems, which is the key challenge in the international, cross-country comparison of spatial planning (Salamin, 2023).

The current analysis deals with the period starting with the very first spatial planning document adopted at the European level in the 1980s. In the pre-Brexit era, this can be considered probably the most intensive period of European integration, with the expanding number of MS and EU competences giving rise to a sort of convergence of even policies under national competence. This convergence has also been identified in the case of national spatial planning policies and practices (Waterhaut et al., 2016; ESPON, 2018).

Since Brexit, the trend of the intensification of integration has changed, and new trajectories may also have appeared in spatial planning. The paper introduces the emergence of European spatial planning documents. The results of the document analysis are presented using detailed tables, followed by a description of the EMP model. The meanings of the EMP dimensions are also interpreted in relation to the shifting forms of spatial planning using the author's planning map tool (Salamin, 2023) and its application is illustrated with a short overview of some experiences of Hungary based on previous studies.

In the paper, we use a functional understanding of spatial planning (covering regional/ territorial and urban planning and other fields) that is applied in the academic world instead of focusing on how the term is literally used in policy practice. We apply the Euro-English concept of spatial planning, which is defined as follows: *"Spatial planning refers to the methods used largely by the public sector to influence the future distribution of activities in space. […] Spatial planning embraces measures to co-ordinate the spatial impacts of other sectoral policies, to*

achieve a more even distribution of economic development between regions […] and to regulate the conversion of land and property uses." *[…] "spatial planning systems" mean "the various institutional arrangements for expressing spatial planning objectives and the mechanisms employed for realising them."* (CEC, 1997: 24) The term is used as a neutral umbrella concept, one that encompasses both the different planning concepts of different countries and, in addition to more traditional urban and regional planning, other public coordination mechanisms that influence spatial (including urban) development (from transport network planning to place-based economic and community development to the spatial coordination of sectoral policies). Spatial plans at different geographical scales, from the urban to the national and even transnational regions, are also part of this (Salamin & Péti, 2019). Although the term "spatial planning" has recently been used less and less in EU policies – mainly to avoid the sensitive overlap with national competences (Purkarthofer, 2018; Dürh et al., 2010) – the EU-level documents dealing with spatial development, territorial cohesion and even urban development are – according to the functional definition applied – the actual manifestations of an EU-level spatial planning process referred to as "planning for Europe" by Böhme and Waterhaut (2008).

Although these documents primarily focus on the European level, their implementation relies on the spatial development activities of MS, and by outlining an approach (to be followed) concerning how to manage spatial development, they provide cognitive orientation regarding national systems. However, these documents have relatively weak direct enforcement power in MS as they are neither legally binding nor involve direct financial sources that could motivate specific planning system patterns. Without regulatory power and direct fiscal consequences, they are rather discursive policy interventions (Berisha & Cotella, 2024; Purkarthofer, 2018). Their policy implementation is mainly voluntary, but as they articulate the EU's preferences and sensitivity directly regarding methods of spatial development, they can be considered adequate materials for capturing the intellectual content underlying the general influence of Europeanisation. In addition, the ideas, approaches, and methods they define are often incorporated in "harder" EU policies, such as Cohesion Policy and implementation requirements and the comprehensive goal of territorial cohesion.

The Europeanisation of spatial planning and the creation of European-level policy documents

Although spatial (incl. urban) planning policy in principle has remained the competence of the MS, the EU's policies, cooperation and directives in the field of territorial (cohesion) and

urban policy are now indirectly and effectively influencing the planning practices of MS, extensively discussed in the European planning literature as the "Europeanisation" of spatial planning. In this paper, Radaelli's (2004: 3) definition is applied: "*Europeanisation consists of processes of institutionalisation of formal and informal rules, procedures, policy paradigms, styles, 'ways of doing things' and shared beliefs and norms which are first defined and consolidated in the EU policy process and then incorporated in the logic of domestic (national and subnational) discourse, political structures and public policies.*" This process of Europeanisation can be the result of a top-down (from the EU towards MS) or bottom-up (i.e., the 'uploading' of domestic ideas to the EU level) or a horizontal process (between EU MS) (Böhme & Waterhaut, 2008, based on Lenschow, 2006). EU policies have top-down influence (imposing constraints or providing motivation through Cohesion-Policy-related funding). Professional-scientific cooperation supported by the various EU programmes (such as European Territorial Cooperation programmes [incl. ESPON and URBACT]), in particular, has a significant horizontal Europeanisation effect, creating platforms for knowledge exchange in territorial and urban planning and development and effectively transposing European priorities and themes into national planning professional systems through an active EU professional discourse (Faludi, 2011; Böhme & Waterhaut, 2008) (Fig. 1). In the process of Europeanisation Purkarthofer (2018) identified 3 types of policy interventions: regulatory, remunerative and discursive.

The creation of European-level documents is connected to both horizontal Europeanisation (due to its collaborative nature) and the rather top-down realization of EU policy will.

As Faludi (2011) described in a book on the issue, after some antecedents in the 1960s, from the late 1980s, the boom era of European (level) spatial planning began, marked by a proliferation of policy documents dealing with spatial development from the late 1990s onwards. The first European spatial planning strategic document of this kind, the European Regional/Spatial Planning Charter, was drawn up in 1983 under the auspices of the Council of Europe. In the 1990s, the EU also prepared policy reports dealing (also) with spatial development issues (Europe 2000, 1991; Europe2000+ 1994), then a separate strategy, European Spatial Development Perspectives (ESDP), was prepared in 1999 – the very first and remarkable step toward European spatial planning (Faludi, 2011). A more action-oriented document, the EU Territorial Agenda, was adopted in 2007 and replaced by the new Territorial Agenda in 2011 and then in 2020. In the absence of a formal EU competence, each of these documents was created and adopted by the MS; however, under the significant influence of the European Commission (EC).

In addition, based on both the voluntary cooperation of MS and the motivation of the EC to strengthen Cohesion Policy, an implicit EU urban policy has been developed since the early 2000s, which, in the absence of a direct mandate, has not been an objective in its own right, but rather an instrument serving the socio-economic objectives of the Union, often referred to as the urban dimension of EU policies related to cohesion, innovation and environmental objectives. Urban issues have been included in the programmes of various presidencies, typically setting out specific and desirable directions for development within the framework of presidency conclusions and joint declarations (Lille Action Programme, 2000; Rotterdam Urban Agenda, 2004, Bristol Accord, 2005, Budapest Communique, 2011, etc.). The German Presidency in 2007 produced the Leipzig Charter for Sustainable Urban Development (2007), renewed in 2020, the most important European urban policy document to date, which has played a decisive role in spreading the notion of an integrated urban development approach in Europe. In the Riga Declaration, the adopting ministers of MS in 2015 declared the need to establish an Urban Agenda to provide a platform for urban development cooperation in EU-preferred topics. All these guidelines involved inputs for MS's urban planning practices.

Falling outside the exclusive competence of the EU, European strategies and directives on spatial and urban development matters are primarily the result of voluntary cooperation between MS, which rely on discursive policy formulation and implementation. Several authors consider these works to be components of European (level) spatial planning (Böhme & Waterhaut, 2008; Luukkonnen, 2011; Waterhaut, 2008; Purkarthofer, 2018). Since 2009, the new European objective of *territorial cohesion*, as set out in the Lisbon Treaty, has become the dominant concept of spatial policy at the European level. This has been welcomed as the new "currency" of European spatial planning (Evers & Tennekes, 2016) or as a sign that the latter had "come of age" (Faludi, 2011). Urban development planning and spatial planning in Europe are typical areas in which EU policies have a substantial impact, yet are also, in principle, areas where the latter have no direct competence, as critics underline (e.g. Luukkonen, 2015).

CONTENT ANALYSIS OF SPATIAL-PLANNING-RELATED EU POLICY DOCUMENTS – METHOD OF EMPIRICAL RESEARCH

For the purpose of the study, documents for analysis were selected according to the following criteria: strategic-future oriented documents that include normative considerations, e.g. goals or visions (agendas, charters, perspectives); those that, in their function and scope address

spatial planning (see definition in the first chapter); have a political nature: i.e., are adopted by political actors or published as a direct component of a policy-forming process. As the subject of the empirical analysis, the nine most relevant documents were selected from the period (Tab. 1). Two documents (Torremolinos Charter, 1983, Guiding Principles for Sustainable Spatial Development, 2000) adopted by a spatial development body of the Council of Europe were formally not documents issued by the EU, but their orientation on Europe and their essential role in shaping the international conceptual framework meant their inclusion in this analysis was unavoidable. With two documents, the first (2007) and the second (2011) Territorial Agenda of the EU, their expert-based background documents entitled "Territorial State and Perspectives of the EU" (TSP) were also included, which provided further details and justification for the priorities of the agendas.

The analysed documents generally do not directly prescribe any formal modifications to the MS's planning systems. However, most of them are concerned with the preferred ways of shaping spatial/urban development, setting up spatial (territorial) development goals, encouraging specific territorial relations and defining spaces to be tackled, encouraging actors connected to territorial development and introducing coordination mechanisms. Therefore, these patterns can be identified and analysed to reveal potential messages associated with spatial planning (of countries). Two paths of influence can be recognised. On the one hand, these patterns can be viewed as models to follow (mechanisms). On the other, implementing the content of these EU documents to which the States have committed themselves by their signatures requires the contribution of the latter's spatial planning practices. To capture these patterns, the following aspects of the documents were addressed in the qualitative text analysis:

- pattern(s) of the spatial organisation function (Tab. 1)
- priorities and goals (their existence in the text and their nature) (Tab. 1)
- identification of preferred, encouraged forms of spatial planning/development mechanisms referred to in the documents (integration, cooperation, strategy-building, comprehensive planning, vertical and horizontal coordination/cooperation, social and stakeholder participation (Tab. 2)
- new spaces of planning motivated by the document (emergence and types) (Tab. 2)

In their content, these papers often reflect the dominant European (spatial) discourses and ideas and the expectations of EU policies towards spatialities. On the one hand, they show the gradual introduction of an international understanding of spatial planning/development and territorial cohesion, formulated at first as a policy concept and then penetrating academic life.

The critical European territorial priorities (polycentric development, territorial integration, integrated development, etc.) gradually emerge in the documents. A significant overlap is found in the content of the subsequent documents, and a sort of gradual evolution of the understanding of European spatial planning can be identified. This can be detected in the evolving understanding of spatial development, European priorities (Tab 1), and the mechanisms for improving the territorial/urban development proposed/targeted in the documents (Tab 2).

Table 1 Identification, functions and priorities of primary European spatial planning documents

Document					Goal system /topics		
Aspects of analysis / Title[4]	1. Year	2. Type	3. Adopted by	4. Basic function as defined in the document	5. Vision, envisioned goal to which it contributes	6. Development priorities[5]	7. Development priorities and aims
European Regional/Spatial Planning Charter (Torremolinos Charter)	1983	Policy strategy	Conference of Ministers responsible for Spatial/Regional Planning (CEMAT)	New common fundamental principles governing space organisation for the harmony of economic, social, cultural and environmental aspects. Setting European meaning of spatial planning	Common principles and cooperation in planning which contribute to the reduction of territorial differences, better organisation and use of space, spatial distribution of activities, the protection of the environment and improved life quality.	**2**	1. Balanced social and economic development of the regions 2. Development of quality of life 3. Responsible management of natural resources and protection of the environment 4. Rational territory usage + specific aims for seven types of space
European Spatial Development Perspectives (ESDP)	1999	Policy strategy	Ministers responsible for spatial planning of the MS and the EC	Common aims and concepts for the development of the territory of the EU Policy framework for EU and national sectoral policies with a spatial effect and for regional and local authorities.	Balanced and sustainable development of the territory of the EU.	**2**	Fundamental aims for every region: 1. Economic and social cohesion 2. Preservation and management of natural resources and cultural heritage 3. More balanced competitiveness of the European space Aims: 1.1 Polycentric and balanced spatial development 1.2. Dynamic, attractive and competitive urban areas 1.3. Endogenous development, diverse and productive rural areas 1.4. (1) Urban-rural partnership; (2). Equal access to knowledge and infrastructure (3). Wise use of natural and cultural heritage
Guiding Principles for the Sustainable Spatial Development of the European Continent	2000	Policy strategy	Conference of Ministers responsible for Spatial/Regional Planning (CEMAT) of the Council of Europe	Policy framework, coherent common strategy, common guidelines.	Contribution to social cohesion. Sustainable development of the European space and increased cohesion between the regions of Europe.	**2**	1. Reinforcement of territorial cohesion through a more balanced social and economic development and improved competitiveness of the regions 2. Encouragement of development by generating urban functions and related development of urban and rural areas 4. Development of access to information and knowledge 5. Mitigation of environmental damage 6–7. Promoting and protecting the natural resources and heritage, making them a development factor; 8. Development of energy resources and maintaining their security 9. Sustainable quality of tourism 10. Limitation of the impacts of natural catastrophes + Spatial development measures related to nine types of space in Europe
Territorial Agenda of the European Union (TA2007) ***Territorial State and Perspectives of the European Union (TSP)***	2007	Policy strategy	Ministers responsible for spatial planning and development	An action-oriented policy framework for future cooperation. (In 2011, it was renewed/replaced.)	A more competitive and sustainable Europe of diverse regions.	**2**	1. Polycentric development and innovation through the networking of urban regions and cities 2. New forms of partnership and territorial governance between rural and urban areas 3. Support for clusters of competition and innovation 4. Strengthening and expanding Trans-European Networks (TEN) 5. Trans-European risk management 6. Reinforcement of the role of ecological structures and cultural resources in development

[4] Documents denoted in *italics* are not directly political ones but expert documents that support policy.

[5] *0: does not appear substantially / 1 present / 2 present strongly.

Document					Goal system /topics		
Aspects of analysis / Title[4]	1. Year	2. Type	3. Adopted by	4. Basic function as defined in the document	5. Vision, envisioned goal to which it contributes	6. Development priorities[5]	7. Development priorities and aims
Leipzig Charter on sustainable European cities	2007	Policy strategy	Ministers responsible for urban development		Sustainable cities, integrated development, balanced (polycentric) development.	**1**	1. Enhanced application of integrated urban development policy - Establishment and encouragement of quality public spaces - Modernisation of infrastructure and reinforcement of energy efficiency - Proactive innovation and educational policies 2. Disadvantaged city parts (and partial aims) - Strategies for the renovation of the physical environment - Reinforcement of the local economy and labour market policy - Proactive educational and training policy for children and youth - Encouragement of efficient and affordable urban transport
Green Paper on Territorial Cohesion	*2008*	*Discourse-orientating report. Not a strategy!*	*Communication of the EC*	*Launch and focus on discourse about territorial cohesion.*	*Turning territorial diversity into strength*	**0**	
Territorial Agenda 2020 (TA2020) of the European Union. *Territorial State and Perspectives of the European Union (TSP*) Update	2011	Policy strategy	Ministers responsible for spatial planning and territorial development	Action-oriented policy framework for the realisation of territorial cohesion and strategic orientation for the policies of the EU, MS and regions.	Inclusive, intelligent and sustainable Europe of diverse regions. Territorial cohesion for a more harmonious and balanced Europe.	**2**	1. Support for polycentric and balanced territorial development 2. Encouragement of the integrated development in cities, rural areas and 7 types of regions 3. Territorial integration in cross-border and transnational functional regions 4. Encouragement of global competitiveness based on local economies which are strong in the regions (including the development of the local economy, too) 5. Territorial connectedness for individuals, communities and enterprises 6. Ecological, landscape and cultural linking of regions and their management
Urban Agenda of the European Union	*2016*	*Cooperation framework (platform): Not a spatial planning strategy!*	*Ministers responsible for urban matters*	*To provide integrated and coordinating help for better realising EU aims, policies, and related national targets in an urban dimension.*	*(No vision; it seeks to be a tool for helping achieve EU targets and policies)*	**0**	*(There are no priorities and aims, just topics for discussion and elaboration for future cooperation)*
Territorial Agenda 2030 – A future for all places	2020	Policy strategy	Ministers responsible for spatial planning, territorial development and/or territorial cohesion	Action-oriented framework to promote territorial cohesion in Europe. Call for the importance of (and orientation for) strategic spatial planning and the territorial dimension of policies.	To contribute to sustainable development and to keeping Europe together. To respond to the increasing imbalances and inequalities, and the transition towards a carbon/climate-neutral economy.	**2**	1.Just Europe: •Balanced Europe •Functional regions •Integration beyond borders 2.A Green Europe that protects common livelihoods and shapes societal transition •Healthy environment: better ecological livelihoods, climate-neutral- resilient towns, cities, regions •Circular economy: strong and sustainable local economies in a globalised world •Sustainable connections: sustainable digital and physical connectivity of places

Source: author's construction based on content analysis of the referenced documents

Table 2 Preferred, encouraged or motivated mechanisms of spatial development in primary European spatial planning documents

	Mechanism-related "messages"[6]									
Aspects of analysis / Title	**8. Key concept of planning**	**9. Integrated development***	**10. Encouragement of strategies, cooperation and visions***	**11. Comprehensive logic for spatial planning/ development***	**12. Role and coordination of sectors***	**13. Cooperation between levels (vertical)***	**14. Cooperation and coordination between actors* (horizontal)**	**15. Social and stakeholder participation***	**16. New spaces of planning***	**17. Main new spaces encouraged**
European Regional/Spatial Planning Charter (Torremolinos Charter)	Spatial planning	**0**	**1**	**2**	**1**	2		1	2	European space; cross-border interventions; areas of special characteristics; functional spaces
European Spatial Development Perspectives (ESDP)	Spatial development	**1**	**2**	**2**	**2**	1	1	0	2	EU and European space; cross-border and transnational cooperation, the introduction of territorial cooperation; city-rural area unit
Guiding Principles for the Sustainable Spatial Development of the European Continent	Spatial planning; spatial development	**1**	**1**	**2**	**1**	2	2	2	1	European space; cross-border and transnational cooperation and dialogue on the topic
Territorial Agenda of the European Union. *Renewed territorial status and perspectives of the European Union (TSP*)	Territorial cohesion	**2**	**2**	**2**	**1**	2	2	1	1	EU space; cross-border and transnational cooperation, introduction of territorial cooperation; city-rural area unit
Leipzig Charter on sustainable European cities	Integrated urban development	**2**	**1**	**1**	**1**	2	2	2	1	Urban region, the role of the national level, etc.
Green Paper on Territorial Cohesion	*Territorial cohesion*	***1***	***nr***	***nr***	***1***		*nr*	*nr*	*2*	*0*
Territorial Agenda 2020 of the European Union and the *Territorial status and perspectives of the EU*	Territorial cohesion	**2**	**2**	**2**	**2**	2	1	1	2	EU space, cross-border spaces, urban regions, ecological networks, areas of specific characteristics, territorial integration of functional spaces, etc.
Urban Agenda of the European Union	*(Urban dimension of the policies)*	***2***	***1***	***nr***	***2***	*2*	*2*	*2*	*nr*	
Territorial Agenda 2030 – A future for all places	strategic spatial planning	**2**	**2**	**2**	**2**	2	2	1	2	EU, local, regional, places (17 types of places), all geographical and governance levels, links and flows, functional regions, (incl. cross border)

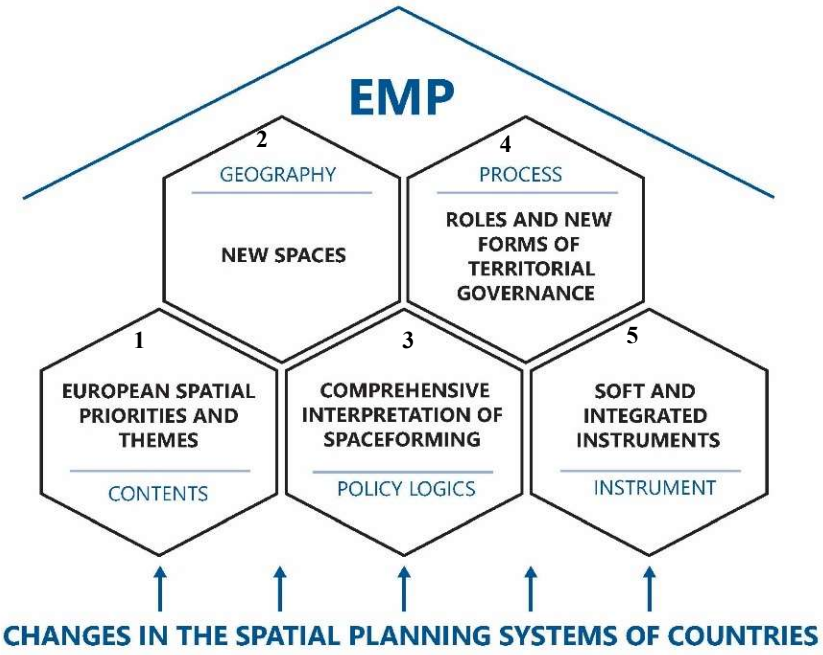
Source: author's construction based on the content analysis of the referenced documents

[6] *0: does not appear substantially / 1 present / 2 present strongly, nr: not relevant for the given document

RESULTS: THE EUROPEAN MODEL OF SPATIAL PLANNING (EMP)

Due to the revealed logical interconnection between the analysed documents, it is possible to group their contents into a handful of cohesive aspects. The directions of change induced or encouraged by the European Union have been integrated into the EUropean Model of Spatial Planning (EMP) theoretical framework (Fig. 2). The "EUropean" attribute (taken over from Faludi [2014]) means that the European interpretation of the model is limited to impacts induced by the European Union. The EMP is an ideal type, which – as mentioned in the introduction – does not determine the status of an actual planning system and practice but rather specifies the change directions (vectors) according to the five dimensions of planning. EMP is an ideal model of transformation. The dimensions are Content (themes, priorities), Geography of planning, Policy logic, Process (governance) and Instruments. These change directions can also be interpreted for entirely different spatial planning practices.

Figure 1 European Model of Spatial Planning (EMP): Five directions of change of national spatial planning encouraged by European-spatial-planning- (related) documents



Source: Author's construction[7]

[7] In the paper's understanding, applying Farinós Dasí's (2006) approach, the terms 'hard' and 'soft' refer to how instruments and rules in spatial planning are more ('hard') or less ('soft') formal and clearly (closed) established from a legislative or juridical point of view.

Beyond the messages in the analysed European documents, identifying these dimensions was also based on the trends suggested by the literature cited in the introduction, consultations with planners from different countries, and the author's personal experience with planning. This model specifies directions of Europeanisation-related change according to the five dimensions. In line with Radaelli's definition (2004), these influences (in each dimension) can be manifested in the transfer of formal and informal rules, procedures, policy paradigms, styles, 'ways of doing things' and shared beliefs and norms into national planning systems. It is important to note that this model is a theoretical construction due to its methodology and has nothing to say about actual changes in countries. However, it is an appropriate framework to be used in developing an empirical methodology, which – e.g. by creating indicators – could measure these changes in a comparative way. Tab. 3 shows how the document analysis supported the identification of the content of the five dimensions of EMP.

Table 3 Relationship between aspects of the analysis of the documents and the synthesized dimensions of the European Model of Spatial Planning (EMP)

	Aspects of analysis (See Tab. 1 and Tab. 2.)															
Dimensions of EMP	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
EMP1. EU priorities and themes																	
EMP2. New spaces																	
EMP3. Comprehensive interpretation																	
EMP4. Roles and new governance																	
EMP5. Soft and integrated instruments																	

significantly relevant
highly relevant

Source: Author's construction

EMP 1.: Influence on content: Appearance of European spatial priorities and themes in plans

The first layer of "European" influence takes effect when objectives defined in the relevant strategies and policies of the European Union (e.g. polycentric development, territorial cohesion, urban-rural cooperation, and territorial integration) and topics of European discourses (e.g. territorial capital, cross border development, specific types of territories) appear in the priorities and issues actually addressed that are associated with the planning documents of a country or, in general, in thinking relating to spatial planning. Giannakourou (2012) calls it "thin learning" when MS incorporate concepts and ideas developed at the European level or adapt their discourses, processes, and institutions without, however, modifying their essential characteristics and the underlying collective understandings attached

to them. This dimension of Europeanisation is usually mainstreamed through discourses and cooperation as a kind of voluntary policy transfer. However, when planning is also directly related to a policy under EU competence (e.g. in the case of Cohesion-Policy-funded programmes), the application of European objectives and themes is rather obligatory within the framework of the planning hierarchy. In Central and East European (CEE) MS, since their EU accession, Cohesion Policy funding has been the primary source for implementing urban and regional development plans. Therefore, the plans addressing these developments must fit the expectations concerning the use of those funds more directly. In 2014-2020, the objectives of the Europe 2020 strategy (as a strategic base for Cohesion Policy) and the corresponding 11 thematic objectives had to be mainstreamed in these countries' territorial and urban development plans (See Salamin, 2019). In research practice the adaptation of priorities, themes, and principles of EU level strategic documents (e.g. Territorial Agenda, Leipzig Charter, other EU strategies) and any kind of reference to them in national or subnational plans can be measured.

EMP 2.: Influence on geography: Towards new spaces of planning

The analysed European documents formulate demands for new territorial entities designed to solve specific challenges or exploit potentials. The emergence of the European level in spatial thinking necessarily results in the transformation of spatial scales, but also spaces and levels of policies, interventions and partnerships (rescaling) with regard to multilevel governance. This claim is in line with the scientific literature on the emergence of new spaces of planning, which often cross the borders of administrative territories (Allmendinger et al., 2015; Faludi, 2013; Gänzle & Kern, 2016; Metzger & Schmitt, 2012; Walsh, 2014, etc.). As opposed to territories assigned with administrative and political competences, spatial planning targets new spaces that are organised according to functions or partnerships to be handled together, and in this context, several kinds of actors cooperate with the related responsibilities and often, boundaries are fuzzy. The new type of planning typically creates these “soft” spaces – e.g., by developing a common strategy for a particular space. The European approach reflected in the examined documents draws attention to the need for functional spaces, such as functional urban areas (urban-rural cooperation) or those related to other functions (e.g., protected areas, the spaces of infrastructural investment, tourism regions, etc.).

Cohesion policy encourages such flexible geography – particularly since the 2014-2020 period – with regard to specific tools and expects integrated strategies that mainly target functional spaces (Salamin, 2021). The spatial planning systems in CEE have undergone

significant transformation since they started becoming more integrated. This has included changes in the territorial levels of development. The application of the NUTS2 level as a planning level was often motivated by the EU regional policy approach (e.g. in Hungary between 2002 and 2012), but integrated territorial development and community-led local development instruments applied extensively in CEE countries since 2014 also resulted in the emergence of new, programme-based spaces (as the LEADER programme did in rural regions much earlier). The European Territorial Cooperation (ETC) programmes created border-crossing programme-based planning spaces in each border section and at the transnational level, while European macroregional strategies emerged as a spatial development framework at an even wider scale (Medeiros, 2018). However other EU policies, e.g. digital and green transition also influence the new geographies of planning. In research practice all kinds of new planning geographic entities or spatial levels or other spatialities (e.g. networks, functional zones, border crossing strategies at different scales) can be recognized and analyzed to grasp the new planning places.

EMP 3.: Influence on policy logic: Towards more comprehensive space-forming planning

The examined European spatial planning strategic documents did not formulate any explicit guidelines concerning how the national urban and regional planning policies should be reformed. Although these European documents were typically approved by ministers with defined fields of responsibility (ministers for spatial planning, territorial development, or urban development), their messages do not limit their reach to the typical scope of urban planning or regional planning. They encourage a comprehensive understanding of controlling spatial development, in which traditionally separate policy fields, such as regional, environmental and transport planning, land use or regional economic development, are increasingly connected within a framework of common strategies, a uniform policy target system, or even common (integrated) tools. In most documents, the envisioned spatial planning requires the coordination of different sectoral policies (Tab. 2). Thus, the implicit understanding of spatial planning indirectly reflected in these documents concerns policy coordination rather than being a distinct policy branch. This comprehensive approach addresses socioeconomic and environmental issues far beyond the spatial (physical) scope of traditional urban and regional planning. Such a comprehensive understanding of spatial planning policy is reflected in Faludi's (2011) description of European spatial planning, which is more about cooperation, coherence, and cohesion. This kind of spatial planning and

development (and one of its components, urban development) does not primarily involve independent policies with target systems but tools that ensure the implementation of other policies mainly due to their specific integrated intervention and coordination capacity.

In the aforementioned classification of the compendium of the EC (CEC, 1997), one of the four ideal types was the so-called comprehensive-integrated spatial planning found to be dominant in many northwestern European countries. This ideal is supported by the EU documents. The success (or the attraction) of this comprehensive, integrated approach in most of the MS is reflected in ESPON projects analysing planning systems (Farinós Dasi, 2006; COMPASS, 2018) In the results associated with this research (which used a method based on self-reporting by the surveyed institjutions), even the CEE countries – new members at that time – demonstrated growing affiliation with this comprehensive, integrated model within their spatial planning systems. This may have been partly due to their willingness to align their policies to those preferred by the EU model (see Salamin, 2019). In research practice the scope of spatial plans, the jurisdiction of spatial/urban planning/development policy, and the relation of spatial planning to sectoral policies can be good materials to be analyzed to measure the 3rd dimension.

EMP 4.: Influence on process and roles: Towards new forms of territorial governance

Closely linked to EMP3, the actors and the general characteristics of planning processes should be significantly different from those associated with traditional, more regulatory and bureaucratic plan-making, which is based more on the formally regulated responsibilities of public actors. This implies that changes can be directly connected to those described in the literature as the "governance turn" in spatial planning (Getimis, 2012; Stead & Pálné Kovács, 2016; Van Well & Schmitt, 2016). In this planning process, the range of actors involved in planning becomes much broader. Besides the growing number of public authorities, various stakeholders are encouraged to become involved. Governance appears to be flexible, ensuring the cooperation of government and entailing that various non-governmental actors and civil and economic sectors are involved in planning, too. This implies both the (horizontal) coordination of sectors and vertical coordination between levels (see multi-level governance) in the context of the development of the territory. This characteristic can be connected to Van Well's and Schmitt's definition, according to which territorial governance is the planning and implementation of public policies, programmes and projects for a place/area by coordinating actors, institutions and activities (1) by integrating policy sectors; (2) by mobilising stakeholder participation; (3) by adapting to changing contexts; and (4) by taking into account

place and territory-based characteristics and impacts (Van Well & Schmitt, 2016). This more flexible, cooperative governance is typically strategy-based, creating new channels of interaction in previously established policy processes, often organised around the implementation of programmes. The EU explicitly creates and promotes new forms of – mainly programme-based – flexible territorial governance in the area of territorial development (ITI, CLLD, ETC programmes, macroregional strategies, EGTCs, etc.), which is legitimised and boosted by the aforementioned EU territorial cohesion objective and the strengthening of the urban dimension, and explained by the need for spatially integrated planning and the implementation of development to make it effective. This requires shifting the focus from expert plan-making to coordination and cooperation; thus, the new governance paradigm may necessitate new methods, such as collaborative and communicative planning. This dimension can be analyzed through investigating actor participation patterns, formalized and non-formalized vertical and horizontal coordination, new territorial/urban governance entities and also the identification of planning professionals (incl. the role and backgrounds of planners and legislation on accreditation of planning profession).

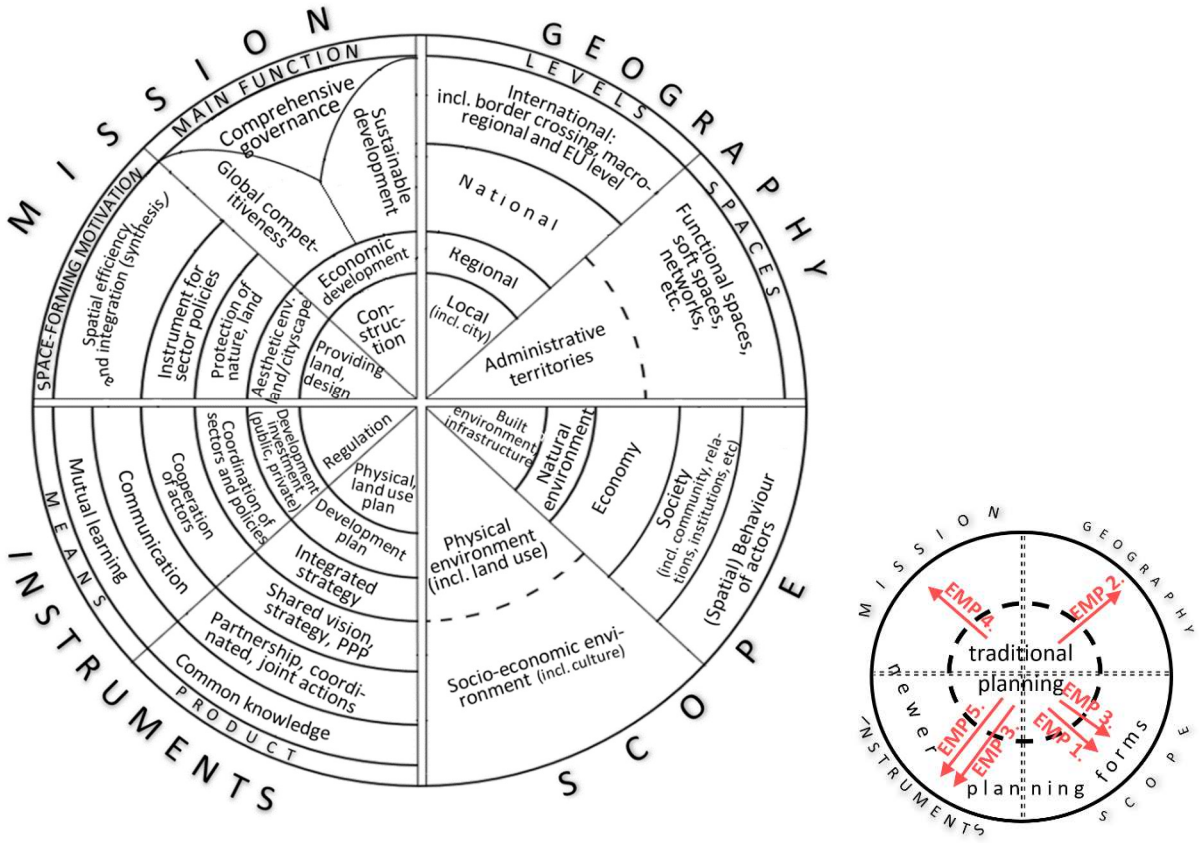
EMP 5.: Influence on planning instruments: Towards soft and integrated forms

In spatial planning, the instruments are crucial. Traditionally, these are blueprints or planning documents. Using our previous definition (Salamin, 2023), instruments are considered here as all those direct outputs of planning action that, according to their function, directly shape the development of a territory or place, i.e., give effect to planning intent. In comprehensive and governance-based European spatial planning, planning is no longer synonymous with plan-making but refers to a broader set of coordination processes that shape spatial development, even if no planning document is produced. The analysed EU documents mention a wide range of mechanisms that can be considered instruments. As the literature also describes, there has been a simultaneous shift in emphasis and a multiplication of tools. Furthermore, the new trends include soft instruments such as shared visions, fostering cooperation between actors, and even shared intentions and new knowledge. Integrated strategies, which can integrate more traditional physical spatial planning and sectoral policies, thereby supporting economic and social development, are becoming increasingly important, with the essential function of coordinating the activities of the various actors. Much greater emphasis is being placed on implementation and periodic feedback (evaluation and monitoring), but the continuous shaping of intentions and planning is intertwined with implementation in territorial governance.

Impact on the forms of spatial planning: EMP and the Planning Map

In our aforementioned paper, a four-dimensional model called a spatial planning map was introduced as a comparative tool to capture different forms of spatial planning according to four dimensions (geography, motivation, scope, and spaces). This comparative framework included the possibility of distinguishing between new and more traditional forms of spatial planning based on the literature (Salamin, 2023). The relation between the transmission of the (intellectual) content of European documents to national spatial planning systems and shifts in spatial planning forms can be analysed by matching the EMP dimensions with the dimensions of the planning map. Fig. 2 shows that each of the directions of the EMP dimensions indicates the transformation of planning into a relatively soft form of territorial governance.

Figure 2 Potential changes in the form of planning suggested by the European Model of Spatial Planning (EMP) as visualised in the Planning Map (Salamin, 2023)



Source: author's construction based on Salamin, 2023

The application of EMP – The case of Hungary

The primary aim of the creation of the EMP is to provide a methodological framework for analysing the Europeanisation of spatial planning in countries. The transformation trends of countries can be analysed along the five dimensions of the model. The empirically identified changes in a certain period can be compared against the EMP pillars and, on this basis, the pace of convergence or even divergence from them can be identified. The EMP is similar to the spatial planning traditions (ideal) model of the EC Compendium (1997), which helped to typify the planning systems of individual countries based on their deviation from the parameters indicated in them (Nadin & Stead, 2013). While the EC compendium helps to identify the European types of spatial planning systems, the EMP, as a tool for examining the process of Europeanisation, helps to identify the changes. The paper does not aim to evaluate the implementation of the EMP model in any country, but a short overview of spatial planning trends in the case of a CEE country, Hungary, can serve as an illustration of the relevance of the EMP model.

As the CEE countries did not significantly influence the respective European discourses and European strategic documents (Faludi, 2004; Salamin, 2019), they appear as potential adopters of EU patterns. It is also connected to the weak participation of eastern scholars in European debates in planning-related disciplines (Maier, 2012). Central and South-Eastern Europe (incl. Hungary) is generally struggling with a relatively slow pace of catching up, a polarized urban structure and a fragile equilibrium (Rácz & Egyed, 2013), which makes it highly dependent on EU policies. As the primary net beneficiaries of EU Cohesion Policy, they are required to adapt to several EU requirements, which are often logically connected to EMP – as mentioned above. In the case of Hungary, the impact of the EU was powerful in the investigated period. Several trends indicated by EMP appeared in the planning system. In 1996, Hungary introduced a completely new planning regime (with the name területfejlesztés [territorial development]) at the regional and national levels. This law on regional development and spatial planning (XXI/1996) – the first of its kind in the CEE region – was explicitly motivated by the preparation for EU membership and the absorption of EU funds in development activities and the established new cooperative governance structures and programme-based planning. Beyond this regulation, powerful influences were the emerging planning exercises related to pre-accession funds (Phare, ISPA, SAPARD) and the cross-border cooperation programmes with Austria, facilitating the acquisition of knowledge of the EU requirements of strategic planning, programme cycle management and evaluations. The European orientation was the main driver of the creation of a new planning system (Salamin, 2019). For a long time, Hungary, with a motivated learning attitude, adopted the concepts, topics and goals in regional development (strategic) planning documents and later also in national spatial planning strategies. The objectives of the current Hungarian spatial development concept adopted in 2014 have a very close topical relationship with the Territorial Agenda of the EU 2020 (2011) (Salamin, 2019; Szabó et al., 2021). Therefore, the significance of EMP1 can be confirmed.

In relation to the Hungarian EU Presidency in 2011, Hungary coordinated the preparation of the revised Territorial Agenda (TA2020), which resulted in the inclusion of some CEE-specific issues, such as those of the local economy, population trends, and native minorities (Péti & Szalóky, 2023). Although this document played a role in the practical definition of territorial cohesion and the procedures and mechanisms ensuring its mainstreaming (new methodological framework), the conceptual framework originating in the north-western European discourses did not change (Salamin, 2019).

As regards the EMP3 dimension, different trends can be currently identified. On the one hand, planning as a profession and function in Hungary is terminologically vague. The public

functions and activities that could fall under the European term “spatial planning” are quite fragmented, belonging to several distinct policy fields (land use planning is separate from development/strategic planning, rural planning, and even local (urban) planning is separate from regional-level planning), resulting in constant disintegration (Salamin & Péti, 2019), in the absence of an integratory function (Péti, 2011). On the other hand, in the national spatial development concept of 2005 – some years before the territorial cohesion concept appeared in EU discourses – Hungary introduced the vision of territorial harmony, which required the coordination of sectoral policies and taking advantage of territorial diversity, thereby anticipating the notions of territorial cohesion. For 2007-2013, the government introduced territorial cohesion as a horizontal project selection criterion in programme implementation (Salamin, 2019).

In Hungary, multiplication and remarkably rapid changes in planning spaces have occurred in recent decades (Salamin & Péti, 2023). (EMP2) The EU had a strong influence on the creation of NUTS2 level planning regions in 2005 – which were abolished in 2012 – and on the short-term planning exercises on the microregional level, while several new programme spaces emerged in relation to EU funding (ETC programmes or EGTCs). After France, Hungary has created the largest number of cross-border cooperation regions formalised within EGTCs, but the real intensity of cross-border connections is often questionable (Pámer, 2021). However, several new planning spaces emerged from national governmental initiatives, too. While in Western Europe, these dynamics of emerging new spaces are primarily associated with the transformation of the role of the state and the private sector (Deas et al., 2015, Allmendinger et al., 2015), in Hungary, the changes result from EU policies and current governmental efforts. Planning spaces in Hungary are normally created for a narrower thematic or functional purpose and have a shorter life span, contributing to the relatively weak performance of spatial planning (Salamin & Péti, 2023). Somewhat contradictorily, in 2018 the former Central Hungary region was split in two to separate Budapest and its surrounding area (Pest county) in order to achieve better results in the absorption of EU funding in the period 2021-2027. However this modification worked against the treatment of the capital city as part of a single city region, i.e. against the functional territory approach (Szabó et al., 2021). In most CEE countries in the 21st century an increased suburbanization and urban sprawl call for coordination on the level of functional urban areas (Kozakov et al., 2024; Hardi, 2022). Although under the pressure of increasing suburbanization (Vasárus & Szalai, 2023) the need for the coordination and planning of the entities of functional urban areas (FUA) has become evident in Hungary – it is included in the national spatial development strategy –, there is no formal planning-coordination at this level (Salamin & Péti, 2023) and the ability of local authorities to cooperate at this territorial level is limited (Kiss & Porhajas, 2024).

The emergence of the governance approach in planning (EMP4) is also quite contradictory in Hungary. At the beginning of the period, new governance forms appeared to be gaining ground, but later on, this governance approach, associated with broader opportunities for less formalised bodies, regressed. In the late 1990s and early 2000s, new institutions with delegated membership were created by law (e.g., regional development councils and microregional associations), which, as a sort of territorial governance structure, had a key role in regional development and planning. However, these councils acted more as a cooperative form of various government branches without involving significant economic or civic players. In contrast, the directly elected local and regional governments had limited roles. Such governance was also established for functional planning territories (e.g., the Budapest agglomeration and Balaton tourism regions). After 2012, most of these regional territorial governance bodies were abolished and some of their competences were decentralized to the county self-governments (at the NUTS3 level) while others have been centralized.

Additionally, participation has gradually emerged as a requirement of urban and regional planning regulation. Various governance approaches, especially those relying on participation and citizen involvement, have become relatively common beyond the official requirements of numerous municipalities, especially those with a stronger community and identity. However, their acceptance is far from unambiguous, and actual procedures often involve the use of measures different from those prescribed by higher-level regulations (Kocsis, 2019a, 2019b). As Bajmócy (2021) noted, development stakeholder and citizen participation in urban planning is undermined by a lack of consensus building and re-centralization.

The centralization of public functions has been the dominant trend in the last decade. At the same time, multi-level governance (including EU, national and regional-local levels) is necessary in Hungary, and the coordination of sectoral policies in the territorial dimension has remained poor. Territorial governance (in a more general sense) in this frequently changing setting is often evaluated as poor. Self-governments have a minimal role in territorial governance due to their weak fiscal, political, and social position and administrative capacities (Pálné Kovács, 2023). In a highly centralised system of governance, without strong local governments, the development prospects of the periphery have remained especially weak (Pálné Kovács, 2021).

Regarding planning instruments (EMP5), Hungary shows some duality. The country was a European pioneer in terms of the early introduction of integrated urban development strategies (IUDS) inspired by the Leipzig Charter. Since 2007, this was set forth as the precondition for EU-financed urban development support and later mainstreamed in planning legislation. However, this had a crucial role in shifting Hungarian planning culture away from a regulation-oriented, rather technocratic architecture-based urban design culture; pursuant to the 2021 reform, IUDS was abolished as a distinct planning instrument. While the formal spatial plans at the local and regional level remain relatively static and regulatory (the former have become even more technical), several less formalised planning types are emerging, such as programme plans related to different kinds of EU funding (e.g. cross-border strategies, integrated territorial programmes), governmental development initiatives and the specific challenges of climate change (SECAP) and mobility (SUMP) in cities. The plans are diverse in nature, but their effective ability to transform reality is generally limited due to poor coordination between different planning processes and the unclear competencies of the plan owners. Although most new planning instruments are not embedded in regulatory systems, they can still not be considered soft as they are driven mainly by the (public) funding opportunities, which are rather hard in nature.

DISCUSSION AND CONCLUSIONS

The outcome of the analysis of European spatial planning documents is mostly in line with the abundant and rather theoretical European planning literature on the dynamics of planning. The results suggest that the postmodern approach of planning since the 1990s, the governance transition and the new spaces emerging since the 2000s, as well as the resulting claims about the transformation of planning, are part of an interconnected logical chain, a narrative, so to speak, which is reinforced and sometimes generated by messages from the European Union. There is such a broad consensus about these trends, both in professional (e.g., in relation to the ESPON programme) and academic discourse and in the EU's urban policy and territorial cohesion/planning strategy documents, that they could be considered a paradigm according to Kuhn's (1984) criteria. Spatial planning, embodied in new forms, is a postmodern approach to the new European paradigm that conveys the EU's spatial planning messages and reflects the challenges of globalisation. Accordingly, the role of planning as a driver of investments and a

strategic framework for resource allocation and investment is enhanced, and planning connects and integrates the public and private sectors. It increasingly creates a spatial dimension for national (sectoral) policies in the context of their spatial alignment and coordination. For the EU policies integrated territorial and urban development is increasingly represented as a means of achieving objectives (implementing policies) such as smart growth (innovation policy), green transition, climate protection objectives, inclusive growth and social cohesion. However, the implicit emergence of such a planning paradigm does not necessarily imply its effective implementation in actual planning systems. Especially in the context of CEE, several authors emphasize the gap between rhetoric (reflecting formal alignment) and reality in the adaptation of EU approaches to spatial planning (Maier, 2012; Dąbrowski & Piskorek, 2018). The Hungarian case with its controversial progress in the five EMP dimensions also shows this two-face nature of Europeanisation.

In order to assess the relevance of the theoretical model of the EMP it is worth looking at some of the more relevant conclusions of the ESPON COMPASS (2018) project, which produced the latest comprehensive study on the trends of spatial planning systems of the European countries between 2000 and 2016. In relation to the changing roles in planning (EMP4) this study states that there have been considerable shifts in the allocation of competences among levels of government but in varying directions, with coexisting decentralization and centralisation tendencies. There has been much reporting of a rescaling of planning competences in 'functional planning regions' to address the reality of flows across borders (EMP2). New territorial governance arrangements are being established for such regions (EMP4). It confirms the changes in planning instruments (EMP5). The ESPON project has identified 251 types of planning instruments in Europe. Visioning and strategy-making are increasing in importance, performance in keeping plans up-to-date is reported as good and improving (EMP3). More change is evident at the local level, where tools have been modified or new ones introduced. This mostly involves a simplification and/or streamlining of procedures, adapting to digital technology, and providing for more citizen engagement (EMP4) in the planning process. Spatial planning at the national and local levels is presented as well integrated with several policies, while integration is much less prevalent at the sub-national level. (EMP3) With a few exceptions, there is progressive innovation in practices of planning which give much more emphasis to sectoral policy integration, transparency and citizen engagement, and creating more responsive instruments that can adapt to changing circumstances. According to the ESPON report the EU impacted territorial governance and spatial planning most significantly through sectoral legislation. EU territorial cooperation has been less influential in domestic planning. Environment and energy legislation have been the most impactful. EU Cohesion Policy has had a considerable impact on domestic planning where significant funding was available. The ESPON report underlines that in the discursive impact of the EU the mainstream development strategies (such as the Europe 2020) have been more influential than specific spatial strategies. The Territorial Agenda has had limited impact compared with the ESDP and other general strategies such as Europe 2020. The relatively new MS – such as Hungary – were more receptive to EU concepts and ideas in the general discourse on spatial planning and territorial governance (ESPON, 2018: VII-X.).

In the context of the transformation of planning, it is important to note that according to studies dealing with different fields of transformation (such as the governance turn or the emergence of soft spaces), the emergence of new forms of planning does not mean that traditional forms have disappeared; the hard instruments of planning are still influential. The ESPON Compass study revealed some signs of the realisation of the model, but there is no evidence of the unification of planning systems in European countries (Stead, 2013; Purkarthofer, 2018) nor of a 'deregulation' of the formal structure of planning systems (COMPASS, 2018).

It must be underlined that our results have identified only the related intellectual content as orienting messages for domestic planning but have provided no evidence of the implementation of this EMP ideal in terms of the actual situation in the respective countries. While the former shows the orientation of a sort of policy ideology, measuring fundamental changes in the planning system is not within the scope of this paper.

In the case of CEE countries, the emergence of this type of Europeanisation necessitates further empirical analysis, for which the EMP can provide a methodological framework. The quick overview of Hungary's experience suggests that, after the accession, a strong desire to learn from Western European patterns existed in the investigated period, and the EU had a straightforward influence not only on content and concepts but also on regulation and institutional settings, at least for a certain time. However, these adaptations did not result in a strong, comprehensive spatial planning policy. Hungary, along with the other CEE countries, was most likely unable to take part in a horizontal process of Europeanisation; even in the implementation of European spatial planning, the latter rather tend to adopt or imitate methods in a top-down process. As Maier (2012) noted Europeanisation in CEE should move away from the formal alignment of planning to EU frameworks to its reinterpretation and the widening of its role to mediation that should seek win-win solutions for all parties in the long-term (Maier, 2012). According to Dąbrowski and Piskorek in Poland, the Czech Republic and Hungary, in spite of their different Europeanisation trajectories, the legacies of the communist era and the transition period, including low administrative capacity, clientelism and the passivity of local leaders resulted in superficial and formalistic compliance with EU requirements regarding strategic and place-based use of EU funds, and the EU has largely been perceived by the governments at all scales in those countries as a ‘milking cow’, thus, regional and local strategic planning tends to remain a hollow ‘window-dressing’ exercise (Dąbrowski & Piskorek, 2018).

It is important to note that enforcing the planning system ideals of the model would not necessarily imply higher planning quality. We cannot identify this kind of Europeanisation with the development of the planning system, as its relation with the effectiveness of planning was not investigated. The study dealt with probably the most dynamic period of the European integration project, marked by a spectacular growth in the number of MS, and even policies under national competence – such as spatial-urban planning – underwent some sort of convergence. With Brexit and rising tensions between certain CEE countries and EU institutions – which also relate to Cohesion Policy – a new era may be predicted in the field of the Europeanisation of spatial planning.

Acknowledgement

The author is grateful to the reviewers of the paper for their substantial critical comments and forward-looking suggestions, which have greatly contributed to the quality of the work.

REFERENCES

Allmendinger, P. (2000). *Planning in Postmodern Times*, London: Routledge.

Allmendinger, P. et al. (2015). *Soft spaces of Europe. Re-negotiating Governance, Boundaries and Borders*. Oxon: Routledge, 247. https://doi.org/10.4324/9781315768403

Allmendinger, P. (2016). ‘Towards a Post-Positivist Typology of Planning’, Theory. *Planning Theory*, 1(1), 77-99. https://doi.org/10.1177/147309520200100105

Bajmócy, Z. (2021). Participation in Urban Planning and the Post-Socialist Legacy. Revisiting Maier's Hypothesis Through the Case of Hungary. *Deturope,* 13(1), 4-23. doi: 10.32725/det.2021.001

Berisha, E., Cotella, G., Janin Rivolin, U., & Solly, A. (2021). Spatial governance and planning systems in the public control of spatial development: a European typology'. *European Planning Studies,* 29(1), 181-200. https://doi.org/10.1080/09654313.2020.1726295

Berisha, E., & Cotella, G. (2024). Europeanisation of spatial planning. The Western Balkans between innovation and resistance. *Southeast European and Black Sea Studies,* 1-22. https://doi.org/10.1080/14683857.2024.2352890

Böhme, K., & Waterhout, B. (2008). The Europeanization of Planning. In Faludi, A. (Ed.), *European Spatial Research and Planning* (pp. 225-248). Cambridge: Massachusetts: Lincoln Institute of Land Policy.

CEC (1997). *The EU Compendium of Spatial Planning Systems and Policies*, Luxembourg: Office for Official Publications of the European Communities.

Cotella G., & Janin Rivolin, U. (2011). Europeanization of Spatial Planning through Discourse and Practice in Italy. *disP: The Planning Review,* 47(186), 42-53.

Dąbrowski, M., & Piskorek, K. (2018). The development of strategic spatial planning in Central and Eastern Europe: between path dependence, European influence, and domestic politics. Planning Perspectives, 33(4), 571-589. https://doi.org/10.1080/02665433.2018.1513373

Deas, I., Haughton, G., & Hincks, S. (2015). 'A good geography is whathever it needs to be': the Atlantic Gateway and evolving spatial imaginaries in North-West England. In Allmendinger, P. et al. (Eds.), *Soft spaces in Europe*. London: Routledge.

ESPON (2018). *COMPASS – Comparative Analysis of Territorial Governance and Spatial Planning Systems in Europe, Final Report.* Luxembourg: ESPON.

Evers, D., & Tennekes, J. (2016). *The Europeanisation of spatial planning in the Netherlands*, PBL Netherlands Environmental Agency, The Hague.

Faludi, A., (2011). *Cohesion, Coherence, Cooperation: European Spatial Planning Coming of Age?* RTPI Library Series, Oxon, Routledge.

Faludi, A. (2013). Territorial cohesion, territorialism, territoriality, and soft planning: a critical review, *Environment and Planning A*, 45(6), 1302-1317. https://doi.org/10.1068/a45299

Faludi, A. (2014). EUropeanisation or Europeanisation of spatial planning?, *Planning Theory & Practice*, 15(2), 155-169, DOI: 10.1080/14649357.2014.902095

Faludi, A. (2019). *Perspectives on the EUropeanisation and EUropeanisation of Planning*. In Salvatori, F. (Ed.), *L'apporto della Geografia tra rivoluzioni e riforme. Atti del XXXII Congresso Geografico Italiano* (pp. 2533-2539). A.Ge.I.

Farinós Dasí, J. (Ed.) (2006). *ESPON project 2.3.2 Governance of Territorial and Urban Policies from EU to Local Level*.

Freestone, R. (2001). History of Urban Planning (Western). In Smelser, N. J., & Baltes, P. B. (Eds.), *International Encyclopedia of the Social & Behavioral Sciences*. Elsevier, 16058–16063

Gänzle, S., & Kern, K. (Eds.) (2016). A *'Macro-regional' Europe in the making: Theoretical Approaches and Empirical Evidence*, Houndmills: Palgrave Macmillan. https://doi.org/10.1007/978-1-137-50972-7

Getimis, P. (2012). Comparing Spatial Planning Systems and Planning Cultures in Europe. The Need for a Multi-scalar Approach. *Planning Practice and Research*, 27(1), 25-40. https://doi.org/10.1080/02697459.2012.659520

Giannakourou, G. (2012). The Europeanization of National Planning: Explaining the Causes and the Potentials of Change. *Planning Practice and Research*, 27 (1) pp. 117–135.

Haughton, G., Allmendinger, P., Counsell, D., & Vigar, G. (2010). *The New Spatial Planning. Territorial Management with Soft Spaces and Fuzzy Boundaries,* London: Routledge. https://doi.org/10.4324/9780203864425

Hardi, T. (2022). Differences and similarities in the expansion of suburban built-up areas around the different city regions of three Central European countries. *Tér és Társadalom*, 36(3), 165-193. doi: 10.17649/TET.36.3.3429.

Kazakov, B., Hardi, T., Ilieva, N., Ravnachka, A., Poleganova, D., Rácz, S., & Smahó, M. (2024). Suburbanization Processes in Sofia: Demographic, Socio-Economic and Spatial Transformation of the Agglomeration Area. *Tér és Társadalom*, 38(1), 32-55. doi: 10.17649/TET.38.1.3541.

Kiss, B. Á., & Porhajas, G. L. (2024). Az önkormányzati feladatellátás kihívásai Magyarország eltérő adottságú agglomerációs térségeiben. *Tér és Társadalom*, 38(3), 95-117. doi: 10.17649/TET.38.3.3561

Kocsis, J. B. (2019a). Peculiarities of Residents' Involvement in Suburban Areas of Major Metropolises. In BM ÖKI (Eds.), *Perspectives of Local Governments in Central-Eastern Europe: Practices and Innovations* (pp. 294-313). Budapest: BM ÖKI.

Kocsis, J. B. (2019b). Public participation in Hungarian local governments. In BM ÖKI (Eds.), *Perspectives of Local Governments in Central-Eastern Europe: Common Learning and Innovations* (116-131). Budapest: BM ÖKI.

Knickel, K., et al. (2021). Towards more balanced territorial relations – The role (and limitations) of spatial planning as a governance approach. *Sustainability*, 13(9), 5308.

Kuhn, T. (1984). *A tudományos forradalmak szerkezete*. Budapest: Gondolat Kiadó.

Kunzmann, K. (2006). The Europeanisation of spatial Planning. In Adams, N., Alden, J., & Harris, N. (Eds.). *Regional development and spatial planning in an enlarged European Union*, Hamshire: ASHGATE.

Lenschow, A. (2006). Europeanisation of public policy. In Richardson, J. (Ed.), *European Union – Power and Policy Making* (pp. 55-71). 3rd ed. Abingdon: Routledge.

Luukkonen, J. (2015). Planning in Europe for 'EU'rope: Spatial planning as a political technology of territory. *Planning Theory.* 14(2), 174-194.

Maier, K. (2012). Europeanization and Changing Planning in East-Central Europe: An Easterner's View. *Planning Practice & Research,* 27(1), 137-154. https://doi.org/10.1080/02697459.2012.661596

Medeiros, E. (Ed.) (2018). *European Territorial Cooperation*. The Urban Book Series. Springer, Cham. https://doi.org/10.1007/978-3-319-74887-0_10

Nadin, V., & Stead, D. (2013). Opening up the Compendium: An evaluation of international comparative planning research methodologies. *European Planning Studies*, 21(10), 1542-1561. https://doi.org/10.1080/09654313.2012.722958

Pálné Kovács, I. (2021). A centralizáció és a perifériák fejlődési esélyei. *Tér és Társadalom*, 35(4), 215-240. doi: 10.17649/TET.35.4.3372

Pálné Kovács, I. (2023). What Can Hungarian Counties do for the Countryside? *European Countryside* 15(2), 297-312.

Pámer, Z. (2021). Tackling the measurement of cross-border cooperation intensity: an empirical example on the Hungary-Croatia border. *Deturope*, 13(2), 125-138. doi: 10.32725/det.2021.016

Péti, M. (2011). *A területi tervezés és fejlesztés a fenntarthatóság jegyében & Stratégiai környezeti vizsgálatok földrajzi szemlélettel*. Szeged: JATEPress.

Péti, M., & Szalóky-Hoffmann, C. (2016). Geostrategic Context of Networking of National Minority Communities in Territorial Cooperation Programmes of the EU. *Deturope*, 8(3), 156-169. doi: 10.32725/det.2016.028

Purkarthofer, E. (2018). *Understanding Europeanisation from Within: The Interpretation, Implementation and Instrumentalisation of European Spatial Planning in Austria and Finland*. [Doctoral Thesis, Aalto University]. Aalto University.

Rácz, S., & Egyed, I. (2023). From the "West of the East" to the "East of the West": The post-socialist economic and structural transition of Central and South-Eastern Europe. *Deturope,* 15(2), 9-27. doi: 10.32725/det.2023.010

Radaelli, C. M. (2004). Europeanisation: Solution or problem? *European Integration Online Papers,* 8(16), 1-23.

Schmitt, P., & Wiechmann, T. (2018). Unpacking Spatial Planning as the Governance of Place: Extracting Potentials for Future Advancements in Planning Research. *disP – The Planning Review*, 54(4), 21-33. https://doi.org/10.1080/02513625.2018.1562795

Salamin, G. (2018). A földrajzi tér alakításának európaizálódása: Az Európai Unió térbeli stratégiáinak, tervezésének és kohéziós politikájának hatása az európai országok térbeli tervezési rendszereinek transzformációjára. (Doctoral dissertation), Gödöllő: Szent István University.

Salamin, G., & Péti, M. (2019). Tervkészítéstől a governance-ig: A térbeli tervezés európai fogalma, jelentései és lehetséges hazai kapcsolódásai. *Tér és Társadalom,* 33(3), 7-28. https://doi.org/10.17649/TET.33.3.3175

Salamin, G. (2019). Hungarian Efforts to Mainstream Territorial Cohesion in Development Policy: Signs of Europeanisation of Domestic Spatial Planning. *Corvinus Regional Studies*, 4(1-2). 5-27.

Salamin, G. (2023). The mapping of forms of spatial planning: An instrument-oriented tool for the international comparison of spatial planning activities, *European Spatial Research and Policy,* 30(1), 55-78. DOI: 10.18778/1231-1952.30.1.03

Salamin, G, (2021). Approaches and Forms of Europeanisation Affecting Domestic Spatial Planning Systems. *Corvinus Regional Studies,* 6(1-2), 41-69.

Stead, D. (2013). Convergence, divergence, or constancy of spatial planning? Connecting theoretical concepts with empirical evidence from Europe. *Journal of Planning Literature,* 28(1), 19-31.

Stead, D., & Pálné Kovács, I. (2016). Shifts in governance and government across Europe. In Schmitt, P., & Van Well, L. (Eds.), *Territorial governance across Europe. Pathways, practices and prospects* (pp. 21-35). Routledge research in planning and urban design. https://doi.org/10.4324/9781315716220

Szabó, P., Józsa, V., & Gordos, T. (2021). Cohesion policy challenges and discovery in 2021-2027. The case of Hungary. *Deturope,* 13(2), 66-100. doi: 10.32725/det.2021.014

Van Well, L., & Schmitt, P. (2016). Territorial governance across Europe. In Schmitt, P., & VAN Well, L. (Eds.), *Territorial governance across Europe. Pathways, practices and prospects* (pp. 3-20). Routledge research in planning and urban design, https://doi.org/10.4324/9781315716220

Waterhout, B., Mourato, J. M., & Böhme, K. (2016). The Impact of Europeanisation on Planning Cultures. In Knieling, J., & Othengrafen, F. (Eds.), *Planning cultures in Europe: Decoding Cultural Phenomena in Urban and Regional Planning* (pp. 239-254). London and New York: Routledge.

Zimmerbauer, K., & Paasi, A. (2020), 'Hard work with soft spaces (and vice versa): probelmatizing the transformating planning spaces', *European Planning Studies*, 28 (4), 771-789. https://doi.org/10.1080/09654313.2019.1653827

Original scientific paper

SMART CITY INDICATORS AND THE CONCEPTUAL PROBLEMS OF MEASURING SMART CITIES

Tamás DUSEK[a]

[a] Professor, Széchenyi István University, 9026 Győr, Egyetem tér 1., dusekt@sze.hu

Cite this article: Dusek, T. (2024). Smart city indicators and the conceptual problems of measuring smart cities. *Deturope*. 16(3), 172-184.

Abstract

As the popularity of smart city research is increasing, the measurement of smartness became also a popular research topic. This is in accordance with the demand of the planners and project financing institutions for the success indicators, and with the observable tendency of new indicators for describing the settlements from the point of view of the quality of life, liveability, creativity, environment, social capital, development and many other fashionable research aspects of modern urban societies. Analyses through such indicators run the risk of taking a mechanistic, technocratic, superficial approach to complex urban systems, ignoring the complex causal relationships between urban subsystems and the interpretative and statistical uncertainties behind the indicators. Moreover, these composite or complex indicators merge very different basic indicators, often with low data quality and validity. This paper focuses on the uncertainties of smart city indicators, which are often used to form composite indicators that moreover form the basis for comparisons of smartness of cities. The transformation of a multi-indicator system into a one-dimensional metric scale is a highly questionable practice. Composite indicators, despite their popularity, are methodologically and conceptually highly problematic analytical tools for researchers and normative targets for policy makers.

Keywords: smart city, composite indicators, proxy indicators, spatial level, decision support tools, monitoring

INTRODUCTION

One of the striking contemporary features of empirical data analysis is the substitution of basic, concrete and evident indicators of the observational units with complex or composite indicators. These composite indicators may contain only two or three basic indicators (like body mass index from the weight and height of a person), but the number of indicators amalgamated into one composite indicator can reach several hundreds, even thousands. Another contemporary feature of empirical data analysis is the frequent separation of statistical data and the concept or idea under study. To mention some common examples, researchers (or rather technocrats, bureaucrats) speak about the quality of research, and they use citation data; they think about the social capital, and they use the average number of Facebook connections; they speak about the quality of universities, and they use indicators

such as the ratio of students and professors, revenues, number of publications, proportion of foreign professors and students.

Indicators describing smart cities are similar or the situation can even be worse in this field. Smart city research has become extremely popular over the last decade, with the emergence of meta-research and methodological studies that deal with smart city indicators themselves, as well as complex indicators derived from individual smart city indicators, in addition to applied research. This is in accordance with the demand of the planners and project financing institutions for the success indicators, and with the observable tendency of new indicators for describingsettlements from the point of view of the quality of life, liveability, creativity, environment, social capital, development and many other fashionable research aspects of modern societies. Today, the mere list of these indicators would take a very long time to read. Networked Society Index (by Ericson), IBM Smart City Assessment, Green City Index (Siemens), European Green Capital Award (European Commission), City Prosperity Index (UN-HABITAT), Global Power City Index, Spatially Adjusted Liveability Index (The Economist Intelligence Unit), Mercer's Quality of Living, Smart Cities ranking by the Vienna University of Technology, Innovation Cities Index (2thinknow), Arcadis Sustainable Cities Index, European Energy Award are some examples, and some of them have a connection to the concept of smart cities. According to a general overview about the performance indicators of world cities by Feenan et al. (2017, p. 8), more than 300 comparative city indices already existed worldwide about 10 years ago for measuring urban life.

The abundance of these indicators poses the risk of applying a mechanistic, technocratic, superficial approach to the concerned questions, instead of a more critical, inclusive evaluation. Moreover, these composite or complex indicators amalgamate very different basic indicators, often with a low data quality and validity. The very concept of smart city remains unclear due to the multiple definitions. Many of the proposed indicators (as will be demonstrated later) are but general, traditional measures of various characteristics of settlements, which have nothing to do with digitalisation or development, and are simply neutral indicators of urban conditions or a characteristic that depends on the size of the settlement. Moreover, some of the indicators used are not interpreted at the level of cities but at the national or regional level. Further conceptual difficulties arise from the comparability of indicators over time. This paper, after a short overview of the motivations for measuring smartness, focuses on the missing connection between the concept (smart city as the result of digitalisation) and the content (the meaning of the indicators). For illustrating some points, a

typical example will be used, namely the smart city index (IESE Cities in Motion Index) of the University of Navarra.

MOTIVATIONS FOR MEASURING THE SMARTNESS OF CITIES

The growing importance of composite indicators is a general trend in descriptive statistics, originating in the 1960's. Several supporting factors have ontributed to this trend. Firstly, composite indicators are often used as a tool to evaluate and monitor the performance of government projects and systems (key words: evidence-based decisions, public accountability, transparency, visibility). The typical form of success indicators for projects funded by the government (more precisely, by some central, regional or local government organisation or agency) is as follows: this and this were the situation in period n-1 (before the project), and this was the situation in period n, after the intervention of local/central/international government, after the termination of the project. This is a mechanistic, measurement-oriented approach that ignores the complexity of processes, deadweight and displacement effects, autonomous processes and unobservable alternatives. The latter are described by Frederic Bastiat (2010) through numerous examples in his 1850 essay "What is Seen and What is Not Seen". Naturally, private companies also have to use success indicators, but that case is much simpler, because profit shows the effectiveness of the activity of the company.

In an ideal situation, every smart city project, as a public project financed by the taxpayers, would have a public and accessible cost-benefit analysis. In this case the task of the researcher would be easy, only a meta-analysis should be conducted, demonstrating which type of projects are the most successful and efficient. Defining success and effectiveness may prove to be difficult and problematic due to the nature of the project, as costs can be monetised, benefits of projects are difficult to measure, especially those that do not generate monetary revenues, but at least there would be some results. However, in reality, the source of the problem is that only the very general and mostly technical features of the projects are publicly accessible, the most interesting and detailed cost elements are treated as business secrets. A further problem is the time dimension, especially for projects using digital solutions closely linked to the smart city concept, where technical obsolescence can be very rapid: obsolescence is expected only a few years after the projects are operational, and the operating and maintenance costs of new digital solutions are difficult to estimate in advance. The only way to analyse efficiency is through unique data gathering about the individual projects, which is often impossible due to privacy issues. Therefore, for the analysis of urban

performance, mostly some general data and some data about the digital solutions can be used, which are combined into a composite indicator or some composite sub-indicators.

A second factor contributing to the spread of composite indicators is the fact that the creation of composite indicators creates great publication opportunities, both in the scientific and in the popular news in mass media. A paper or a newspaper article with a ranking of observation units (e.g. countries, cities, companies, universities), the latter with a spectacular colour infographic, is easier to publish than a complex and technical verbal analysis of the causal links and technical details between the indicators.

The third factor supporting the construction of composite indicators is the widespread belief that more data means more information, and not only more information, but also more accurate and more precise information. And at the same time, this goes hand in hand with the belief, that it is more scientific to create a composite indicator than the mere display of the original one dimensional data. In fact, data quality aspects such as accuracy, validity, reliability, precision, consistency, usefulness are very important, and in the case of smart city indicators, relevance is of paramount importance. This will be demonstrated through several examples in the coming sections.

The fourth factor promoting the spread of composite indicators is technological, namely the digitalisation of data collection and processing, the availability of large databases, the spread of computers, which make it easy to construct composite indicators, to regroup and reweight basic indicators. Computers have a revolutionary impact on the practice of statistics. Seventy years ago, it was mainly only a theoretical possibility to create a composite indicator with one hundred indicators and two hundred observational units. Today the computational process requires practically zero time if the data are prepared and available for the researcher.

Finally, efforts to measure the smart city fit well with a quantifiable megatrend that pervades many layers of society and the economy, in which significant resources are used to rank and score phenomena and entities that were previously only considered qualitatively and based on expert experience: restaurants, hotels, films, books, songs, teachers, doctors, universities, hospitals and so on. This megatrend may have positive impacts, but at the same time tremendous dangers too (Power, 1997; Dahler-Larsen, 2012; Muller, 2018; Mau, 2019; Fourcade & Healy, 2024).

Relevant critiques of composite indicators pointed to the possible misinterpretations of the composite indicators, not their uselessness (see for example Espeland & Sauder, 2016; Bowen & Kreindler, 2008). These warnings however could not halt the general trend. Simple and deceptive composite indicators have had a great carrier when backed up by a powerful

propaganda machine. For example, the UNDP Human Development Index (HDI) has become a well-known indicator, although it has inherent and intractable problems, for example the original underlying indicators would be necessary for interpreting the magnitude of the HDI (especially for countries with the same magnitude but with completely different basic indicator values), but due precisely to the aggregation of indicators, this original information is lost in the composite indicator. Similarly, university rankings have become a successful industry for profit oriented ranking institutions, leading to various noxious practices by the evaluated universities (O'Neil, 2015).

THE ELUSIVENESS OF THE SMART CITY CONCEPT

The smart city has become a key concept in urban planning and urban strategies, used by researchers, city managers, politicians and information technology companies (Józsa, 2020; Salnikova & Khanin, 2022). On every continent and in cities of all sizes, from megacities of tens of millions to mini-towns and villages of a few hundred inhabitants, more and more people are seeking to use more and more information technology applications, to become more digital and smarter and to involve as much external rather than local resources as possible in smart projects, in the spirit of rent seeking behaviour. In addition, the various projects have become a popular research topic, generously supported both by different levels of government and by the IT giants with a financial interest in smart city projects. Unusually for other academic subjects, the smart city theme has a very high proportion of corporate contributions (IBM, Cisco, SAP, ABB, Siemens, GE, etc.).

Among the historical antecedents of the smart city, Kitchin (2014) identifies a number of approaches, such as rational, modernist urban planning in the mid-twentieth century, cybernetics focused on surveys and monitoring in the seventies, and neoliberal entrepreneurial urban management and development in the eighties and nineties. Others refer to even earlier antecedents, going back to the late 19th century (Baji, 2017) or even to ancient planned cities. There are numerous definitions of the smart city concept itself (Klusáček et al., 2020), with many studies providing multiple definitions that include one or a combination of four elements:

- technology (the use of digitalisation, information technology for a positive purpose),
- qualities of city inhabitants (smart, responsible, informed),
- involvement of citizens in decision-making (local democracy),
- quality of life (good, environmentally friendly, energy efficient, transport efficient and so on).

There is no consensus on the concept of a smart city (Fernandez-Anez, 2016). Of the four categories above, the clearest and most tangible is the technological element, the use of digital solutions in the functioning, operation and management of cities. The adjective “smart” in this sense refers to technology, for example in the term “smart development” (Torre, 2022). According to Karvalics (2017, p. 14), the number of smart city ranking lists is outnumbered by the number of smart city definitions. And the existing definitions are not converging, but rather further diverging. In addition, supplementary adjective definitions are emerging, such as sustainable smart city, eco-sustainable smart city and so on. Kulcsár (2020) also points out that the relationship between the smart city and the other vaguely used, multi-defined concepts of the city (liveable city and the like) is not clarified. Egyed and Rácz (2020) indicate the relationship between local economic development strategies and smart specialisation, while Szép et al. (2021) analyse the relationship between the smart city and resilience. It is not my intention to list and classify the various definitions and to explore the connections between the various related concepts. Such lists can be found, for example, in Albino et al. (2015) or Ruhlandt (2018). The former work presents 23 definitions, the latter 19, selected from a large number of available options. In addition to presenting some definitions, Gere (2018) also discusses the relationship with various related concepts.

The widening of the meaning of measurement has made it possible to measure the smartness of cities

Measurement, in its traditional everyday meaning, is an operation (action, sequence of actions) in which some tangible property of an object is expressed numerically on a predetermined scale based on some convention. The result of such a measurement is the metric and the unit of measurement; the metric refers to the number of times and the quantity is the unit of measurement. This is what every young child encounters in everyday life and then in school, initially on a tangible and visible scale (for example, measuring the weight and height of the human body), and then expanding to microscopic and macroscopic scales. This traditional meaning does not change when the measurement is of a more complex characteristic and requires some more sophisticated technological aid, such as temperature, electric current, wavelength, air pressure, blood pressure, eye pressure, blood sugar. Also included in the traditional meaning of measurement are derived measurements in the sense that the relationship between more than one basic measurement is the result of the measurement: speed requires distance travelled and time, density requires mass and volume. These, although derived measurements, still refer to tangible, obvious phenomena.

By the end of the 19th century, the concept of measurement had expanded, the measurability of the physical and biological world had improved, but the basic meaning of measurement had not changed. Since then, the meaning has broadened and changed significantly: firstly, due to the extensive use of aggregates, then thanks to the psychometric and sociological surveys, it became common to describe non-observable concepts with one or many observable attributions, often without any strong connection between the non-observable concepts and the observable attributions. All this went hand in hand with an abstract, logical, epistemological discussion of measurement, divorced from empirical science, which began in the late 19th century and reached the stage where measurement was, in Norman Campbell's 1920 definition, "the process of assigning numbers to represent qualities" (Campbell, 1920, p. 267). Not only the qualities and properties measured have changed significantly, but also the units of observation: aggregated, complex, collective units of observation have emerged alongside the concrete and unambiguous natural units of observation (e.g. persons). Units of observation can be, for example, aggregated groups of different entities, such as countries, settlements, firms, institutions and others, whose delimitation is often arbitrary. Without these changes in the meaning and practice of measurement, it would not be possible to measure the smartness of cities (Dusek, 2024).

Several composite indicators have been proposed to measure the smartness of cities (see for example Giffinger, 2007; Zygiaris, 2013; Lazaroiu & Roscia, 2012; Lombardi et al., 2012; Carli et al., 2013; Nagy et al., 2018). Composite indicators are always based on basic or individual indicators. The number of basic indicators grouped into a composite indicator may be few (less than 10) or very large (more than 100). It is quite a common practice to use more than one hundred basic indicators, and to use them to create a main index and several sub-indices, such as economy, human capital, social cohesion, environment, public management, governance, urban planning, technology, transportation, education and so on. The surprising or strange feature of the basic indicators of composite smart city indicators is that a vast majority of them have nothing to do with information technology solutions, but they are very simple traditional indicators.

Inadequate basic indicators of Smart cities

This inadequate foundation, the lack of linkage between the concept and the basic indicator describing the concept, is a fairly common practice in the complex indicators for smart cities, and is very easily verifiable and demonstrable by empirical evidence, namely by a simple listing of the problematic basic indicators. For the sake of simplicity, I have chosen a well-

documented smart city index, but its characteristics can be generalised to other smart city indices, namely the Cities in Motion, provided by the University of Navarra yearly from 2014. In her 2016 article, Uszkai presented the position of the city of Vienna through various global composite indicators, including the Cities in Motion Index, but unfortunately, apart from the rankings, she did not discuss the content of the various indices, nor did she present the basic indicators on which they are based. This smart city index was the best performing index in a study by Lai and Cole (2023), which compared the following 9 smart city indices (the publisher of the index and the number of cities surveyed in brackets, specific indicators are not discussed):

- Cities in Motion Index (University of Navarra, 174),
- Digital City Index (Bloom Consulting, 136),
- Global E-Governance Survey (The Economic Policy Institute, 100),
- Global Innovation Index (World Intellectual Property Organization, 131),
- ICT Development Index (International Telecommunication Union, 176),
- Innovation Cities Index (2thinknow, 500),
- Smart City Government (Eden Strategy Institute, 235),
- Smart Cities Index (Easy Park Group, 500),
- Smart City Index (The IMD World Competitiveness Center, 118).

The history of the indicator will not be detailed, but as with other composite indicators published over several years, the indicators and the cities considered have changed several times due to data availability, content and other reasons. The indicator deals with major cities worldwide, the number of cities covered varies between 170 and 185 and the number of indicators considered between 80 and 120. The number of sub-indices is nine, as follows:

- Economy,
- Human capital,
- Social cohesion,
- Environment,
- Governance,
- Urban planning,
- International outreach,
- Technology,
- Mobility and transportation.

Previously there were 10 sub-indices, but community management has been merged into governance. The results are presented each year with spectacular infographics for the mass media, and there is a longer publication which describes the basic indicators and the sources of the data too.

The economic sub-index consists of 8 basic indicators (source of the data can be seen in the parentheses):

1. Labor productivity calculated as GDP per working population (Euromonitor).
2. Number of calendar days needed so a business can operate legally (World Bank).
3. The top positions in the ranking indicate a more favorable regulatory environment for creating and developing a local company (World Bank).
4. Number of headquarters of publicly traded companies (GaWC).
5. Percentage of people involved in total entrepreneurial activity (TEA) who are motivated by an opportunity for improvement, divided by the percentage of TEA motivated by need. Total entrepreneurial activity (TEA): new entrepreneurs or owners/managers of a new business (GEM).
6. Estimated annual GDP growth (Euromonitor).
7. Gross domestic product in millions of dollars (Euromonitor).
8. GDP per capita (Euromonitor).

None of the indicators are based on original empirical research conducted by the composite index creator. Each indicator has been imported from some other common source. Moreover, all indicators are very general, not related to the concept of smart city, either as a technological concept (digitalisation) or as a knowledge economy concept. They are traditional indicators used to measure economic development, economic administration and centrality in economic power, except for GDP growth, which is a rather volatile indicator from year to year.

As regards the other sub-indices, they include a number of additional indicators that have nothing to do with the smartness of cities. Such indicators include:

- Average rent prices for local households
- Number of museums
- Number of art galleries
- Carbon-dioxid emission
- Future climate

- Number of metro station
- Number of gas stations
- High-rise building
- Number of McDonalds restaurants
- Poverty ratios
- Road traffic deaths
- Deaths due to the cardiovascular diseases
- Ratio of female workers in public administration
- Ratio of deaths per 100000 inhabitants

In addition, there are also indicators for which it is even questionable whether their high or low value is favourable:

- Population density
- Road density
- Water consumption
- Ethnic plurality

Overall, the following conceptual problems can be identified when examining the basic indicators:

- Most indicators do not have any connection to smart technologies and digitalisation. They are unreliable and invalid, as a proxy (even a very distant proxy) for smartness. They can be useful for some reasons but entirely inappropriate indicators for smart cities.
- Some indicators are dependent on the size of the city (not proportion or ratio, but their absolute number. For example, the number of McDonalds restaurants, gas stations).
- Some indicators do not have any meaning at the level of settlements.
- Some indicators have an entirely different meaning for settlements of different size.
- Some indicators cannot be compared spatially due to the different method of measurement in different settlements.
- Several indicators cannot be measured adequately.
- Several indicators cannot be measured or are not measured at settlement level, only at country level (for example: Peace index).

- Some indicators are conceptually problematic: is a higher or lower value of the indicator advantageous?
- The value of most indicators is influenced by the administrative boundaries of cities, which can vary from country to country and can be arbitrary (to what extent are agglomerations a part of each metropolitan area?)

The common conceptual problems of multidimensional measures arise as well, such as the treatment of outliers, weighting, way of standardization. Finally, due to the very different phenomena (number of hospitals, number of crimes, number of McDonald's and so on) that are combined into one number or ranking, the effective interpretation of the results is difficult.

CONCLUSION

Indicators and composite indicators can provide valuable information, but they also have limitations. In the case of smart city indicators, as can be seen from the examples, there can be a clear breakpoint, a clear distinction between the concept and the content of the data. Therefore, the interpretation of the results (ranking of cities, sometimes with concrete benefits in addition to prestige) can be highly misleading. A notional solution to this problem is to rename the complex indicator of smart cities to some very general quality of life indicator. However, this is not an elegant and scientific solution. One step towards a substantive solution to the problem is to examine the original basic indicators of the composite indicators in terms of their linkage to digital technology. Only those indicators that are related to digitalisation are justified. Examples of other problems were also given, such as poor data quality, international and temporal comparability problems, different meanings of indicators for different sizes of settlements. Another solution to the problem is to return to individual indicators, rather than using complex indicators with uncertain content, merging many very different phenomena.

REFERENCES

Albino, V., Berardi, U., & Dangelico, R. M. (2015). Smart Cities: Definitions, Dimensions, Performance, and Initiatives. *Journal of Urban Technology*, 22(1), 3-21.

Baji, P. (2017). Okos városok és alrendszerek – Kihívások a jövő városkutatói számára? *Tér és Társadalom*, 31(1), 89-105.

Bastiat, F. (2010). *That Which Is Seen and That Which Is Not Seen: The Unintended Consequences of Government Spending.* Classic Book Library.

Bowen, S., & Kreindler, S. A. (2008). Indicator Madness: A Cautionary Reflection on the Use of Indicators in Healthcare. *Healthcare Policy,* 3(4), 41-48.

Campbell, N. R. (1920). *Physics, the elements.* London: Cambridge University Press.
Carli, R., Dotoli, M., Pellegrino, R., & Ranieri, L. (2013). Measuring and Managing the Smartness of Cities: A Framework for Classifying Performance Indicators. *Proceedings of IEEE Systems, Man, and Cybernetics*.
Dahler-Larsen, P. (2012). *The Evaluation Society*. Stanford: Stanford Business Books.
Dusek, T. (2024). A mérés és méréselmélet néhány alapkérdése. *Statisztikai Szemle*, 102(2), 107-157.
Egyed, I., & Rácz, S. (2020). The Role of Territorial Capital in Urban Renewal in a Non-core Central European City. *Deturope*, 12(3), 108-132.
Espeland, W. N., & Sauder, M. (2016). *Engines of Anxiety: Academic Rankings, Reputation, and Accountability.* New York: Russell Sage Foundation.
Feenan, R., Kelly, J., McBryde, W., Clark, G., & Moonen, T. (2017). *The Universe of City Indices. Decoding City Performance*. Chicago, London, Singapore: Jones Lang Lassale.
Fernandez-Anez, V. (2016). Stakeholder approach to smart cities. A survey on smart city definitions. *Smart Cities, First International Conference, Smart-CT 2016, Proceedings*, 157-167.
Fourcade, M., & Healy, K. (2024). *The Ordinal Society*. Cambridge, Massachusetts: Harvard University Press.
Gere, L. (2018). An Introduction and Critical Assessment of Smart City Developments. *Deturope*, 10(3), 33-52.
Giffinger, R. (2007). *Smart Cities: Ranking of European medium-sized cities.* Vienna: Centre of Regional Science.
Gyimesi, Á., & Somlyódyné Pfeil, E. (2021). Az adat és a kormányzás jelentősége az okos város stratégiai alapú értékteremtési folyamatában – Magyar nagyvárosok összehasonlítása egy szintetizáló ökoszisztéma modell keretében. *Tér és Társadalom,* 35(3), 59-86.
IESE Cities in Motion Index (2018). Business School University of Navarra. DOI: https://dx.doi.org/10.15581/018.ST-471
IESE Cities in Motion Index. (2022). Business School University of Navarra. https://www.iese.edu/media/research/pdfs/ST-0633-E.pdf
IESE Cities in Motion Index. (2024). Business School University of Navarra. iese.edu/media/research/pdfs/ST-0649-E.pdf
Józsa, V. (2020). Miskolc – A Central and Eastern European City in the Crossroads. *Deturope*, 12(3), 82-107.
Kitchin, R. (2014). The Real-Time City? Big Data and Smart Urbanism. *GeoJournal*, 79(1), 1-14.
Klusáček, P., Konečnỳ, O., Zgodová, A., & Navrátil, J. (2020). Application of the Smart City Concept in Process of Urban Recycling – Case Study of Spitálka in Brno, Czech Republic. *Deturope*, 12(1), 22-40.
Kulcsár, L. (2020). Elméleti és módszertani megfontolások az életminőség, a jóllét kutatásához. *Statisztikai Szemle*, 98(11), 1239-1287.
Lai, C. M. T., & Cole, A. (2023). Measuring progress of smart cities: Indexing the smart city indices. *Urban Governance,* 3, 45-57.
Lazaroiu, G. C., & Roscia, M. (2012). Definition Methodology for the Smart Cities Model. *Energy*, 47(1). 326-332.
Lombardi, P., Giordano, S., Farouh, H., & Yousef, W. (2012). Modelling the Smart City Performance. *Innovation: The European Journal of Social Science Research*, 25(2), 137-149.
Mau, S. (2019). *The Metric Society. On the Quantification of the Social.* Cambridge: Polity Press.

Muller, J. Z. (2018). *The Tyranny of Metrics*. Princeton: Princeton University Press.
Nagy, Z., Sebestyénné Szép, T., & Szendi, D. (2018). Smart cityk teljesítménye a visegrádi országokban. *Erdélyi Társadalom*, 16(1), 59-82.
O'Neil, K. (2015). *Weapons of Math Destruction*. Penguin Books.
Power, M. (1997). *The Audit Society. Rituals of Verification*. Oxford: Oxford University Press.
Ruhlandt, R. W. S. (2018). The governance of smart cities: A systematic literature review. *Cities,* 81, 1-23.
Salnikova, S., & Khanin, O. (2022). Socio-economic Indicators of the Ukrainian Lutsk City Development: Dynamics, Trends, and Some Paradoxes. *Deturope*, 14(1), 189-211.
Szalai, Á. (2020). Az okosváros-koncepció kritikai földrajzi vizsgálata – elméleti háttér és lehetséges kutatási irányok. *Tér és Társadalom*, 34(2), 88-107.
Szép T., Nagy Z., & Tóth, G. (2021). Lehet az alkalmazkodóképesség vonzó? A rugalmas ellenálló képesség szerepe a magyar városok példáján. *Statisztikai Szemle*, 99(8), 709-730.
Uszkai, A. (2016). Evaluation of Vienna's World Economic Position Based on Global and World City Rankings. *Deturope*, 8(3), 72-87.
Torre, A. (2022). Smart Development for Peripheral Areas. A Never-ending Story? *Tér és Társadalom*, 36(3), 10-27.
Zygiaris, S. (2013). Smart City Reference Model: Assisting Planners to Conceptualize the Building of Smart City Innovation Ecosystems. *Journal of the Knowledge Economy*, 4(2), 217-231.
Z. Karvalics, L. (2017). *Okos városok, kérdő- és felkiáltójelekkel*. Szombathely, Kőszeg: Savaria University Press, Felsőbbfokú Tanulmányok Intézete.

Report

INTERNATIONAL CONFERENCE ON THE 40TH ANNIVERSARY OF THE INSTITUTE FOR REGIONAL STUDIES

Zsuzsanna ZSIBÓK[a], Réka HORECZKI[b]

[a] Senior Research Fellow, HUN-REN CERS Institute for Regional Studies, 7621 Pécs, Papnövelde u. 22., zsibok.zsuzsanna@krtk.hun-ren.hu
[b] Senior Research Fellow, HUN-REN CERS Institute for Regional Studies, 7621 Pécs, Papnövelde u. 22., horeczki.reka@krtk.hun-ren.hu

Cite this article: Zsibók, Z., Horeczki, R. (2024). International conference on the 40th anniversary of the Institute for Regional Studies. *Deturope.* 16(3), 185-189.

On the occasion of the 40th anniversary of the Institute for Regional Studies, the HUN-REN CERS organised a three-day event series in May 2024 in the Granary visitor centre of the Bishopric of Pécs. On the first day, the 10th Village Conference was held, and the international "RKK40" anniversary conference in English on the second and third days.

The legal predecessor of the Institute for Regional Studies, the Transdanubian Research Institute (DTI) was founded in Pécs in 1943. The Centre for Regional Studies (CRS) was established in 1984 on the basis of the DTI, which has been an academic research institute since 1955, and has acquired a networked organisational structure based on regional units, which it has preserved even after its integration into the Centre for Economic and Regional Studies (CERS) of the Hungarian Academy of Sciences in 2012. The institute is a leader among national research institutes in regional science, not only owing to its size, but also due to the presence of its four scientific departments in various regions of the country, providing valuable local knowledge and embeddedness. The understanding of the spatial patterns of natural, social and economic resources and the reduction of spatial disparities, which are key to the country's competitiveness and balanced development, requires a complex social science approach. The Institute for Regional Studies of the CERS, the base institute for regional science in Hungary, has the critical mass for interdisciplinary research in economics, geography, sociology, political science and law, providing expertise in the above fields.

The colleagues of the HUN-REN CERS Institute for Regional Studies (IRS) are dedicated to strengthening the position of regional science in Hungary through their research, teaching, doctoral school management and science organisation activities. All of them are committed to advancing this field of science; at the same time, they intend to maintain a balance between domestic and international research and publications in the interests of Hungarian and, within this, rural science. This dual commitment is based on values rooted in IRS's past, building a bridge between past and future (https://rki.krtk.hun-ren.hu).

The conference celebrating the 40th anniversary was entitled „Regional and rural development trends over the last forty years”. Over the two days, a morning block of plenary sessions, a round table and 17 parallel sessions were organised. The opening plenary session featured distinguished speakers. Tibor Navracsics, Minister of Public Administration and Regional Development, was the guest of the conference, and in his presentation he reviewed the past decades of Hungarian regional development, from the initial challenges of the years before the regime change (the housing crisis due to accelerating urbanisation, the industrial decline due to the weak competitiveness of the economy, the weakness of territorial decision-making levels due to over-centralised decision-making, the relatively small size of rural economic poles), to the crisis triggered by the change of regime, which exacerbated territorial disparities. In the 2010s, policymakers faced a number of difficulties, some of them inherited, including institutional weaknesses, persistent regional disparities, the effects of climate change, the difficulty of accessing some areas by public transport, the depopulation of villages and small rural towns, and the sectoral approach to development policy at the expense of targeted territorial aid. The fact that the gap in GDP per capita has not narrowed in recent decades and the persistence of the relative backwardness of the north-east and south-west regions of the country were mentioned as the major challenges for the country's regional development policy. Population growth can only be observed in the Budapest agglomeration, around Győr and in the eastern basin of Lake Balaton, while Budapest is also experiencing population loss. Looking ahead to the future of national regional development policy, the Minister highlighted three main pillars. Firstly, the place-based approach, the role of functional zones reaching across administrative borders, secondly, the renewal of the financing system, in which sectoral and territorial investments are to be integrated in complex territorial programmes, supported by a territorial development fund. Thirdly, the renewal of the institutional system to make it more people-centric, with an emphasis on multi-level governance, cooperation between local actors and government bodies and the creation of a new territorial support service.

The second speaker of the plenary session was Roland Jakab, CEO of HUN-REN, who gave an overview of the current situation of the research network and the ongoing developments affecting the network. He stressed that both within the network and the network's management centre, the aim is to focus on higher efficiency, high-quality research, innovation and their complex impact. The speaker detailed the process of the revision of the HUN-REN strategy and the work of the different national and international actors involved, as well as the different aspects of the renewal, the connected programmes and initiatives.

Following the CEO, Imre Fertő, Director General of the HUN-REN CERS, gave a presentation on the characteristics of the research centre, its mission and the impact of the

teaching and research work carried out within its framework. The official opening and welcoming speeches were coordinated by Viktor Varjú, Director of the IRS. The plenary session was started by Franziska Sielker, lecturer at the Technische Universität Wien and the University of Cambridge, who spoke about cross-border cooperation between cities and regions from a European perspective. She referred to the growing trend in the number of cooperation projects, the available support frameworks, the various types of cooperation and mentioned some typical examples, including cooperations along the Danube River. She also presented new framework conditions and thematic elements for future trends, including the impact of climate change, the green transition, demographic transition, digitalisation and artificial intelligence, industrial transition and the autonomy of supply chains, geopolitical challenges and the expected diversification of EU funding mechanisms. The second speaker was James W. Scott, professor at the University of Eastern Finland and HUN-REN CERS IRS researcher, who gave a presentation titled "Tracing multifarious links between borders, geopolitics and geographical imaginations". He presented the work of IRS's Borders Research Group, the different interpretations of borders and their significance in the space covered by European integration. As an example, he mentioned the situation in the Carpathian Basin and the difficulties in institutionalising cross-border cooperation. The unravelling of the difficulties of such cooperation is progressing slowly in Europe, reflecting an evolutionary process of social innovation and institutional change. The plenary session was concluded by József Benedek, professor at the Babeș-Bolyai University in Cluj-Napoca, who presented the latest results of the work of the Sustainable Development Research Centre of the University. Their research focused on the measurement, visualisation and monitoring of the Sustainable Development Goals (SDGs), using innovative monitoring methods and GIS tools. Their aim was to respond to the challenge that monitoring of the SDGs at regional and local level has not yet been implemented. The SDG performance toolkit at the local level has shown that urban regions are more sustainable than rural areas, due to the fact that only three of the 17 SDGs address environmental sustainability, while the others measure the social and economic dimensions of sustainability. Their SDG Index has been adopted in the international assessment toolkit.

During the first day of the anniversary conference, sessions were held in four different venues, followed by a round table discussion to round off the day's professional programme. The topic was the re-industrialisation of developed and peripheral regions of Hungary, which was discussed by the participating experts through the examples of Győr and Pécs. The discussion was moderated by Zoltán Gál, senior research fellow at the HUN-REN IRS and lecturer at the University of Pécs, with invited speakers Gábor Lux (HUN-REN IRS), Judit Berkes (HUN-REN IRS and Széchenyi István University, Győr) and András Trócsányi

(University of Pécs). The main lessons of the debate are that, in a broader European context, Europe is not in a position to take the lead in the ongoing industrial revolution, while the results of the re-industrialisation of Central and Eastern Europe are mixed. The regions that have benefited from the inflow of foreign direct investments have experienced a significant boom, while those that have not have become peripheral. However, for the region as a whole, the FDI inflows have resulted in an asymmetric dependency, and the initial benefits can no longer be reaped, the growth rate has slowed down, and alternative development opportunities need to be explored. The different development paths of the two cities, Pécs and Győr, are rooted not only in their geographical location but also in their distinct history, as Győr specialised in mechanical engineering activities during the industrial revolution, which could be easily converted to meet the changing needs of the post-transition era. While specialisation in high value-added industries provided Pécs with considerable prosperity, after the 1950s this development was interrupted and, with the decline of the industrial sector, it was unable to use its mining knowledge as a base for development. At the same time, in Pécs the knowledge provided by the university was not adapted to the needs of the local economy, while Győr was able to meet this challenge. Pécs lacks the critical mass to rely on its cultural industries, while Győr is also vulnerable due to the one-sided sectoral dominance of the automotive industry. Győr may find it easier to attract higher value-added alternatives, while Pécs can also identify sectors that can ensure long-term development on a small scale but in a diverse range (high value-added manufacturing industries and innovative sectors drawing on the university's knowledge base), as they are characterised by stable family businesses, a good knowledge base, slow growth, process innovation and the application of I4.0 solutions. But a sad experience of local, innovative initiatives in peripheral areas in Western Europe, too, is that they can no longer find the path to growth locally, so these businesses move on to larger market opportunities, to capitals or from Hungary to Western countries. Large-scale, leapfrog growth cannot be expected in Pécs and its region, but through gradual development and medium-scale innovation, following the example of rural Germany and rural Austria or even the Czech Republic, the region can stabilise its position.

The rest of the conference was divided into 12 sessions, with 90 speakers presenting their research. The sessions were structured around a few well-defined themes. The main themes of the programme were mainly related to sustainability in environmental, economic and social terms. Not only were there parallel sessions on sustainability, but also a plenary lecture by József Benedek, as outlined above. Demographic challenges, which are of far-reaching importance for the development of human capital, have been approached from several angles. A recurrent theme of the conference was cooperation on a wider scale, with a particular focus on cross-border cooperation.

Economic development issues were also highlighted – this was reflected in several parallel sessions and the round table discussion described above. Linked to this was a key message of the conference, namely that any positive change can only be achieved through a gradual and bottom-up approach, supporting grassroots initiatives and through strategic coordination of local actors. Regional scientists tried to analyse territorial disparities at the lowest possible territorial level.

Urban and rural development issues were equally represented among the themes. The role of small-scale, grassroots social initiatives and local institutions was also addressed by the conference programme committee. Accordingly, the message of the conference was that local development should be supported by broad-based, diversified activities, starting on a smaller scale and built up incrementally, as described above.

The anniversary conference was both retrospective and forward-looking, but with a greater emphasis on a strategic approach. The diverse mix of invited guests reflected the openness of the Institute to policy-makers at national and even EU level, as well as to the national and international research community, including those from the Carpathian Basin. As was repeatedly stated at the conference, many of the permanent challenges in the field of regional science have not yet been resolved, and thus, even beyond the next 40 years, a wide range of research directions will continue to emerge for the regional scientists' community.

Figure 1 Key topics of the conference

Source: authors' own elaboration.