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# THE POTENTIAL EFFECTS OF SCHENGEN ENLARGEMENT ON THE CROATIAN-HUNGARIAN AND HUNGARIAN-ROMANIAN BORDER

**Ferenc SZILÁGYI[a], Szilárd RÁCZ[b,c], Réka HORECZKI[b]**

[a] Partium Christian University, 410209 Oradea, Strada Primăriei 36, ferenc.szilagyi@partium.ro
[b] ELTE CERS Institute for Regional Studies, 7621 Pécs, Papnövelde u. 22., racz.szilard@krtk.elte.hu; horeczki.reka@krtk.elte.hu
[c] University of Pannonia, 8200 Veszprém, Egyetem u. 10., racz.szilard@htk.uni-pannon.hu (corresponding author)

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**Abstract**

The paper investigates the economic, social, and spatial structural implications of newly opened borders. The Schengen borders of Hungary, opened between January 1, 2023, and January 1, 2025, display heterogenous geographical, social, and economic features. The objective of the study is to examine the possible integration of these factors and the future development directions of cross-border cooperation. According to our preliminary hypothesis, the specific assets of the border regions significantly shape their bridging and regional integration function. The comparative analysis of the Croatian-Hungarian and Hungarian-Romanian border sections sheds light on these particular social, economic, and physical geographical features.

Keywords: border, integration, territorial disparities, transition, development, Europeanisation

## INTRODUCTION: FOURTY YEARS OF THE SCHENGEN AREA

The Schengen Agreement is uncontestedly among the most significant achievements of the European Union, having guaranteed – for over fourty years – the free movement of persons, labour, goods, and businesses within the Schengen Zone for the member states of the continuously expanding European Union (EU) (Schengen Agreement 1995). For 29 European countries this implies the removal of internal borders, 25 of which are EU member states, and a further four are members of the European Free Trade Association. This is faciliated by common external border protection using an automated, centralised electronic border registration system (Regulation 2017/2226) and close cooperation in the field of law enforcement and justice [Directive 2013/40/EU of the European Parliament and of the Council, Regulation (EU) 2018/1862 and (EU) 2024/982]. Since a wealth of studies have addressed the issue of regulated and non-regulated entries from non-Schengen countries (Dócza et al., 2025; Szép, 2024), this issue remains outside the scope of the present enquiry. Within the EU, some 3.5 million people make daily border crossings to work, study, visit family or friends, for

shopping or tourism purposes (European Council. 2025). The openness of internal borders has increased alongside fears of uncontrolled population and labour movement. However, against the backdrop of the prevailing socio-economic trends in Eastern Europe, these fears appear unjustified. The region's population is experiencing a steady decline due to falling productivity rates and an aging population (Eurostat, 2024). The regional dynamics largely reflect EU trends, with population decline most severely affecting the external border regions of Croatia and Bulgaria.

The abolition of internal borders, however, does not go hand in hand with an altered perceptions of borders; border controls can be restored for shorter periods, e.g., in crisis situations such as mass migration or the Covid-19 pandemic [EP 2020/2616(RSP); EU 2025]. Eurobarometer surveys (2015, 2018, 2024) reveal that the borderland situation is incorporated into the local identity of residents, shaping their spatial representations, and, depending on which part of the border they inhabit, their perception of the border as a barrier or an opportunity. The surveys reveal that western border areas are generally associated with positive attributes, such as better life chances, enhanced job opportunities, particularly in the case of Hungarian cross-border areas (Horeczki, Lados & Nagy, 2024). Historical heritage and the frequency of border changes represent factors of uncertainty in Central Europe, given older generations' (particularly persons above 65) perception of the border as a strictly bounded area, imposing multiple restrictions. The presence of open borders in the CEE region have been highly advantageous for Hungary, facilitating daily mobility for both educational and work-related border crossings (Kovács & Sipos, 2020); the repatriation of Hungarian minorities living in the Carpathian Basin (Megyesi & Péti, 2022), and intensified cooperation among the inhabitants of cross-border and rural areas (Kézai & Zsibók, 2024).

That said, no comparative studies have been published to date on the opening-up of border regions. This study therefore aims is to investigate the economic, social, and spatial changes in Hungarian cross-border areas triggered by Croatia's (January 1, 2023) and Romania's (January 1, 2025) recent Schengen accession.

## THE CHALLENGES AND OPPORTUNITIES OF SCHENGEN ENLARGEMENT

Eastern Europe is characterised by the diversity of its border regions, ranging from highly advanced, cooperating urban and traditional rural areas to peripheral regions struggling with socio-economic problems (Pénzes, 2018). The analysis focuses on two of Hungary's seven

border sections, which, until recently, have also formed part of the external border of the Schengen Area.

**Border permeability, the characteristics of state borders**

The analysed two are constituted by the second (453 km) and fourth (355 km) longest border sections. The demarcation of the Romanian-Hungarian border was mostly arbitrary; natural barriers are rare. The Maros River represents the border along 21.3 kilometers in Csongrád County, while the Fekete-Körös along 4.3 kilometers between Békés and Bihar in Romania, respectively. These two river sections together account for a mere 5.7% of the total length of the border. While not a strictly „linear" natural unit, in the first half of the 20th century, the former Ecsedi marshland also formed a natural dividing zone. Due to the absence of topographical barriers in the area, in the 20th century, forest belts were planted for military defence, while on the Romanian side, ditch systems (so-called „Tankárok") were established in some places for water management and protection purposes. Historically, the Maros River border section used to be an administrative boundary between Csanád County and the Banat (Torontál County). Such shorter border sections separated the counties of Csanád and Arad (three sections totaling 27.4 km), Arad and Békés (20.1 km), Békés and Bihor (6.3 km), Szabolcs and Bihor (11.8 km), and Szabolcs and Satu Mare (7 km), which were attached to Romania. The length of these sections is 93.9 km or 20.7% of the entire borderline. In these areas, due to the coincidence of the distinct frontiers – natural and historical-administrative – the Hungarian-Romanian border divides the same geographical and administrative spatial units along cca. 80% of its length. With the demarcation of the border, in addition to the dissolution of historical counties, urban cores and their surrounding settlements sometimes ended up on different sides of the border (e.g., Nădlac – Nagylak, Salonta – Újszalonta) as a direct impact of the redrawing of state borders on the settlement network (Szilágyi, 2013a).

The Croatian-Hungarian state border can be seen as a counterpoint to the Romania-Hungary border, where the demarcation line along the Mura and its continuation, the Drava, is mostly natural, although the riverbed does not always coincide with the effective border. Where the border deviates from the riverbed – for instance, in the cca. 34 km-area of the Croatian Gola region – it functions as a historical-administrative border. The only exception is a 76-km-long section in the area of Baranya, 72 km of which belongs to Baranya County and the rest to Bács-Kiskun County. The character of the border here shows similar features to that of the Partium region separating Hungary and Romania.

The border region under scrutiny forms a single entity in terms of physical geography, forming the central part of the Mura-Dráva basin, and as such, represented a coherent space at various times in history. From a constitutional law perspective, the evolution of the Hungarian-Croatian border can be divided into different historical periods (Rácz, 2017): 1) the initial phase, with autonomous countries forming in the 10th and 11th centuries; 2) the period of Personal Union from 1102 to 1918 (including the Kingdom of Hungary, the Habsburg Monarchy, and from 1868 Austria-Hungary and the Croatian-Hungarian Compromise); 3) 1918-1991, the period of the South Slavic State (including the first Yugoslavia until 1941, then the Independent State of Croatia, and from 1945, the second Yugoslavia); 4) the contemporary period, with autonomous Croatia since 1991. This most recent period can also be divided into distinct phases for the sake of greater clarity. The first phase (1991-1999) constitutes the first decade of autonomous Croatia. Croatia's independence ushered the beginning of a new era, characterised by a certain inward orientation. It was a period of state-building, nation-building, or, from another perspective, a period of war, marked by specific border region movements. The second phase (2000-2013) began with a shift in orientation at the turn of the millennium. This was the beginning of Euro-Atlantic integration in Croatia and simultaneously, its most intensive period in Hungary. Both countries were focusing on their Western relations. Bilateral relations were gradually strengthened. The third phase (2013-) started with Croatia's EU membership; henceforth, we can speak of cooperation between two EU member states. Importantly, with regard to state borders, Croatia has border disputes with all its neighbours apart from Hungary.

With over half of the 355 km-long Hungarian-Croatian border being riverine (135 km along the Drava, 45 km along the Mura, 1.8 km along the Kerka stream), the immediate border area is relatively sparsely populated and has seen modest development over the past century, highlighting the outstanding natural value of the area (Danube-Drava National Park, Mura-Drava Regional Park, Kopácsi Meadow Nature Park). The seclusion of the border has favoured environmental utilisation and simultaneously created opportunities for tourism. The region has a very significant untapped potential. Throughout history, the water-dominated region with its extensive catchment areas has always prompted cooperation between states to various extents, despite their frequently conflicting positions on water use and water management.

In the 1990s, Croatians emphasised the energy and economic utilisation of the Drava, while the Hungarian Government terminated its agreement with Yugoslavia, shifting the focus to nature conservation. Nevertheless, successful water and environmental cooperation initiatives were also implemented in the framework of cross-border projects. One such highly successful

collaboration is the Mura-Drava-Danube Transboundary UNESCO Biosphere Reserve, covering the territory of five countries and launched by a Croatian-Hungarian initiative.

Overall, cca. 77.5% of the Hungarian-Croatian border constitutes an effective demarcation line, with 68% of the entire border being a physical geographical divide, as opposed to the 10.5% share of the Romanian-Hungarian border section. The Border Population Concentration Index (BPCI) helps to identify population hubs by county within a 20 km zone along different border sections. The border population concentration index = border population (persons)/border length (km), which allowed us to process the spatial and population data from the grid_1km_surf.gpkg and LAU – NUTS 2021, EU-27 and EFTA databases during the data extraction process. The distance between the nodes of the cells was measured in a 20 km zone along the Hungarian state border (hu.kml), and the 2021 population was aggregated based on NUTS3 codes using Python.

The Hungarian side of the Croatian-Hungarian border is more densely populated, while the Croatian zone is more sparsely populated; similarly to the Romanian-Hungarian border, where the population is also highly concentrated on the Hungarian side, and the Romanian zone is somewhat less densely populated. Drawing on BPCI values, we scored the border sections of individual counties on a scale of 0 to 10, averaging the obtained county scores for each border region. Overall, the highest average value (3.4 points) was detected on the Hungarian side of the Hungary-Croatia border due to lower population numbers, while the minimum value (2.2 points) was found on the Croatian side of the same border section.

**Spatial reintegration or rethinking historical regions**

Romania's accession to Schengen is a major step towards the integration of the border region. It allows different spatial units with a shared territorial and historical identity to „rediscover" each other (e.g., along the Romanian border: Satu Mare, Bihor, Arad, and Csongrád region, along the Croatian border: Baranya-Baranja and the Zala-Međimurje region) and to reconnect through closer interactions also involving everyday routines. The state border used to be a physical barrier, but now there is a realistic chance to see the emergence of a border region with economic and social interoperability. Various cross-border cooperation initiatives have facilitated such interactions, but the elimination of border control might intensify and simplify these relations.

Uncontestedly, the examined border regions differ in terms of the depth of reintegration. This is most likely due to border specificities, the presence or absence of large cities in the given border area, the presence of some degree of shared regional identity, linguistic/cultural/religious

cleavages strengthening or weakening the border, or even developments of national spatial significance. On the Hungarian-Croatian border, the dominant natural dividing lines have always coincided with administrative frontiers, and the state border also represents cultural boundaries. The actual demarcation lines on the Hungarian-Romanian border, by contrast, account for only 20%, and ethnocultural cleavages can also underplay or blur previously rigid borderlines.

Cooperation and competition between cross-border twin settlements is becoming an increasingly defining trend. Apparently, the main factor considered in the demarcation of the Hungarian-Romanian border was not the linguistic divide, but Romania's access to the strategic Timișoara-Arad-Oradea-Satu Mare (railway) line. As a result, the main centres of this former trade route detached from Hungarian territory lay in the proximity of the state border (Szilágyi, 2013a). Their integration into the Romanian economic and state power system necessitated strict state borders with minimal permeability. The Hungarian-Romanian border area and the sister cities shaping the border region was already examined in 2013 in the framework of a different project (Szilágyi, 2013b), under fundamentally different physical/infrastructural conditions. The past decade has witnessed the opening of two motorway crossings, and with Romania joining the Schengen Zone, ten former temporary crossing points have been upgraded to permanent border passes, influencing border permeability.

The proportion of Hungarians living in Croatia (cca. 3 per thousand) largely mirrors that of Croats in Hungary. When examining cross-border relations, it is important to consider the interaction between ethnic patterns and state borders as well as the location of settlement areas. Historically, bilateral minority policies have always formed an important part of inter-state relations, and the legal situation of Hungarians in Croatia and Croats in Hungary can be considered satisfactory. A specific type of cross-border relations is formalised intermunicipal cooperation. The Hungarian-Croatian border area has currently cca. 70 Hungarian and a similar number of Croatian municipalities with twin settlements on the other side of the border. The majority of these twinning relations can be considered active and operational. Mohács and Pélmonostor and Pécs and Eszék boast the longest-standing partnerships, with twinning contracts signed in 1970 and 1973, respectively. In the autonomous state of Croatia, the number of twinning agreements increased in the aftermath of the South Slavic war (e.g., welcoming refugee families), as a result of the foreign diaspora and the process of Europeanisation. According to research conducted in the border region, municipal leaders in both countries identify similar areas of potential and significant cooperation: infrastructure, tourism, education, and culture.

Croatia has a very complicated spatial structure and settlement network owing to its differentiated natural geographical structures. It is highly fragmented in a horizontal sense, and has a total land border of 2,374.9 km, including riverine borders, and a coastline length of 6,278 km, of which 4,398 km are island borders. The shape of the country is highly disadvantageous for organising domestic transport. The route-based transport axes connecting the eastern and southern parts of the country run through Bosnia and Herzegovina.

Despite its historically highly centralised state organisation, Croatia has a polycentric urban network, due primarily to its heterogeneous and uniquely shaped state territory. Croatia has no settlements with a distance of over 60 km from the state border. The shape of the state „predicts" the spatial position of the larger cities. Zagreb's nodal position in the spatial structure relies on its ability to connect the country's geographical macro-regions via economic and transport linkages. As the center of Slavonia, Osijek has played a key role in the eastern part of the Danube-Drava-Sava region since the birth of independent Croatia. To the west, its macro-regional influence is counteracted by that of Zagreb. According to most Croatian research, Zagreb's catchment area extends as far as Virovitica. The two major Adriatic cities of Split and Rijeka serve as gateways to numerous regions of the world, while Osijek provides a link to the Pannonian Basin and Central Europe. At the macro-regional level, there has been a partial shift of focus in the development of Croatia, with the coastal areas and the capital region (Central Croatia) showing significant progress, and the eastern part of the country, Slavonia, emerging as the definite loser of regional processes.

The area of the Croatian-Hungarian border is generally underdeveloped in both European and national terms (throughout the 20th century, developments were blocked for security policy reasons). The demographic trends are even more unfavourable than the national average (only the data for Međimurje show a positive deviation from this trend), with significant population loss and a persistent trend of natural decline, emigration, and an aging population on both sides of the border. The labour market situation is also bleak, characterised by high rates of inactivity and unemployment. A defining feature of the spatial structure is a co-existence of the two countries' peripheral regions – characterised by low level of urbanisation, a predominance of rural settlements and a sparse settlement network – aggravated by the presence of a divisive riverine border on the major part of the border section.

The peripheral position of the region is a historical heritage, compounded by weak economic performance. Cross-border cooperation only occurs in two areas: Barcs–Virovitica and the Slovenian-Croatian-Hungarian triple border. All this reinforces the dominance of cooperation between relatively distant hubs, the large cities of the cross-border axes. In addition,

cooperation is shaped by the small size of the countries in European terms, their centralised state systems and capital city-centricity.

An important factor shaping cross-border relations is border permeability. Despite the explicit intent of bilateral declarations to expand cross-border transport links, there is a relative scarcity of border crossings on the land border. Crossing points are even more limited on the Drava. Of Hungary's border sections, the Croatian section has the lowest density even after the completion of the planned developments.

The sphere of influence of large cities in the proximity of the border will be assessed using a simplified gravity model. The analysis covers the seats of NUTS3-level territorial units along the state border. Eight such units were identified along the Hungarian-Romanian border: Szabolcs-Szatmár-Bereg, Hajdú-Bihar, Békés, and Csongrád-Csanád counties, and the Romanian counties of Satu Mare, Bihor, Arad, and Timiș. Likewise, eight administrative units were identified along the Hungarian-Croatian border: Zala, Somogy, Baranya, and Bács-Kiskun counties on the Hungarian side, and Međimurje, Koprivnica-Križevci, Virovitica-Podravina, and Osijek-Baranja counties. These represent the same administrative level in the European NUTS system, but for the sake of comparability, it should be noted that significant disparities were detected both in the size of the territorial units (area, population) and their central settlements. Drawing on data for 2021/22, the population of the four Romanian county seats ranged from 91,000 to 251,000, while that of the eight county seats in Hungary ranged from 55,000 to 200,000, and population numbers of the four county seats in Croatia ranged from only 19,000 to 97,000, even including lower tier administrative units. It is also worth noting that, unlike Hungary, where each historical settlement forms an independent municipality, an average of 3-4 settlements make up a commune in Romania, while in Croatia a municipality is typically comprised of 15-16 settlements. In addition to population size, distance is another factor to be considered in the gravity model. In this case, instead of the physical distance to the nearest border crossing, we considered travel time to the fastest accessible crossing point, measured in minutes. The three countries also revealed significant disparities in this respect, with three of the four major Romanian cities positioned effectively within an isochrone of 20-minutes, just like the Hungarian county seat of Békéscsaba, while several other county seats are located within an isochrone of one hour (e.g., Kaposvár) or beyond (Kecskemét). Three modifications were performed to optimize the model in the case of Hungarian centres: county-level cities (with a historical role as county seats) along the border were included in the analysis instead of remote county seats, Zalaegerszeg was thus replaced by Nagykanizsa and Kecskemét

by Baja. In the case of Békéscsaba, where another member of the conurbation, Gyula occupies the space between the county seat and the border, the combined population of the two cities was taken into account. In each case, our analysis relied on 2021/22 census data for the population living within the administrative border.

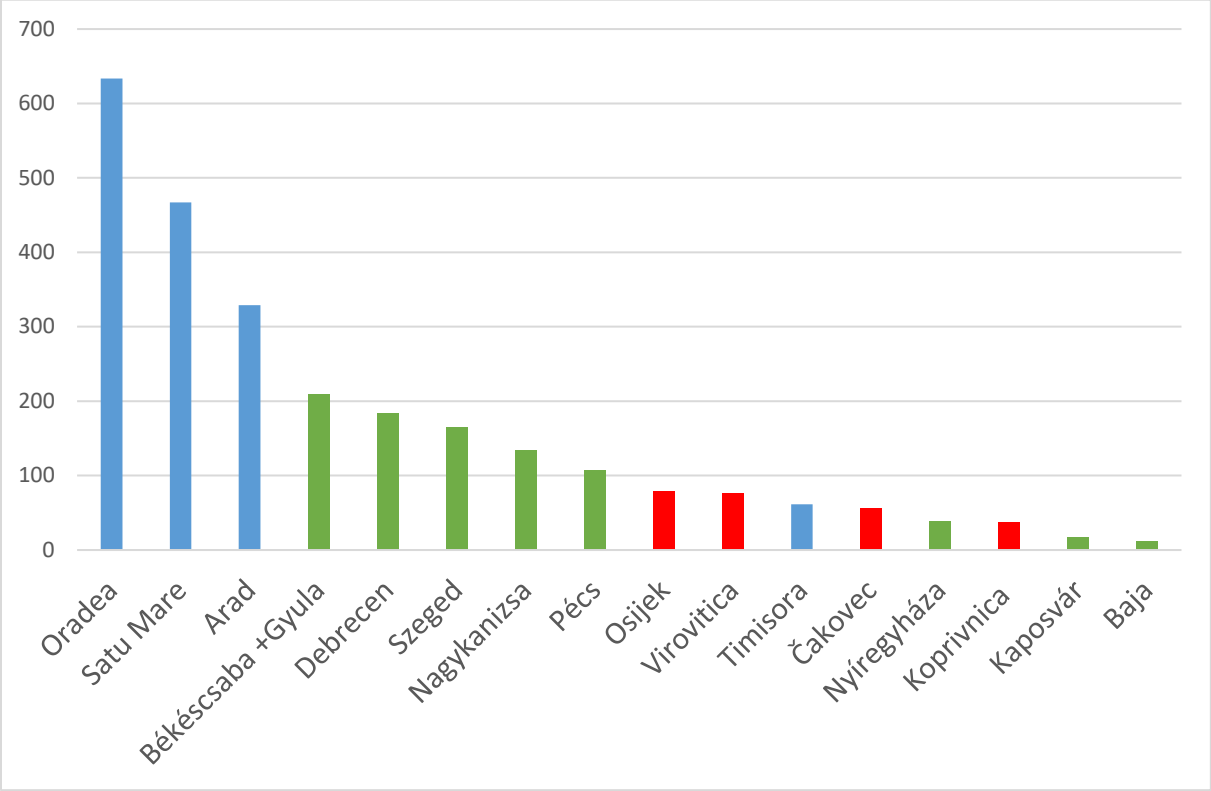
**Figure 1** Newton's law of gravity formula

$$F = G\frac{m_1 m_2}{r^2}$$

Source: own editing.

Our analysis drew on Newton's law of gravity, where m1 is the population of a given city and m2 represents the border crossing point, with each point associated with a value of 1. G is the gravitational constant used for weighting in similar studies, assigned a value of 1 in this study. Finally, r is the distance between the city and the border crossing point, calculated in minutes of travel time.

**Figure 2** Gravity coefficient values for border towns




Source: own evaluation (blue: cities in Romania, green: cities in Hungary, red: cities in Croatia).

According to the gravitational model, Oradea, Satu Mare, and Arad have a profound impact on the border region, with a potential to generate significant economic and social interactions in the future (figure 2). Due to their lower gravitational potential, no significant integration effect was found in the case of Hungarian-Croatian border towns (Pécs, Osijek, Virovitica), which is primarily explained by their lower population numbers and greater distance from the border. The examined gravitational coefficients allow us to conclude that, due to the combined effect of the metropolitan potential of the Hungarian-Romanian border region and its much higher permeability, more intense integration dynamics can be anticipated in the near future. Our presumption during the assessment of the gravitational weight of the leading cities of the examined spatial units was that significantly higher values might be obtained for cities along the Hungarian border not in our analysis (e.g., Bratislava, Vienna, Sopron, Győr, etc.), we therefore adjusted the scoring on a scale of 0-10 to a maximum gravitational coefficient of 820, obtaining values between 0.13 (Baja) and 7.71 (Nagyvárad) for the cities under study. Hence, the scaling prioritised compatibility with future, geographically extended analyses using similar methodologies. This phase also included calculating averages from county (city) values for each border section.

**Main characteristics of the ethnocultural dimension**

From the perspective of regional integration, the ethnocultural dimension deserves special emphasis, as communities with a shared or similar cultural background and language can significantly contribute to strengthening cross-border economic, social, and cultural linkages. The presence of minorities is particularly relevant in the case of the Hungarian-Romanian and Hungarian-Croatian border regions, as ethnic communities can create a social milieu that is particularly conducive to cross-border relations development. Our analysis relied on 2021 Census data for Romania and Croatia and 2022 Census data for Hungary. During the data processing phase, percentages were calculated without taking into account the population of unknown ethnicity and linguistic origins in order to obtain a more realistic picture of the actual proportion of ethnic minorities.

Nearly 5% of the over 5.6 million inhabitants of the border region belong to ethnic groups that represent the majority nation of the neighbouring country. The figure is slightly higher for native language (5.15%) compared to ethnic origin (5.0%), which underlines the persistence of language use despite the weakening of identity.

The northern part of the Hungarian-Romanian border section hosts mostly Hungarian-majority municipalities on both sides of the border, in addition, bilingual minorities are also

present in many settlements. The opening of the border could strengthen cooperation and trigger an expansion of cultural and economic relations. The shared ethnic and linguistic basis can contribute to successful cross-border projects and initiatives.

The role of Hungarian-majority regions along the Hungarian-Romanian border and their potential for cultural cooperation is significant. Important Hungarian communities are found in Bihar and Satu Mare counties (RO), forming cohesive entitites in terms of ethnicity and language, and accounting for 22.35% and 31.38% of the population of known ethnicity, and their proportion is even higher in terms of native language (24.30% and 36.94%, respectively). Arad County is also home to a significant, albeit smaller Hungarian minority group (ethnicity: 6.98%, native language: 6.91%). Timiș County on the other hand has a diaspora (cca. 4%), albeit of strategic importance due to its presence in a large city (Timișoara). In the Hungarian zone, the Romanian minority is more modest, with the highest representation in Békés County (ethnicity 1.71%, native language: 0.91%). In the meantime, in border towns such as Ártánd, Battonya, and Csenger, the strengthening of Romanian enclaves has been detected, largely as a consequence of cross-border suburbanisation.

Despite our failure to obtain ethnocultural data of the 2021 Croatian census in a regional breakdown, the potential in this respect is considerably less important along the Hungarian-Croatian border. On the Hungarian side (table 1), the number and proportion of the Croatian minority is low, particularly compared to the Hungarian minority in Romania. The highest shares were recorded in Baranya County (ethnicity: 1.75%, linguistic origin: 0.76%), while lower values were typically found in Zala, Bács-Kiskun, and Somogy counties. On the Croatian side, Osijek-Baranya County has the most significant Hungarian minority (cca. 2%), whereas in other border counties (Međimurje, Koprivnica-Križevci, Virovitica-Podravina), the Hungarian presence is rather negligible (diasporic). Notwithstanding the low population, a well-developed minority institutional network is functioning on both sides of the border, with a potential to strengthen cross-border relations, however, it is difficult to objectively measure this effect.

Cultural and educational institutions are key stakeholders in the border region. Both countries provide opportunities for studying in the language of the majority nation from kindergarten to university (native language, bilingual, or supplementary). Two secondary schools offer education in Croatian, both serving as educational centres, in Budapest and Pécs, respectively (Miroslav Krleža Croatian Kindergarten, Primary School, Secondary School, and Boarding School). The University of Zagreb has operated a Department of Hungarian Studies since 1994, and the Josip Juraj Strossmayer University in Osijek has hosted a Department of

Hungarian Language and Literature since 2007. In Hungary, Croatian language and literature courses are offered in three locations: Budapest (ELTE BTK Department of Slavic Philology), Pécs (PTE BTK Department of Croatian), and Szombathely (ELTE SEK Department of Slavic Studies). It is worth noting that the Croatian Theatre in Pécs, maintained by the municipality with state support, is the only Croatian-language theatre outside Croatia, highlighting its role as an identity and cultural centre.

**Table 1** Ethnic and linguistic characteristics of neighboring counties in Romania and Croatia

| NUTS3 | Total population | Neighbouring ethnic group, % | Neighbouring native speakers, % |
|---|---|---|---|
| Arad | 410,143 | 6.98 | 6.91 |
| Bihor | 551,297 | 22.35 | 24.30 |
| Satu Mare | 330,668 | 31.38 | 36.94 |
| Timiș | 650,533 | 3.94 | 3.68 |
| Békés | 315,222 | 1.71 | 0.91 |
| Csongrád-Csanád | 391,184 | 0.46 | 0.23 |
| Hajdú-Bihar | 519,141 | 0.52 | 0.14 |
| Szabolcs-Szatmár-Bereg | 529,381 | 0.22 | 0.07 |
| Bács-Kiskun | 495,318 | 0.54 | 0.14 |
| Baranya | 354,022 | 1.75 | 0.76 |
| Somogy | 293,470 | 0.48 | 0.16 |
| Zala | 260,800 | 1.14 | 0.50 |
| Osijek-Baranja | 258,026 | national data: 10,315 | national data: 7218 |
| Koprivnica-Križevci | 101,221 | | |
| Međimurje | 105,250 | | |
| Virovitica-Podravina | 70,368 | | |
| Total | **5,636,000** | **5** | **5.15** |

Source: Census data from the three countries.

The data and factors analysed underline the potential of the ethnocultural dimension to support integration in the Hungarian-Romanian border region. The significant Hungarian communities on the Romanian side create a cultural milieu that is particularly conducive to enhanced border permeability, thereby intensifying economic, social, and cultural integration. Although this potential is more limited and only of local significance on the Hungarian-Croatian border, the presence of the institutional network in both countries can facilitate the development of further integration initiatives.

When examining the sense of comfort on both sides of the border, two components stand out as important benchmarks (table 2): „A” represents the ratio of nationalities/native languages, substituted by the relative proportion of the population speaking the neighbouring

country's language. Percentage value were represented with point values as follows: scored from 0 to 5: 0=0-1%, 1=1-3%, 2=3-10%, 3=10-20%, 4=20-30%, 5= 30% and above. The other component („B") refers to the development of the institutional network, also assigned with values between 0 and 5 points. Regarding the institutional network, the factors examined were: availability of minority local government, minority religious community, minority kindergarten and elementary school, minority secondary school and higher education.

**Table 2** Benchmarking values for the ethnocultural dimension on both sides of the border

| NUTS3 | Ethnic ratio % | A. | B. | A + B | Average |
|---|---|---|---|---|---|
| Arad | 6.98 | 2 | 4 | 6 | 7.5 |
| Bihor | 22.35 | 4 | 5 | 9 | |
| Satu Mare | 31.38 | 5 | 5 | 10 | |
| Timiș | 3.94 | 2 | 3 | 5 | |
| Békés | 1.71 | 1 | 5 | 5 | 2.5 |
| Csongrád-Csanád | 0.46 | 0 | 3 | 3 | |
| Hajdú-Bihar | 0.52 | 0 | 2 | 2 | |
| Szabolcs-Szatmár-Bereg | 0.22 | 0 | 0 | 0 | |
| Bács-Kiskun | 0.54 | 0 | 3 | 3 | 3.75 |
| Baranya | 1.75 | 1 | 5 | 6 | |
| Somogy | 0.48 | 0 | 2 | 2 | |
| Zala | 1.14 | 1 | 3 | 4 | |
| Osijek-Baranja | 4.00 | 2 | 4 | 6 | 1.5 |
| Koprivnica-Križevci | 0.00 | 0 | 0 | 0 | |
| Međimurje | 0.00 | 0 | 0 | 0 | |
| Virovitica-Podravina | 0.00 | 0 | 0 | 0 | |

Source: own calculations based on sources indicated in other references.

Note: when examining the "sense of comfort on the other side," travelers to the given region were invariably considered to be part of the majority group in the home country. On the other hand, a significant proportion of the population living on the Romanian territory of Partium are Hungarian, who would not bemoan the absence of Romanian speakers in Szabolcs-Szatmár-Bereg or Hajdú-Bihar, for instance. Hence, the low benchmarking values for these counties can be misleading as their Hungarian character can greatly facilitate the assimilation or integration of the population living across the border into the local education system or labour market. The majority of ethnic Hungarians in Partium live in close proximity to the border and constitute the most mobile segment of the local population, which explains their disproportionate share in „international" interactions.

## INFRASTRUCTURAL CHANGES AS THE KEY CHALLENGES ON THE ROMANIAN-HUNGARIAN BORDER

The 20th century saw the dramatic decline of road and rail connections (Baranyi, 1999). The state border area has 60 municipalities/settlements on both sides. During the demarcation of the border, cca. 80 roads and 12 railway lines crossed the border. The majority of these were closed or destroyed in the 20th century due to political decisions: roads were closed or construction works halted, and railway lines were dismantled in some cases: both railroads were destroyed in Satu Mare, two out of three in Oradea, one of two in Arad, as well as the only direct railway link to Timișoara. Connections to neighbouring regional centres were the first to be terminated, while those that bypassed the neighbouring large cities (Debrecen, Szeged, Nyíregyháza) survived (e.g., Arad-Lökösháza; Nagyvárad-Püspökladány). Moreover, the number of road connections was reduced to five during the most severe decades of oppression (the artificial restriction of road access was necessary for Romania to ensure the integration of the new state territories: while it had no natural dividing lines to the west, there were several to the east). The post-regime change period saw a gradual easing of restrictions and development, with a gradual increase in the number of border crossings, showing a twofold increase by Romania's EU accession, and reaching 12 with the construction of two additional motorway crossings. Although the two new motorway crossings (Nagylak 2, Nagykereki) generated significant interregional traffic, local connections were limited. Post-millennial infrastructural developments targeted these expressways. In addition to the completion of two new motorways, the inauguration of two high-capacity border crossing points is anticipated in the near future (Csengersima – Satu Mare and Sarkad-Méhkerék-Nagyszalonta). However, ahead of these, due to the much anticipated enlargement of the Schengen Area, ten new border crossings (Transinfo.ro) have been opened, starting January 1, 2025. These crossing points mostly faciliate local traffic and represent the highest value for local border communities. With the addition of two new motorway crossings, the currently functioning 22 border crossing points on public roads will be expanded to 28 lanes in each direction. This will lead to a notable increase in the throughput of crossing points compared to the 80 predominantly local roads in operation at the time of the demarcation of borders.

The control of infrastructure hubs and the development of strategic transport routes are significant challenges connected to integration to the Schengen Zone. A key priority is the development of main routes ensuring control over junctions. Hungary has constructed four major corridors in a west-east direction towards Partium/Banat and Transylvania (M43, M44,

M4, M49). Romania is about to begin the construction of a south-north expressway connecting Timișoara and Satu Mare, as part of the Via Carpatica, a trade route of European significance stretching between the Mediterranean and the Baltic Sea. The new main route will intersect with the four main roads listed above and the junctions will be located on Romanian soil. The significance of nodality is paramount and gaining control over transport hubs is necessary for economic and geopolitical reasons (Németh, 2009). The construction and potential extension of the prospective southern (M9) motorway is therefore of national strategic significance. It is important to ensure its extension to Berettyóújfalu and its connection to the M35 to create a national outer ring expressway. This would extend the benefits of nodality to Hungary as well. A similar phenomenon can be witnessed in the reorganisation of railroad infrastructure: the rehabilitation of connections along former routes does not serve Hungary's interest. New hubs should be created on the Hungarian side; between Debrecen and Nagyvárad, the newly built Derecske-Berettyóújfalu railway line restores direct connections – all the while maintaining the hub on Hungarian territory and preventing unilateral external restrictions, such as the dismantling of the Romanian section of the direct Debrecen-Nagyvárad railway line. In assessing the infrastructure, 2 points were assigned to cross-border railway lines and express lanes and 1 point to non-express road lanes. As a result, the Romanian-Hungarian border section received 10 points and the Croatian-Hungarian border section received 5 points.

In addition to the infrastructural approach, the statistical analysis of border crossings can provide an useful method for investigating cross-border integration. Data from the Hungarian Central Statistical Office (CSO Table 27.1.1.4; CSO Table 27.2.1.8) reveal that in 2024 the number of short-term (less than 24 hours) journeys from Croatia to Hungary was 982,000, 922,000 from Hungary to Croatia, 8,159,000 from Romania to Hungary, and 1,307,000 from Hungary to Romania. When assigning 1 point on a scale of 0–10 for every million border crossing, the scores are as follows: HR→HU 1 point, HU→HR 0.9 points, RO→HU 8.1 points, HU→RO 1.3 points. The results reveal remarkably high values in the case of Romania→Hungary crossings. This method therefore allows for a finer distinction of border sections compared to the infrastructure score-based assessment.

## CONCLUSIONS

This study undertook an analysis of the challenges of opening Schengen borders and the associated new opportunities on both sides of the border along five main dimensions. On the basis of contemporary data, the four border regions offer the highest benefits on the Romanian

side in terms of infrastructure, border traffic, and ethnocultural aspects. Compared to the Croatian border section, the cities along the Romanian-Hungarian border show a higher capacity for cooperation, with the gravitational pull between cities exceeding six-fold the Croatian values. Likewise, the ethnocultural dimension can yield more significant development opportunities for the country – due to the existence of significant Hungarian minorities on the Romanian side of the border – compared to the Croatian section. Due partly to the absence of natural borders and partly to existing economic and labour market relations, the effects of the opening of the Romanian border are much more palpable.

The Schengen enlargement could catalyse social and economic processes favouring integration, with positive effects for Hungary. The changing symmetry triggered by the opening of the Romania-Hungary border is one such factor. It could promote the extension and upgrading of the Hungarian border by extending the eastern periphery of the EU, similar to the Romanian borderland as the western periphery of the country, by creating a more favourable context for investments and strengthening cross-border relations. Further benefits include the revitalisation of Oradea, Arad, and Timișoara, with the expansion of job opportunities for those living in the Romanian-Hungarian peripheral cross-border area and stimulating labour mobility within the Hungarian community. The catchment areas of Debrecen and Szeged already exert a notable impact on the situation of the Hungarian community living in Partium, counting around 350,000 people. The new industrial parks and large companies are seeking bilingual Hungarian-speaking workers. The inhabitants of these borderland areas can constitute important reserves or potential replacements for the local workforce. The borderland community serves as a virtual „gold reserve" for the mother country in terms of human resources and economic development by softening the state border and acting as a buffer zone for Hungarian companies and businesses. However, the trend is different nowadays as investments in Hungary tend to attract the native Hungarian and Hungarian-speaking workforce to the mother country who may settle in the long term.

Due to historical precedents, the border used to serve as a so-called social „iron curtain" by fragmenting the previously homogeneous socio-economic space, turning settlements into dead-end villages and triggering the decline of institutions and the population. With the concentration of agricultural activity, land ceased to provide the unique source of livelihood, leading to massive population outflow and declining property values in the borderland. As a result of the new waves of settlement linked to seasonal agricultural work in the second half of the 20th century, the proportion of the Roma population showed a significant rise in various border settlements, reshaping socio-economic processes and altering the socio-economic profile of the

affected communities. These processes reinforced peripheralisation, contributing to the outmigration of young people and the aging of the population in the region. Despite the growing „virtualisation" of the border as a result of the Schengen enlargement, social disparities continue to represent rigid boundaries and social „reintegration" is only partially conceivable.

The European Union has emerged as an important actor in the region's network of relations, partially as a result of the opening up of new funding opportunities. Potential cross-border relations have been explored, and the expansion of relations has been documented in several areas. However, the period of European integration has not triggered a permanent deepening and significant intensification of cross-border relations in the case of the Croatian-Hungarian border region. Several factors have hindered the emergence of an integrated Croatian-Hungarian transborder area. To begin with, both countries prioritised their Western relations and integration into the European core region, significantly reinforcing their capital city-centricity. In addition, the borderland areas are among the poorest regions of their respective countries, and their spatial structure, economic potential and ethnic composition created unfavourable conditions for cooperation. Furthermore, a number of factors are necessary to catalyse such relationships, as demonstrated by the case of the more developed Austrian-Hungarian-Slovak border region.

Interesting changes were detected in the real estate market on the Romanian-Hungarian border, which were not visible on the Croatian-Hungarian section in the period of the opening of the Schengen border. Romanian citizens, similar to Croatians, have a high degree of mobility on the labour market, with nearly 5-6 million Romanian workers (and Moldovans) migrating to Western, Southern, and Central Europe. Some of them consider returning to their home countries and purchase property in Romania. However, typically they do not purchase property in their country of origin but in the west. The most attractive areas for settlement on the western border periphery are those those with well-organised towns, a regional airport, and access to a motorway. For this reason, property prices on the Romanian side of the border are significantly higher compared to the Hungarian section (indicating asymmetrical peripherality): selling property in the Oradea agglomeration and settling in a Hungarian municipality in the proximity of Oreadea with high-level public services and good infrastructure has become an attractive option. This leads to a rising number of commuters to dormitory towns in the region, a phenomenon already visible in the Hungarian-Austrian borderland. The borderland settlements of Ártánd, Biharkeresztes, Bedő, Létavértes, Csenger, Battonya, and Gyula (as well as Rajka and Tornyosnémeti) may witness a significant inflow of foreign residents (belonging to the Hungarian minority) using these villages as dormitory towns. While these commuters will live,

work, and study in Oredea, they might, for instance, return to Biharkeresztes to sleep, hence the origins of the legend of workers commuting from Hungary to Romania. Most settlers have dual citizenship, and from this perspective, they are Hungarians employed in Romania, but in reality, they are foreign-born dual citizens who have never settled completely. Actual international commuting is more likely to occur in the opposite direction, for instance, a significant number of workers commute to Debrecen from the settlements of Székelyhíd, Érmihályfalva, Margitta, and Nagykároly in Partium.

From the perspective of development policy measures, the positive effects of the family policy instruments introduced by the Hungarian government, which are unique in Europe, might create a vacuum effect in the border region, as many young people will find it worthwhile to move to Hungary and found a family there. The Romanian support system is less robust, potentially leading to a rise in mobility toward the Hungarian border.

As regards education, there is a growing tendency for Hungarian-speaking young people from the border region to pursue their studies in Hungary (in Debrecen, Szeged, Nyíregyháza, Békéscsaba-Gyula), triggering internal migration on the Romanian and rising student numbers on the Hungarian side of the border.

In addition, further factors may emerge as challenges, such as environmental and sustainability issues (e.g., river pollution); health and social care (an issue for commuters); tourism (exploitation of common resources); the role of local governments (grant systems – partnerships, twinning arrangements, networking); digital infrastructure, etc.

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## REFERENCES

2024/982 Consolidated version of the Treaty on the Functioning of the European Union.

Baranyi, B. (1999). A „periféria perifériáján”. A határmentiség kérdőjelei egy vizsgálat tükrében az Északkelet-Alföldön. *Tér és Társadalom,* 13(4), 17-44. https://doi.org/10.17649/TET.13.4.542

Croatian Bureau of Statistics (2022). Census of Population, Households and Dwellings in 2021 – Final Results. Zagreb. https://dzs.gov.hr/u-fokusu/popis-2021/popisni-upitnik/english/results/1501 (2025.03.13.)

Croatian Bureau of Statistics (2022). *Population Census Results Database.* Zagreb. https://podaci.dzs.hr/en/statistics/population/census/ (2025.03.13.)

Directive 2013/40/EU of The European Parliament and of the Council of 12 August 2013. https://eur-lex.europa.eu/eli/dir/2013/40/oj (2025.03.01.)

Dócza, E. K., Kovács, B., Marsai, V., Párducz, Á., & Sayfo, O. (2025). 2025-ös migrációs prognózis – Mi várható az Európába irányuló migráció frontján? *Horizont,* 1. Migrációkutató Intézet.

Education Office (2020). Nationality Base Institutions (2020-2023). https://www.oktatas.hu/pub_bin/dload/kozoktatas/pok/Nemzetisegi/Nemzetisegi_Bazisintezmenyek_2020-2023.pdf (2025.03.13.)

EU (2025). Temporary Reintroduction of Border Control. https://home-affairs.ec.europa.eu/policies/schengen/schengen-area/temporary-reintroduction-border-control_en (2025.03.11.)

European Council (2025). https://www.consilium.europa.eu/hu/policies/schengen-area/#schengen (2025.03.01.)

European Parliament (2020). European Parliament resolution of 17 April 2020 on EU coordinated action to combat the COVID-19 pandemic and its consequences (2020/2616(RSP)) https://www.europarl.europa.eu/doceo/document/TA-9-2020-0054_EN.html (2025.03.11.)

Eurostat (2024): Population change – crude rates of total change, natural change and net migration plus adjustment (tps00019). https://ec.europa.eu/eurostat/databrowser/view/tps00019__custom_15570202/default/table?lang=en

Eurostat GISCO. https://ec.europa.eu/eurostat/web/gisco/geodata/grids (2025.03.13.)

Horeczki, R., Lados, G., & Nagy, D. (2024). A határhelyzetből adódó lehetőségek és korlátozó tényezők vetületei Magyarország és a szomszédos országok példáján. *Területfejlesztés és Innováció,* 17(2), 4-20. https://doi.org/10.15170/terinno.2024.17.02.01

Hungarian Central Statistical Office (2023). Census data 2022. https://nepszamlalas2022.ksh.hu/adatbazis (2025.03.13.)

Hungarian Central Statistical Office (2024a). Table 27.1.1.4. https://www.ksh.hu/stadat_files/tur/hu/tur0004.html (2025.03.13.)

Hungarian Central Statistical Office (2024b). Table 27.2.1.8. https://www.ksh.hu/stadat_files/tur/hu/tur0070.html (2025.03.13)

Institutul Național de Statistică (2023). Recensământul Populației și Locuințelor 2021 – Rezultate definitive. Bukarest. https://www.recensamantromania.ro/rezultate-rpl-2021/rezultate-definitive/ (2025.03.13.)

Kézai, P. K., & Zsibók, Z. (2024). Városdiplomáciai vizsgálat a Dél-Dunántúl régió településeit érintően – fókuszban a testvérvárosi kapcsolatok. *Turisztikai és Vidékfejlesztési Tanulmányok,* 9(4), 60-78. https://doi.org/10.15170/TVT.2024.09.04.03

Kovács, E., & Sipos, N. (2020). Mobilitás a határmenti régiókban – Ausztria. *Pécsi Munkajogi Közlemények,* 13(klsz), 14-31.

Ludovika (2021). A Magyarországon élő nemzeti kisebbségek helyzete az oktatás területén. Ludovika – Öt perc Európa blog. https://www.ludovika.hu/blogok/ot-perc-europa-blog/2021/07/05/a-magyarorszagon-elo-nemzeti-kisebbsegek-helyzete-az-oktatas-teruleten/ (2025.03.13.)

Megyesi, Z., & Péti, M. (2022). Nemzetközi mobilitási magatartás és lehetséges járványhelyzeti jövője a Kárpát-medencei magyarság körében, 2020. *Területi Statisztika,* 62(6), 698-731. https://doi.org/10.15196/TS620604

Németh, N. (2009). Fejlődési tengelyek az új hazai térszerkezetben: Az autópálya-hálózat szerepe a regionális tagoltságban. Budapest: ELTE Regionális Tudományi Tanszék.

Part One – Principles https://eur-lex.europa.eu/eli/reg/2024/982/oj (2025.03.11.)

Pénzes, J. (szerk.) (2018). *Falu, város, periféria: határon innen és túl.* Debrecen: Didakt Kft.

Rácz, Sz. (2017). Main characteristics of Hungarian-Croatian political relations and Cross-Border Co-operations. *Geographica Pannonica*, 21(1), 54-67. https://doi.org/10.18421/GP21.01-05 Regulation (EU) 2017/2226 of the European Parliament and of The Council of 30 November 2017. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R2226 (2025.03.01.)

Regulation (EU) 2018/1862 of the European Parliament and of The Council of 28 November 2018. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32018R1862 (2025.03.01.)

Szép, F. (2024). A Magyarországra irányuló illegális migráció trendjei 2008-2023 között. Magyar Rendészet, 24(2), 17-37. https://doi.org/10.32577/mr.2024.2.1

Szilágyi, F. (2013a). A nagyvárosi vonzáskörzetek áttekintése a magyar-román határsávban. In: Szilágyi F., & Zakota Z. (Eds.), *Partium – Társadalom és térszerkezet.* Nagyvárad: Dokumentum Kiadó.

Szilágyi, F. (2013b): *Közigazgatás a Partiumban.* Nagyvárad: Partium Kiadó.

The Schengen acquis – Convention implementing the Schengen Agreement of 14 June 1985 between the Governments of the States of the Benelux Economic Union, the Federal Republic of Germany and the French Republic on the gradual abolition of checks at their common borders. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:42000A0922(02) (2025.03.11.)