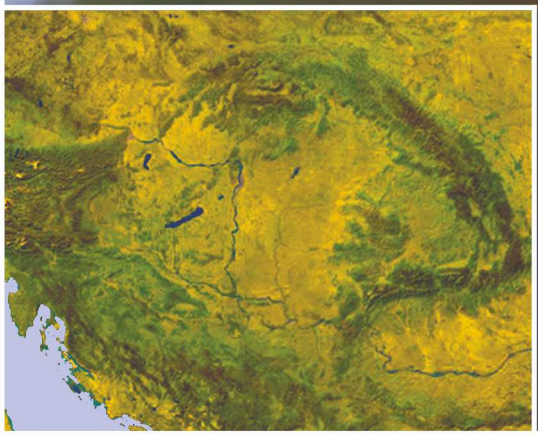
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Shahids and martyrs: Conflicting national narratives and places of memory in Kosovo

Péter REMÉNYI[1,2], Nurcan Özgür BAKLACIOĞLU[3] and Norbert PAP[1,4]

Abstract

Kosovo Field (Kosovo Polje), the core region of the newly independent Kosovo, experienced several key historical events, each of which left important memories in the space. As political control over territory changed, different memories connected to the area became stronger, while others were pushed into the background. The first battle of Kosovo (1389) and the death of their ruler Lazar, is a key event in Serbian history, identified through spectacular landmarks in the region. Connected to this event, Turkish monuments also exist, commemorating the death of the martyr Sultan Murad I. Following independence, memorials of Albanian fighters started mushrooming as a core element of Kosovar identity building, with the martyrdom of the "legendary commander" Adem Jashari being central to this emblematic memory project. All three nations have an "official" martyr connected to the space, around which different nation-building narratives have been constructed. As the struggle over the control and influence of the region continues, so does the competition of different memories and memorials. Territorialisation and de-territorialisation of memories are ongoing projects in the country by the three nations, linked to competing nation-buildings and political power struggles.

Keywords: Kosovo, memorials, narratives, martyrs, territorialisation

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Introduction

Following the armed conflict of 1999, Kosovo achieved its independence from Serbia to become the youngest state in Europe. However, its recognition is still contested as its former "master" Serbia claims sovereignty over the country (Judah, T. 2002). Due to the young and conflictual independence, nation-building is in full swing today, which has a cross-border nature (Krasniqi, V. 2014), since ethnic Albanians live in several neighbouring countries as well as part of Kosovo's population is non-Albanian (Serb, Bosniak, Roma, Turkish, etc.) and the state is constitutionally multi-ethnic (Constitution… 2008).

Since history is a core fundament of modern nations (Anderson, B. 1983; Smith, A.D. 1986), the (re)interpretation of historical events and heroes, the (re)construction of national narratives are a vital part of identity formation, and therefore competing nation-buildings (Hobsbawm, E. and Ranger, T. 1983; Foote, K.E. and Azaryahu, M. 2007;

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Semian, M. and Nováček, A. 2017). As for a young nation, the remembrance of national heroes and martyrs and the continuous construction of their myth and narratives are an integral part of everyday life, as well as the erasure and reinterpretation of memories and memorials of rival groups (Krasniqi, G. 2013). Parallel narratives and their territorial representations are, thus, in constant conflict with each other in Kosovo. In this conflict of historical memories and national narratives, the antagonisms between the parties seem irreconcilable, the positions are mutually exclusive, and the confrontation takes on the character of a "holy war", which transforms the geographical space, especially its memorial layer.

To understand these spatial processes, first, we have to understand the conflicting national narratives, and how they are linked to certain, often 'sacralised' places representing them. That is why this paper is focusing on these narratives, and addresses their territorialisation as well as the conflictual remembrance politics of the three nations in Kosovo (Serbs, Albanians, and Turks), focusing on their representative martyr-heroes. Besides introducing these narratives, we present the major places of memories related to them and their often conflicting role in identity and nation-building. We describe how changes in territorial power have influenced the shifting spatial representation of memories and their narratives and what characterizes this process in current Kosovo. We argue that the struggle over the politics of memory in Kosovo is an antagonistic conflict, a "holy war" with civilizational overtones, where communities construct their national narratives and heroes, as well as their spatialisation accordingly. We illustrate the similarities of the "competing" heroes: how they all became "official" martyrs in wars fought for a political cause and territories, "sacralised" by the most important communities of their era (religion or nation). We argue that their martyrdoms and the territorial representations of their national narratives have been and are still utilized by contemporary elites.

Theoretical background

Despite scientific debates of the 1990s foreseeing the end of territoriality, its importance in political power is consensual. Control and domination over a territory provide the basis for the power of states and their elites (Agnew, J. 1994; Taylor, P.J. 1994; Newman, D. 2006; Laine, J. 2016). One means of securing territorial control is to strengthen the connection of the nation and state through (among others) memory narratives and discourses (Flint, C. and Taylor, P.J. 2018). Territorial representations of them are of paramount importance (Foote, K.E. and Azaryahu, M. 2007), especially in materializing memories, particularly for young states and nations. Not only can the pursuit for the creation of new legitimacy be observed in youngest states, but territorial conquests also require symbolic takeover; an area's shifting political control always brings with it the territorialisation of the changing memory narratives (Gnatiuk, O. and Homanyuk, M. 2023).

Monuments very often eternalize wars (of conquest or independence) and national efforts which mark patriotic values and represent present-day political and social tensions and fault lines (Foote, K.E. and Azaryahu, M. 2007). This is particularly true in Kosovo where at least three nations have shifted power one or more times, never without conflict. These "sacralised" wars against each other and their protagonists became part of national identities from the 19th century start of nation buildings, becoming the major factors linking them to Kosovo. Their most important memorials, thus, commemorate military events and the heroic dead, playing an important role in the construction of spatial identity, improving the link between territory and people, thus, creating a multilayered military-memorial landscape.

In addition to analysing the literature, we examined the academic discourse to present the context of the national narratives, which play an important role in identity formation, nation building as well as in shaping memory politics in Kosovo. We also visited and ob-

served the major memorial sites of the communities, the spatial representations of the national narratives, to understand the process of their spatialisation, and how these narratives are linked to the places of memories.

Parallel memory politics and their territorial representations

The Kosovo Field is a north-south longitudinal plain framed by mountains and hills, it is the core area of Kosovo and serves as the region's main transport route. Prishtina, the capital of the country is located in the centre of the plain. The Kosovo field is not only the country's administrative centre but also its demographic, political, and economic core, and also contains important remembrance locations of the three national narratives.

The current dominant narratives of memory politics are related to the First Battle of Kosovo (1389) and the War of Independence (1998–1999). The former is a milestone in Serbian national identity to which many later events in Serbian history were linked. This battle served as the basis for the most important myth of 19th century Serbian national revival (Malcolm, N. 1998; Greenawalt, A. 2001; Bieber, F. 2002; Čolović, I. n.d.). The events and protagonists of the battle have fundamentally influenced the Serbian national consciousness and identity. In the battle, north of Prishtina, the Sultan Murad-led Ottoman army defeated the Christian army led by Lazar, the Serbian ruler. Little is known about the exact course of the battle (Malcolm, N. 1998), but both rulers certainly lost their lives and as a result, the Ottoman army left soon as Bayezid (Murad's son), who was also present, was involved in the succession. Since both rulers lost their lives in the battle, the site became memorialized by both nations.

By his death, Murad became a martyr of Islam, which resulted in the erection of a mausoleum (*turbe*)[5], that gradually grew to a place of pilgrimage. The turbe of Sultan Murad can also be seen as the territorial representation of the memory of the 1455 Ottoman occupation as well as (through its renovation) the return of Türkiye to the Balkans in the 21st century *(Photo 1).*

Albanians, the ethnic group in majority and political power in Kosovo today (Bottlik, Zs. 2009; Bottlik, Zs. and Gyuris, F. 2010) have been developing and territorializing myths over the past decades regarding Adem Jashari, leader of the Kosovo Liberation Army (KLA), who died a martyr's death while fighting Serbian forces (Di Lellio, A. and Schwandner-Sievers, S. 2006). The memory of the war against Serbia and its Albanian victims have become important building blocks of Kosovo's new national identity.

Today the three nations are on different tracks. Serbs are being marginalized from the region, their territorialised memories are in danger of being lost, and their dominant narratives are in decline. On the opposite side of the same processes, Albanians are gaining ground in terms of territorial domination, their monuments are proliferating and their narratives are steadily replacing those of the past. Kosovo's centuries-long 'ruler' was pushed out of the region during the Atatürk era, but has made a spectacular and conscious return in recent decades, utilizing memorial sites, and religious and historical links among others. These territorialized memory narratives are contradictory, civilizational, and as such difficult to reconcile.

[5] Mausoleums (*turbes*) were built for members of the reigning house and secular and religious leaders from the Ottoman elite. While the tombs of the first group were built at the expense of the state, those of secular leaders were often built at their own expense, and those of religious leaders from the offerings of their admirers or church foundations. All rulers of the Ottoman dynasty have their mausoleums in the contemporary capital (Bursa or Istanbul), however, for symbolic reasons, some of the rulers' turbes and monuments were built outside the capital as well (Kosovo Polje, Turbék, Hungary).



Photo 1. Sultan Murad's mausoleum with the memorial tablet of the Turkish Cooperation and Coordination Agency (TIKA)

Foundations of Turkish remembrance politics in Kosovo

Murad I is a martyr whose body was entombed in Bursa and whose inner organs were buried at the battlefield of Kosovo Polje, thus, connecting Anatolia to the Balkans his mausoleum also symbolizes this connection, and proves Ottoman and Islamic presence in the region (Şenyurt, O. 2012).

There were 36 rulers of the Ottoman dynasty, only two of whom were recorded to have died on the battlefield: Murad I, who according to a legend, was killed by Christian warrior Miloš Obilić during the battle of Kosovo in 1389, and Sultan Suleiman I in 1566, at the siege of Szigetvár (Hungary) (Pap, N. *et al.* 2015).

Since very little reliable data are available on the death of Murad I and the construction of his mausoleum, we use the nearly identical story of Suleiman I for comparison. Like Murad, Sultan Suleiman died in his tent during a military operation in 1566 (Fodor, P. and Pap, N. 2018), however, the cause of his death was disease (Pap, N. *et al.* 2015). The funeral rites of both rulers were very similar. Their internal organs were buried at the site of death while their bodies were taken to the capital (Murad's to Bursa and Suleiman's to Istanbul), and placed in ornate mausoleums. Memorial buildings were also erected at both death sites, which became pilgrimage destinations for Muslim believers in the empire, who could pay their respects to the rulers who died in the Holy Wars.

Islamic written sources claim that the Qur'an (or Koran), and the Sunnah enumerate four types of ideal or exemplary groups

of people: the prophets, the *Siddiqsons* (infinitely trustworthy and righteous people), the *Shahid* (martyrs or witnesses), and the *Salih* (righteous) people (Yüce, A. 2000). He who sacrifices his life for a sacred purpose is a martyr, where the manner of death is not important. The martyrs fight a relentless battle for the purposes and values that God (Allah) has appointed.

The category of martyrdom is less subjective and certain requirements must be met. "Perfect martyrs" meet all conditions and are therefore buried in immense glory, unlike other Muslim believers.[6] On the other hand, those who do not meet all conditions, but whose life and death are regarded as exemplary, are called the afterlife martyrs. Their funeral, however, is like that of ordinary believers.

In light of the above guidelines, it may be said that Murad I, who led the campaign to protect or expand the Islamic world, could become the martyr of Islam. Out of the 36 sultans, four Ottoman rulers have this title.[7]

Place of death

The territorialisation of Murad's memory came about early. Although the construction of the mausoleum is uncertain, the Turkish have the oldest still existing memorials of the three nations. We have no exact data on when the Kosovo complex was built but we do know that it has been standing since the 16th century at the latest. Historical tradition links it to Bayezid, the son of the late Sultan, and is listed in the Database of Cultural Heritage of Kosovo operated by the Ministry of Culture, Youth and Sport as a 14th century building, one of the earliest monuments of Ottoman architecture in the Balkans.[8] However, the Ottoman rule was only consolidated in 1455 over the area (Malcolm, N. 1998), which calls into question the 14th century origin, but being listed as such has its message though.

Murad was lionised as Shahid of Islam and the Turkic world and it is emphasized in the literature that the mausoleum was built to make immortal the Ruler's grave in the Ottoman Balkans (İnalcık, H. 2010). A multi-building *külliye*[9] was built around the Kosovo memorial tomb, which served as a pilgrimage site (Ayverdy, E.H. 1957; İbrahimgil, M.Z. and Konuk, N. 2006). Although little is known about the founding and operation of the Kosovo *meşhed*[10], that which stands at Szigetvár is well documented, and one can conclude the role of the Kosovo complex with the help of the one near Szigetvár through analogy.

The founder of the Szigetvár meşhed, Sheik Ali Dede al-Busnavi, lived and worked in Turbék in the late 16th century. He was a famous teacher and the author of several works (Karic, D. n.d.). His works covered issues regarding the Hajj, the holy places of Islam, and the identification of ideological enemies, and supported the legitimacy of the Ottomans' claim to be the leader of the Islamic world. The role of the meşhed near Szigetvár was similar: strengthening the legitimacy of the Ottoman Dynasty, supporting propagandistic goals, and contributing to the symbolic consolidation of the territorial occupation.

Based on analogy the Kosovo site is thought to have the same role, with the important difference, that Szigetvár had always been part of the Ottoman-Habsburg frontier zone. With the expansion of the Ottoman Empire, the frontier moved away from Kosovo by the 2nd half of the 15th century and therefore its symbolic and ideological significance decreased. Evlia Chelebi even

[6] The perfect martyr must meet six conditions: 1. Only Muslims can be perfect martyrs. 2. He must be responsible. 3. He must be in a state of ritual cleanliness. 4. He must be killed deliberately. 5. He must be found dead on the battlefield. 6. There cannot be a bounty on his head. (Yüce, A. 2000).

[7] Murad I (1362–1389), Osman II (1618–1622), Ibrahim (1640–1648), Selim III (1789–1807), Abdulaziz (1861–1876).

[8] Database of Cultural Heritage of Kosovo, Ministry of Culture, Youth and Sport, Republic of Kosovo. *Source*: https://dtk.rks-gov.net/tkk_objekti_en.aspx?id=8970 – Downloaded: 01.06.2018.

[9] A type of religious building complex.

[10] Sanctuary.

described the Murad Memorial in Kosovo as neglected in the 17th century (Dankoff, R. and Elsie, R. 2000). The retreat of the Ottoman Empire in the 19th century put Kosovo and the Murad mausoleum back to the frontier zone, thus, increasing its significance and re-enhancing it with symbolic and propagandistic importance (Pap, N. 2019).

In 1848 the turbe was enlarged with additional buildings for accommodation of the visitors (Ayverdi, E.H. 1957). The archives notify that in 1906 Sultan Abdulhamid II opened the Selamlık Building (hotel) and afterward, the tomb was placed under the protection of the Young Turks' government. Its re-appreciation can be traced back to the Balkan wars when Sultan Mehmed V Reshad visited it in 1911 and attempted to use it for the political mobilization of Balkan Muslims, unsuccessfully. During his visit, Sultan Reshad enlarged the site by launching the basis of the Reşadiye Medrese, a religious school. At this ceremony Sultan Reshad and his followers also announced the day of Sultan Murad's death, i.e.16 June as a national day of remembrance and called all Ottomans to visit his grave in Kosovo, a move attempting again to use the site for mobilization. Thus, both mausoleums played a significant role in the political mobilization of the Muslim subjects of the empire against their potential enemies and their symbolic occupation policy.

With the empire moving out of the region in the 20th century and the formation of the Republic of Türkiye, the importance of the mausoleum was reduced, however, it did not fall victim to the new Serb rulers either: protection was granted along the Serbian-Ottoman peace agreement. Plundered during the World War I and II, the mausoleum was announced as destroyed by the Yugoslavian government on 22 October 1952, however, it was placed under the protection of the Yugoslavian government and restored in 1967. Kosovo Turks took care of the site until 1999 when Prime Minister Suleyman Demirel visited it and Ankara undertook its restoration.

Memorialization today

An active 21st century Turkish foreign policy increased the mausoleum's importance considerably. One of the core means of Türkiye's return to the region, or as adversaries label it "neo-Ottomanism", in the area of the former empire is the restoration of cultural heritage with the help of Turkish public funds, within the framework of Turkish soft-power, providing visibility and symbolic presence. The renovated mausoleum is in very good condition, it is accessible and well-kept, and the site also directly displays the symbols of the Republic of Türkiye. A museum has been added to the complex as an extension (2010, financed by TIKA [Turkish Cooperation and Coordination Agency], and Diyanet, a Turkish state agency, opened by the then Prime Minister of the Republic of Türkiye, Erdoğan), perfectly apt for promoting the Turkish narrative even further. The fountains built by prominent pashas (Sultan Reshad) and graves of famous believers and soldiers (Pasha Rifat) that surround the mausoleum demonstrate that it represented a spiritual graveyard, especially at the time of Sultan Abdulmecid, Sultan Abdulhamid, and especially the Young Turks whose majority came from the Ottoman Balkan vilayets.[11] Today the mausoleum is a symbol of Ottoman victory, but also a site of prayer and mourning for the lost Rumelia lands.

Close to Murad's mausoleum is the tomb of the sultan's standard bearer (Bayraktar), who also died in the Battle of Kosovo. The memorial is said to date back to the 14th century, which raises questions similar to those of Murad's mausoleum.[12] The Bayraktar Mausoleum has also been restored using Turkish state resources, is in very good condition, and symbolizes the presence of the Turkish state *(Photo 2).*

[11] Dr. Neval Konuk Halaçoğlu 2021. "Kosova Sultan Murad Hudavendigar Türbesi". *Source*: https://www.rubasam.com/kosova-sultan-murad-hudavendigar-turbesi.html – Downloaded: 5.3.2021.

[12] Database of Cultural Heritage of Kosovo.



Photo 2. The Bayraktar Mausoleum, close to the Murad's one.

Besides the official discourse regarding the Murad's mausoleum as a historical Ottoman heritage in the Balkans, three main streams in the literature in Türkiye show interest in this monument: One belongs to the Islam-centred circles, the other to the Turkish-Islamic synthesis, and the third one belongs to the Turkish minority living in Kosovo.

Turkish-Islamic synthesis emphasizes the battle as a *fetih* (conquest) performed by the *akincilar* (raiders) that had spread Turkish Islam beyond Anatolia to the Balkans (Türk Tarih Kurumu, 1992). According to this nationalist perspective, Ottomanism is closely connected with Turkish identity and the Ottoman expansion to the Balkans is in fact Turkish progress in Europe (Gündoğdu, H. 2014). This approach is to a certain extent similar to the one shared by the mainstream right-wing liberal parties in Türkiye (Rüma, İ. 2011).

The Islam-centred approach grasps Sultan Murad as *mujahid*, and the mausoleum as an Ottoman Islamic heritage of the first sultan of the Ottoman Empire who spread Islam to the European lands and moved the centre of the Ottoman state from Bursa to Edirne.[13] This literature prefers to call the historical monument a symbol of the revival of the meshed and the Kâbe/Kaaba in the Balkans. Islamic discourse is used to emphasize the sacrifice of Sultan Murad for the Muslim world and his dedication to spreading Allah's word into Christian lands. The most important document that is referred to here is the prayer of Sultan Murad to become a martyr of Allah as cited in Mehmed Neşrî Efendi's Kitab-ı Cihan-Numâ. Conservative Albanian circles who often refer to their Ottoman past by using the saying: "*Elhamdülüllah Türküm*" ("I am Turkish because I am Muslim") are also prone to see the mausoleum as a sacred memorial of Islamic culture and history in the Balkans.

Turkish minority in Kosovo approaches the Turbe as a sacred monument that protects and proves the heroic Turkish presence in the Balkans (Recepoğlu, A.S. 2001). For them, the mausoleum represents the "title deed of Turkish presence in Kosovo" and the battle of Kosovo Polje (1389) is the victorious moment when European lands opened for the Turks and 500 years long Turkish presence began in the Balkans.[14]

Kosovo and Serbian politics of memory

After the Battle of Kosovo, the Serbian church and folk poetry started building an extensive world of legends around the events, which

[13] "Kosovanin En Onemli Turbesi Meshedi Hudavendigar", *Yeni Asır*. *Source*: https://www.yeniasir.com.tr/sarmasik/2013/12/12/kosovanin-en-onemli-turbesi-meshedi-hudavendigar –Downloaded: 12.12.2013.

[14] Dr. Altay Suroy Recepoğlu 2023. "Kosova'da Türk İzleri-1". *Source*: https://www.turkaydergi.com/2023/09/04/dr-altay-suroy-recepoglukosovada-turk-izleri-1-kosovadaki-turk-ve-islam-varligini-en-az-on-cag-oncesine-goturen-maddi-ve-tarihi-delillerher-seye-ragmen-hala-ayakta-duran-ve-ziyaret/ – Downloaded: 4.9.2023.

evolved and transformed over the centuries (Malcolm, N. 1998; Greenawalt, A. 2001; Bieber, F. 2002; Čolović, I. n.d.). One legend tells of Lazar, the Serbian ruler who lost his life in battle, opting for the Heavenly Kingdom instead of the Earthly one, thus, losing the battle and his life, but securing the Serb's future in the long run. Conscious self-sacrifice for a higher cause is an important component of Christian martyrdom. Well-known Christian saints (e.g. St. George, St. Sebastian, etc.) die for their faith, but in a political context dying for a cause (other than faith) can also lead to martyrdom as is the case with Central European heroes (e.g. the Croat-Hungarian Nicholas Zrínyi, defender of Szigetvár, against Suleiman I.) fighting against the Ottoman Empire, where faith also comes into play since the struggle is widely perceived as a holy war, a fight between Christianity and Islam.

The Serbian Orthodox Church soon began to build the martyr cult of Lazar. His canonization is surrounded by many uncertainties, most likely it happened in the years following the battle (Malcolm, N. 1998, 77), however, he only became an important national hero during the modern nation-building process of Serbs (19th century), when the unification of Serbs (including the conquest of Kosovo among other lands) became high on the Serbian national agenda. One obstacle in the unification and the occupation of Kosovo was the Ottoman empire in decline, against which the 14th century myths about the battle of Kosovo and its heroes provided a useful narrative (against which Murad's mausoleum regained its symbolic importance and mobilizing value as was shown earlier). The cult of Lazar is, thus, not only a church cult but also a state/national one. The church and the state are closely intertwined in the Orthodox cultures and many saints are also "national" saints as well. Thereupon, Lazar, like Murad, became a martyr of a sacred national cause (for the Serbs) by the late 19th century, both a church and state/national hero.

Another important event is the killing of the sultan by Obilić which became a symbol of the importance of armed resistance, Obilić himself emerged among the saints of the Serbian Orthodox Church by the 19th century (Malcolm, N. 1998), unsurprisingly in times when Serbian political and armed struggles are on the way to (re)conquer Kosovo.

From the 19th century, as a result of Serbian national revival and growing nationalism, the Kosovo legends with self-sacrificing Lazar and sultan-killer Obilić became means for nation-building and Serbian expansionism against the Ottoman Empire, which ruled Kosovo until 1913 (Malcolm, N. 1998; Čolović, I. n.d.). Thus, the fighter/ruler, martyr/saint are the most important figures in the Serbian narrative, representing the Serbian "right" to territory, not only in a secular but also spiritual/religious context, much in the same way as Sultan Murad who "confronted" them in the symbolic space once again in the 19th century.

Memorializing politics of memory

According to historical tradition, Lazar and the Serbian heroes were memorialized in the Kosovo field early on and, similarly to Murad, the monument was said to be erected by the child of the deceased ruler. However, Lazar's monument is no longer standing and it is not certain that it ever existed. The marble column erected by Štefan Lazarević was lost in Ottoman times (Šuica, M. 2011), if it existed at all. The obelisk, restored under Serbian rule in 1924, was destroyed during the short Albanian rule during World War II (Vlašković, Z. 2016).

The most famous monument of the battlefield was erected in Gazimestan *(Photo 3)* after the return of Serbian/Yugoslav rule. Although Serbian historicism and ethno-nationalism weren't dominant ideologies at that time, still the Serbian leadership decided to construct a memorial in 1953 which became a place of remembrance and scene of formal commemorations. The architectural design does not look like a grave site or a place of mourning (though it was established where

Serbian knights are thought to rest). The structure is more fortress-like, radiating power and resembling a military object. In contrast to the Turkish tombs and the Jashari complex discussed in the next section, it represents the violent nature of control over the area and the perpetuity of the fight.

The complex has also been a focal point of Serbian identity from the last decades of the 20th century. During the years of post-Tito Yugoslavia Kosovo and the memorial within symbolized Serb suffering and at anniversaries, especially in 1989 with the infamous Milošević-speech, it was also utilized by politicians in their power struggles recalling the civilizational nature of the fight and Serb victimhood (Bieber, F. 2002) in a context of tense interethnic situation in Kosovo.



Photo 3. The Gazimestan memorial, close to the Murad's Mausoleum.

Memorialization today

Political geography vastly influenced memorialization in the region. The late erection of the Serbian monument (lack of territorial control) and the renovation of the Murad mausoleum (Türkiye's return to the Balkans) are examples of it. The independence of Kosovo also put one of Serbia's most important memorial sites onto the territory of another country, with which relations are far from cordial. Thus, Serbs might have a much more difficult time maintaining and developing their memorial site.

The change of rule over Kosovo made local Serbs a minority, in many cases living in ethnic enclaves where laws confer on them broader community rights (Constitution… 2008; Law No. 03/L-040), so the territorialisation of Kosovo's Serbian memory politics also focuses on these areas. On the other hand, the Albanian nation, gaining a powerful position, has condemned to oblivion objects of remembrance related to the former hegemonic ethnicity, and has partly destroyed them following bottom-up and top-down initiatives.

However, the Serbian enclaves still have the opportunity to create new memorials that embody Serbian narratives. In 2016, Serbia gifted a huge statue of Lazar to ethnic Serbs in the divided town of Mitrovica, one of Kosovo's most sensitive political geographical locations *(Photo 4)*. It is the first Lazar statue in Kosovo after the demolished statue in Gnjilane, representing the citizen's connection to the territory.[15] The monumental statue (7.5 metres) is leaning on his drawn sword, pointing to Gazimestan, the site of the battle. Of course, Prishtina, the Albanian-dominated capital of Kosovo is also in that direction, as well as the Albanian-majority areas of Mitrovica beyond the river which have already seen interethnic clashes during the early 2000s (Bottlik, Zs. 2009; Bottlik, Zs. and Gyuris, F. 2010).

[15] Interview on the erection of the statue in English: The monument as the pillar of Serbian spirituality. *Source*: http://www.kosmitrovica.rs/the-monument-as-the-pillar-of-serbian-spirituality/ – Downloaded: 18.11.2019.



Photo 4. Statue of Prince Lazar in Mitrovica

Located 10 km southeast of Prishtina, and 12 km away from Gazimestan, Gračanica is another important Serbian enclave with a 13th century monastery, which is the central ecclesiastical site of the Battle of Kosovo. Nowadays, the issue of the ownership of church property in Kosovo is an important scene in the Serbian-Albanian struggle, thus, adding another layer to the importance of Gračanica. In addition, the statue of Milos Obilić, (originally located in the town of Obilić, named after him), was re-erected here in 2014 surrounded by Serbian national symbols.

The territory of Kosovo is, thus, segregated from a memorial aspect as well. The Serbian population has been moving into ethnic enclaves as well as some of the territorialized elements of their remembrance and memory politics. Only here can new memorials be erected and the old ones outside the enclaves are feared to eventually be removed by the politics of oblivion of the majority nation.

Albanian politics of memory

The Albanian majority has more political power and can form its memory politics countrywide. Kosovo independence monuments (Newborn), statues of domestic and international politicians (W. Clinton, I. Rugova, etc.), and Pan-Albanian historical heroes (Skanderbeg, Mother Theresa) were erected, and the names of public spaces changed accordingly. In addition, a new personal cult has been constructed around the late fighter Adem Jashari.

Several spectacular independence/KLA memorials appeared nationwide announcing the new masters in the area (Di Lellio, A. 2013). One spectacle can be seen about 10 km north of the Serbian and Turkish memorial sites of the Battle of Kosovo, between Prishtina and Mitrovica *(Photo 5).* In the vast majority of monuments, like here, the memorials use Albanian national symbolism, not only promoting the independence of Kosovo but also Albanian national consciousness.

Modern monuments add new importance to the geographical area of Kosovo for Albanians. Albanians have entered the former Ottoman-Serbian sacralised space as relatively young actors. The emergence of Albanian flags and coats of arms, tombs of heroes, and monumental concrete structures are aimed to counterbalance other historical/memorial claims to Kosovo. Cemeteries in particular play a role in remembrance and military commemoration. Symbols and colours are often Albanian, not Kosovan, which promotes Albanian nationalism.

Shifting Albanian narratives through territorialisation

The territorialisation of Albanian memory politics began with the end of Serbian rule in Kosovo and steps were taken to unravel Serbian narratives marked by Serbian memorial sites. One example of this is the attempt to change the dominant Serbian narrative about Serbs confronting Ottomans in the Battle of



Photo 5. Kosovo Liberation Army (KLA) Monument at Vučitrn

Kosovo. Serbian memorials tell of a Serbian-Ottoman battle while in Albanian and international historian circles the dominant narrative consists of a Christian (including Albanians)-Ottoman dichotomy (Malcolm, N. 1998; Dalipi, Q. 2009; Di Lellio, A. 2009), although some Serbian politicians are reluctant to accept this (cited by Bieber, F. 2002). Kosovo's independence has empowered the Albanian elite to go beyond historical debates; some Albanian politicians argue that a memorial should be constructed in honour of the Albanian victims of the battle.[16] The main objective here is to Albanianise the existing memories and change the exclusively Serbian narrative which dominates not only the Gazimestan monument but also the Turkish Museum near the Murad turbe. The hope here may be to territorialise an equivalent Albanian memorial narrative and contribute to the creation of an Albanian ethnoscape. (further on territorialisation of memory: Smith, A.D. 1996; Richardson, P. 2015).

Another attempt to change the long-standing Serbian narrative is the changing discourse of the Second Battle of Kosovo of 1448. A lesser-known event than the first battle, it was important in its time and the Kosovo elite seems to be making efforts to use it in identity construction today. It is a seemingly ideal choice because of its similarity in name and it also features Skanderbeg, a well-known Pan-Albanian national hero. He was an ally of Hungarian governor János Hunyadi who led the Christian crusade against the Ottoman army in the last attempt by the Hungarian state to liberate

[16] *Source*: https://kossev.info/haradinaj-trazi-spomenik-za-pale-albanske-borce-u-kosovskom-boju/

the Balkans. Based on the historical tradition of the battle, the Serbian despot refused to march against the Ottomans and actively prevented Skanderbeg and Hunyadi from joining their armies before the battle (Bánlaky, J. 1936; Ágoston, G. 2014; Whelan, M. 2016).

The battle is believed to have taken place southwest of Prishtina (Bánlaky, J. 1936), but its exact location is unknown. The political and scientific Kosovo elite seems to be making attempts to locate the site by archaeological means and begin developing its memorialization. The Second Battle of Kosovo may be perfect for building a counter-narrative of the Battle of Kosovo. It centres on a Pan-Albanian national hero trying to protect Europe from the threat of an eastern, non-European Empire. According to legend, the Serbs, the Albanians' biggest rival today, prevented them from doing so. This narrative may also link Albanians and Skanderbeg to Kosovo.

In addition to constructing new memorials, Albanianising existing Serbian memory politics, and territorialising new Albanian historical narratives, some Serbian memorials were also destroyed. Miloš Obilić's equestrian statue had to be taken from Obilić to Gračanica in 2002, and in 1999 the only Lazar statue in Kosovo was demolished by the Albanians (Ramet, S.P. 2011) along with the destruction of several other objects of Serbian-built heritage (Herscher, A. and Riedlmayer, A. 2001).

Martyrdom and Albanian politics of memory

Albanian Kosovans' most important narratives of memory involve Adem Jashari, a fighter who died in the armed conflict against Serbian forces. Jashari lived northwest of Prishtina in the Drenica Region and became a symbol of martyrdom, one of the most famous victims of the Kosovo independence struggle. Jashari was raised in an Albanian patriotic way, his father went to prison because of his overtly Albanian sentiment. From 1991 on, he fought against the Serbian army, received military training in Albania, and according to the official narrative co-founded the KLA and became its commander. In 1998, he was killed in his house surrounded by Serbian forces, along with nearly fifty family members, following a 3-day siege (Fylli, D. 2012) *(Photo 6).*



Photo 6. Location of the 3-day siege, where Adem Jashari was killed by Serbian forces (Photos taken by the authors.)

Jashari is one of the greatest heroes of today's Kosovo Albanians and many institutions and public spaces (most of the major towns of Kosovo have Adem Jashari streets) are named after him, including the Prishtina Airport, the Prishtina military barracks, Mitrovica sports stadium, etc. Unlike Lazar and Sultan Murad I, Jashari was not a political leader of his people (although the recent narrative, with the founding of KLA, moves his remembrance in that direction). He did not meet his fate leading the army, yet he became a martyr of the nation, a symbol of unmistakable armed resistance and self-sacrifice. Although Di Lellio, A. and Schwandner-Sievers, S. (2006) note that Jashari is a different kind of martyr than Murad, the latter being a martyr of religion while the former a martyr of the nation, this distinction may be less important for Kosovo's nation-building. Murad is a martyr of religion, but in the 19th and 20th centuries, his memory was "used" to mobilize for the secular interests of the empire. Lazar is a saint of the Orthodox Church, but also an important figure in Serbian national identity, a mobilizing symbol in the interests of Serbian national goals from the 19th century. Jashari's role in political mobilization is what situates him next to the other two martyrs. Jashari's martyrdom was also officially recognized, but while Murad and Lazar were done so by their religious leaders (the most important authorities of their time), Jashari was officially elevated among martyrs by the Kosovo legislature (again the most important authority in his time); Jashari was even granted the title Legendary Commander and his family special status (Law No. 04/L-054). This secures his place in official Kosovo memory, bringing him to the level of the two aforementioned official martyrs.

Memorial Complex Adem Jashari is located in the vicinity of Kosovo Field and the size of the national heroes' memorial is monumental concerning the size and resources of the state (see *Photo 6*). The dilapidated, half-destroyed houses are intentionally preserved in their present state, reminiscent of the violence that occurred there. Next to the house is a museum and a military cemetery with a permanent guard of honour, plaques, and statues decorated with Albanian national and military symbols. The site is governed by its law (Law No. 2004/39) which makes it a national highlight. With the Jashari Complex, Albanians once again place military, martyr, and national memorials in the contested space.

Conclusions

Owning our past and history and controlling our narratives are widely used means for legitimizing territorial control. Kosovo has undergone several changes of territorial rule, none under peaceful conditions. The armed events and their spatial memorialization are components of the territorial struggle in Kosovo along with its questioned sovereignty, disputed borders, forming identities, and foreign influence. Ongoing territorial-political debates continue between Serbs and Albanians while Türkiye has returned to the scene, mainly through means of soft power.

Furthermore, the populist movements of the early 21st century positioned identity in the focus of politics, which therefore turned out to be one of the major means of political mobilization. The foundations of identity discourses are first of all the histories and through their territorialisation the geographies, hence they are mainly built upon place-based narratives.

The narratives of memorialization for each of the three nations, covered by this study, are centred on a mighty military man who fought and died of martyrdom for his "sacred" (national) cause. All of them were formally martyred by the most important institutions of their time: the 14th century Orthodox and Muslim religious leaders and the 20th century state and have been used to mobilize "their" people. Their memories have been territorialized, forming an important link between nation and territory and creating a hybrid, multi-layered military, and memory landscape *(Figure 1)* with significant differences among the nations.

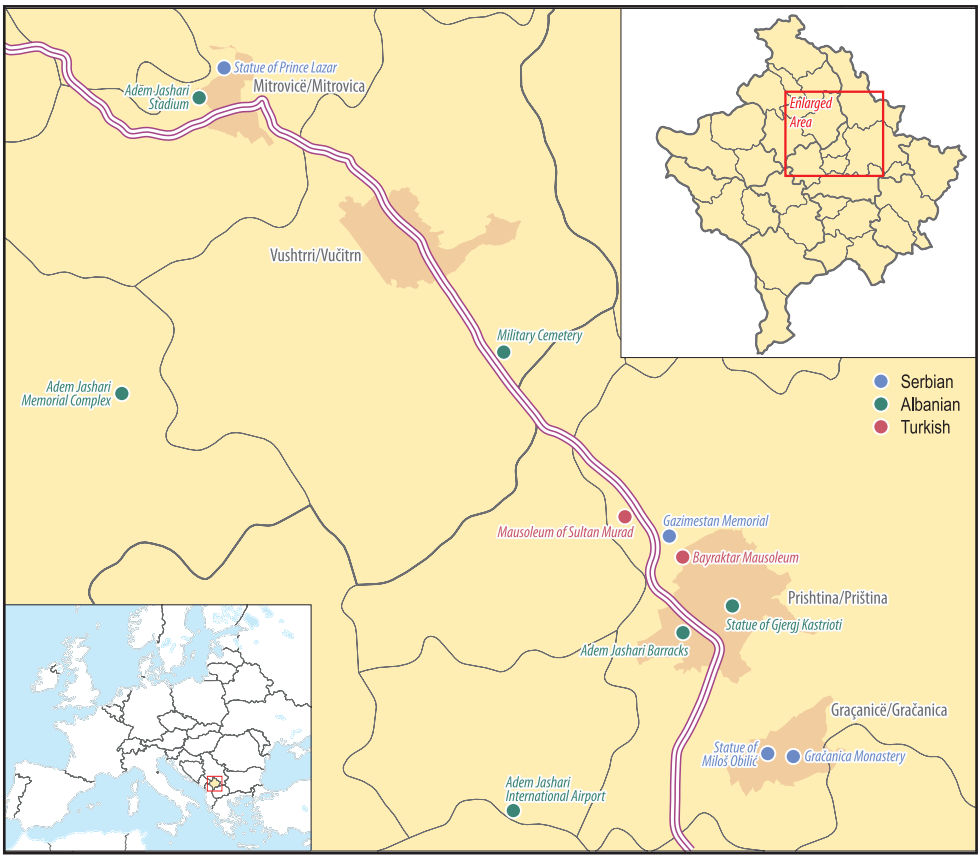


Fig. 1. Some of the major memorial sites of the three narratives inside Kosovo. *Source*: Compiled by the authors. Cartography by Tamás Szabó.

The spatial representations of Serbs' narratives are currently in territorial decline, they have been withdrawing to minority majority municipalities (Lazar and Obilić statues). The immobile structures (like Gazimestan) reflect waning power (remnants of a powerful past but being neglected), the new Kosovo elites are not interested in improving their influence and Serbia does not have the means to do so. Türkiye's narratives on the other hand are well represented by Murad's renovated complex. The site is less militaristic, serves as a place of mourning (tomb) and spreads the narrative directly (museum), displaying the state's vast resources, soft power and overall influence.

Spatial representation of Albanians' narratives are the most widespread and seem to be in constant growth. Numerous new monuments connected to Kosovo's and the Albanians' history mark the landscape, of which the ones connected to the Liberation war are the highest in numbers. The narrative they represent includes the successful liberation by force in the form of military cemeteries, statues, murals and billboards of soldiers in arms as well as public spaces renamed after persons actively involved in the war. The Jashari complex is the largest and most highlighted one, where both armed resistance, self-sacrifice and everlasting gratitude from the nation is represented.

The future of these spatial representations are strongly connected to the future of interethnic relations, where a reconciliation may open up room for Serbs to take care of their sites, while remaining tense situation would prevent it.

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Materialization of spatial identity in Slavonia and Baranja's linguistic landscape changes

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Abstract

The linguistic landscape is an essential aspect of determining how language materializes in our surroundings. It is especially important in multilingual communities, as it reflects their identity. The linguistic landscape changes over time due to various factors, such as changes in politics, economics, and the national minority population. Study aims to explore how language manifested in the cultural landscape of Slavonia and Baranja, how it changed over time. Linguistic signs can also reflect the spatial identity of the population in the investigated periods (and its changes). Research compares the linguistic landscape of the turn of the 19th and 20th centuries with the contemporary period. We used old postcards as sources for the turn of the 19th and 20th centuries and conducted fieldwork for the modern period. The research involved analysing a vast corpus of linguistic signs in the cultural landscape. Research showed that the linguistic landscape, both in the past and present, is visible through various inscriptions on shops, craft stores, state institutions, and street names. Official inscriptions on public institutions in Croatia are written in the Croatian language, and in ethnically diverse areas, these inscriptions are bilingual, but not to the extent allowed by the Croatian Constitution. Homogeneity or heterogeneity of the linguistic landscape users determines its appearance. Croatian is the primary language in most of inscriptions. However, the status and dominance of other languages have changed, depending on the complex political and linguistic past of the region. The study has confirmed that the linguistic landscape reflects both the spatial identity as well as the heterogeneity and multilingualism of the linguistic landscape in urban and rural areas.

Keywords: linguistic landscape, linguistic sign, postcard, cultural landscape, Slavonia, Baranja, diachronic approach

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Introduction

Throughout history, the language and cultural landscape of a region can be traced through the pictograms found in cave walls and other inscriptions in the vicinity. This trace is reflection of the identity of the population. The materialization of language is an important component of the cultural landscape, and it serves to indicate the spatial identity. The linguistic landscape can be analysed by examining the written language, or language signs, in public spaces, both urban and rural.

The term "linguistic landscape" was first coined by two Canadian linguists, Landry, R. and Bourhis, R.Y. (1997). They defined it not only as the »distinctive marker of the geographical territory inhabited by a given language community« but also as »delineate marker of the territorial limits of the language groups witch harbours relative to others linguistic communities inhabiting adjoining territories«. The definition of a linguistic sign has since been further clarified and now encompasses all linguistic inscriptions in public spaces, including traffic signs, signboards, street signs, store names, advertisements, and more. Backhaus, P. (2007, 66) provides a more detailed description of the linguistic sign as "any part of a written text spatially

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defined by a frame". He suggests that a message can take many forms, ranging from a handwritten note on a small piece of paper to a large billboard advertisement. Examples of messages include signs at the entrance of a store, inscriptions on doormats, and botanical nameplates in a botanical garden.

The study of linguistic landscape started in the early 1970s when a geographer, Masai, Y. conducted the first survey of the linguistic landscape by studying the language used on signs of shops, cafes, and restaurants in Shinjuku, Tokyo (Masai, Y. 1972). He collected data from 3000 samples, focusing on the type of language, script, and the type of activity represented by the inscriptions. Through analysis, Masai found that English language signs were more prevalent in Japan than any other language. He also discovered a correlation between the use of language and activities. For instance, Japanese bars and traditional activities predominantly used Japanese, while Chinese restaurants used Chinese, and cafes and restaurants often opted for English names.

Tulp, S.M. (1978) and Monnier, D. (1989) studied the geographical distribution of languages in multilingual areas. Tulp focused on the language displayed on commercial billboards in Brussels and found that the distribution of languages is determined by geography. In the northern part of the city, where the Flemish population resides, Dutch billboards are predominant, while in the southern part, where the Walloon population lives, both French and Dutch languages are represented. Monnier, on the other hand, examined the linguistic landscape of Montreal and identified a relationship between the linguistic composition of a certain area and the language used on signs. He discovered a clear connection between the written language outside a shop and the spoken language inside. But those early researches had no systematic approach and faced many doubts due to the lack of research methodology (Grbavac, I. 2018).

Landry, R. and Bourhis, R.Y. (1997) recognized the potential of linguistic landscape research, and the first phase of research began. During this phase, research focused on inscriptions in multilingual urban areas such as the USA, Canada, Israel, the Netherlands, and Belgium. Urban environments, as conglomerates of human activity, are the spaces with the richest linguistic diversity. This period gave birth to a new term – *linguistic cityscape*. The studies mainly questioned language policy and historical heritage and involved listing written signs like road signs, street signs, place inscriptions, inscriptions by places, buildings, institutions, advertisements, etc. These signs were then coded based on different variables that the researcher singled out himself. For example, the language of inscriptions, official regulations related to the use of official languages, comparison of the number of speakers and language signs in space (Spolski, B. and Cooper, R.L. 1991; Ben-Rafael, E. *et al.* 2006; Backhaus, P. 2007).

Landry and Bourhis viewed the linguistic landscape as a *signifier* of the power and status of language communities in a particular territory (Ferdinand de Saussure's semiotic theory – de Saussure, F. 2000), and a provider of data on the informational and symbolic functions of the language used by the community. For a language sign to make sense, it must be placed in the right context. In this case, the linguistic sign is a *signifier* that refers to a *signified,* i.e. company, street, or other entity. Ferdinand de Saussure's semiotic theory suggests that the signifier refers to the signified. However, Charles S. Peirce, an American philosopher is the 1860s, adds a third element – *the interpreter* (reader/listener). The interpreter connects the signifier and the signified with their own interpretation, determining how they will perceive a particular sign (Atkin, A. 2006). It's important to consider not just the content of linguistic signs, but also how we consume them. Research by Ben-Rafael, E. *et al.* (2004, 2006) showed that people are motivated not only by a desire to express their identity through language, but there is also a different motivation, like economic

interests. In other words, the creators of linguistic signs may prioritize attracting potential clients over presenting their own identity characteristics. Additionally, the placement of linguistic signs can be influenced by political relations, particularly in sensitive sociopolitical environments. Apart from simply listing signs and analysing their meanings, some studies have compared the results with the regulations on the use of official languages and the estimated number of speakers of each language in that area (Wenzel, V. 1996; Ben-Rafael, E. 2006). These studies introduced elements of demography and social geography into the research of linguistic landscapes. Some authors explored the spatial distribution of languages in urban areas and correlated the data with the spatial distribution of the population (Ben-Rafael, E. 2008), and some other authors correlated this with the historical geographical development of the researched area (Blommaert, J. 2016).

During the second phase of research, the focus shifts from frequent documentation of language signs to studying the semiotic spectrum. Scollon, R. and Wong Scollon, S. (2003) broaden the scope of research to include multimodal (sound, moving) signs. They believe that signs only acquire meaning when we relate them to others and consider their social and material environment. Therefore, this phase of research often investigates politics (national, regional, local), language policy, sociology, demography, and various economic activities (economy, tourism, trade), and uses two different perspectives of social relations: top-down and bottom-up. The linguistic landscape is viewed as a state (quantifying linguistic signs and explaining how they fit into the space in which they are located) and as a process (planning of linguistic signs). The papers also address the issues of personal, collective, and national identity, language policy, and expand the theoretical and methodological framework. This research also includes studies on the linguistic landscape in Croatia, specifically in Osijek (Gradečak-Erdeljić, T. and Zlomislić, J. 2014), Rijeka (Rončević, M. 2019; Stolac, D. and Hlavač, J. 2021), Zadar (Oštarić, A. 2020), and Sinj (Bošnjak, J. 2022). By this stage the linguistic landscape had become highly multidisciplinary field, with scientists from various fields of study currently involved. Although geographers were the first to research the linguistic landscape, they are rarely involved in it today.

Among rare geographical researches is the research of marketing landscapes (Maruani, T. and Amit-Cohen, I. 2013) in which authors examined advertisements for new housing estates to understand the significance of landscape values associated with the names of investments. They conducted a comparative semiotic quantitative analysis of the advertisements, focusing on one specific component: the project name. The study provided insights into the relative importance of landscape values and identified the implications and associations that the names of housing developments generally evoked in potential buyers. Hannum, K.L. research (2022) delves deeper into the linguistic landscape, examining how language represents the imaginary landscape in the Spanish region of Galicia. In this region, the national landscape and language have become intertwined. Hannum interviewed Galician educators and found a clear connection between language and the landscape. Booth of them serve as foundational symbols of identity, highlighting how the Galician language embodies the representation of an imaginary landscape.

The linguistic landscape reflects the spatial identity of communities. According to Cifrić, I. and Nikodem, K. (2006, 2007) social identity has its dimensionality which are defined through its four conceptual categories: social, cultural, spatial and family gender. So, every identity has its spatial dimension because every individual and collective action takes place in some space (Vukosav, B. and Fuerst-Bjeliš, B. 2015; Fuerst-Bjeliš, B. 2021). In this context, spatial identity is defined by how people perceive and experience space. When shaping spatial identity (sense of belonging to a place) the naming of specific locations (toponyms) or the use of language signs plays

a crucial role (Mirošević, L. and Vukosav, B. 2010). Border regions, like Slavonia and Baranja, are particularly sensitive because their regional identity is influenced by political and territorial changes that could make them marginalized with negative feelings (Kajić, S. *et al.* 2022). Research in multilingual communities is particularly interesting as it is influenced by various factors such as the share of the national minority population, political and economic changes, and changes over time. The contemporary linguistic landscape is usually explored through fieldwork. Researchers usually investigate the cultural landscape, specifically public space in urban settlements (Miles, M. 2007; Ben-Rafael, E. 2008), as it is believed to have the highest concentration of language signs due to the largest interaction of people and dissemination of cultures. Most of the linguistic landscape research is synchronic, with a diachronic approach being rare (Spolski, B. and Cooper, R.L. 1991; Backhaus, P. 2005; Rončević, M. 2019). Some research touches on it, but few studies explore it in-depth (Gradečak-Erdeljić, T. and Zlomislić, J. 2014). Historical research can be challenging, as sources for past periods are often scarce and vary in availability across different areas. This can make it difficult to conduct research on a wider spatial framework or to make comparisons. However, one valuable and reliable source for diachronic research is old postcards.

Postcards depicting our cities have a history that dates to the 1880s. This means that for over 150 years, people have been capturing photographs of various places and events, whether they were amateurs or professionals. While most of these photos remained in private albums, a few were published on postcards. Postcards were not taken seriously for a long time because they were thought to be objects of transient value with no real purpose, meant only for intimate communication between friends and family. However, their popularity stemmed from their ability to influence their observers with their visual representation. Even today, postcards are still popular, with the only difference being the change in interest groups. The former broad masses have been replaced by a narrower circle of experts and scientists who view postcards as a material visual resource that provides multi-layered data, depending on research interest, for many multidisciplinary studies. Essentially, postcards serve as an archive of individual spaces, interesting views, landscapes, and important events from public life such as current events, royal visits, portraits, exhibitions, and more, all captured in their pictorial parts (Bogavčić, I. 2015).

Geography has shown interest in old postcards as a valuable visual source for numerous geographical studies. Among the most popular are cultural, historical, and linguistic geography. While postcards with landscapes were mainly produced as tourist souvenirs, their communicative aspect provides geographers with insights into the layout of urban and rural spaces, particularly cultural objects, and the way language has evolved through time in space (Zupanc, I. 2010).

The purpose of this research was to investigate the relationship between language and culture in Slavonia and Baranja regions. The study aimed to determine how language was manifested in the cultural landscape over time and how it contributed to the spatial identity. To accomplish this, the study posed several research questions such as: How visible is the linguistic landscape in the cultural landscape? Who plans and designs the linguistic landscape? Who benefits from it, and how does it contribute to the spatial identity of the population? To determine changes in the linguistic landscape, the study examined the linguistic landscape during two reference time periods - the beginning of the 20th century and the beginning of the 21st century. This study contributes to academic and practical, societal domains. Academically, it contributes to the field of geography by expanding the knowledge base on linguistic landscape, an area that is insufficiently explored in geography. The analysis of linguistic landscape, both historically and in the present, offers insights into numerous unanswered questions that geographers

encounter. This type of research can unveil the educational, economic, ethnic, and linguistic structure of a population, provide indications of migration (as a result of population migration, many cities are becoming more multilingual) and population development, aid in analysing the spatial distribution of the population, and shed light on various other demographic characteristics of a given area. By investigating diverse characteristics of signs, this study provides valuable insights into the dynamics of language and spatial identity within the Slavonia and Baranja regions. From a practical view, the findings of this research can foster language policy development and intercultural understanding in researched spaces. It is important to observe state institutions approach to managing multilingualism in their region. Understanding the prevalence and usage of different languages can guide local authorities to enable inclusive and multilingual environments and intercultural dialogue, in order of the linguistic needs of local population.

Based on the questions presented, the following hypotheses are suggested: The national government plans the linguistic landscape, and lower levels of government implement these decisions. The linguistic landscape is highly visible in the cultural landscape and is primarily designed for the ethnic majority population. The linguistic landscape reflects the spatial and ethnic identity of the population.

Research methodology

The term "linguistic landscape" in this study refers to all the visible linguistic signs present in a cultural landscape, such as the public spaces of a city or geographical area. The basic unit of analysis in this research is a linguistic sign – any part of a written text within a spatially defined frame, regardless of its size. The most common way in which language signs were observed in this research was through road signs, advertising signs, place names, signboards (and other inscriptions on buildings), toponyms, and other inscriptions on postcards, among others.

The study utilized two research instruments: a camera (digital camera and mobile phone) for collecting the data and the researcher for capturing photographs of the signs within the linguistic landscape contents and later for analysing the findings. The data source in this study were the researcher's photographs of the signs (post cards and contemporary linguistic landscape signs). Samples from the older period were taken from a corpus of archival material (from private and state sources) that has been published in Širić, D. (2002) and Ivanković, G.M. (2007). Corpus is selected with an attempt to select equally random representative samples from both urban and rural areas of Slavonia and Baranja. The urban area represented in the research refers to Belišće, Daruvar, Kutjevo, Lipik, Našice, Nova Gradiška, Osijek, Pleternica, Slavonski Brod and Vinkovci, and the rural area to Aljmaš, Čepin, Darda, Kopačevo, Rajić, Vrpolje and Zmajevac. Samples were taken only from the front of the postcard. 134 postcards were collected from which 275 language signs were extracted. For the contemporary period, random representative samples were collected through field research and photographed the contemporary linguistic landscape in Daruvar (western Slavonia), Kneževi Vinogradi, and Bilje (Baranja). This area was chosen for research because it was subject to various political changes and demographic trends in the past. Slavonia and Baranja are historical-geographical regions that were administratively divided between Croatia and Hungary, and Slavonia was also under the administration of Austria (Military Frontier until its disestablishment in 1873). Noble families (like Janković in Daruvar) and military government in Military Frontier immigrated craftsmen from other parts of the Austro-Hungarian Monarchy (among them the Czech; still present in this area), and the Hungarians still present in Baranja as a national minority. Such a multilingual environment is very interesting for research into

the linguistic landscape. The only location that appeared in both research periods was the city of Daruvar. Postcards from Kneževi Vinogradi and Bilje were not available for analysis. Due to the limited number of postcards from examined era, the research expanded to include a larger number of locations across Slavonia and Baranja. As both regions shared similar historical and political circumstances, there was no reason to prevent such a generalization in postcard examination. Photographs for the contemporary period were taken in the central part of the settlement (500 m long main street near central square) as this is area that has the highest level of liveliness. A total of 139 photographs with 192 language signs were collected from this period. The goal was to collect photos of the signs located in a place where they are easily visible to passers-by (on the walls, streets). Field work was conducted (from February to March 2023), to research the current state of the linguistic landscape, and in November of the same year for old postcards.

After gathering the data, the photos of the signs that were taken were sorted based on the sites they contained, allowing a more thorough categorization and analysis at a later stage. Once the necessary data-gathering was completed, the data were ready for analysis and interpretation. A cross-sectional research method was used (diachronic approach) to examine linguistic signs from two different time periods: the beginning of the 20th century (the golden age of postcards) and the contemporary period.

The research involved using the method of analysing linguistic signs. Data on linguistic material was extracted from each sign and coded through 10 variables (*Table 1*), which were selected based on the linguistic and semiotic characteristics of the sign. These variables were designed to provide answers to the research questions (*Table 2*). Once all the data was coded, a quantitative analysis was carried out using the in-depth clustering method to group similar data and a semantic analysis of the results obtained.

Results

How visible is the linguistic landscape in the cultural landscape?

Based on the postcards, it can be concluded that linguistic signs play a significant role in the cultural landscape. However, the presence of artificially added linguistic content by the publisher can disrupt the reading experience. Excluding the artificially added content, it can be observed that there were slightly fewer linguistic signs during the first comparative period than there are today. In the past, monolingual signs accounted for 66.4 percent, while multilingual signs accounted for 33.6 percent. Croatian is the most dominant language (thus, largely autonomous), appearing either on its own or as a primary language in a multilingual combination in 90 percent of the samples. Even though Croatia was under the influence of Germanization and Hungarianization

Table 1. Variables with which language signs are coded

Ordinal number	Variables	Ordinal number	Variables
1	Serial number of the sign	6	Language of the sign
2	Types of signs (contemporary period) / specificity of the scene (postcard)	7	Number of languages on the sign
3	Types of representation	8	Order of language on the sign
4	Types of discourse	9	Whether there is language mixing
5	Sign placement source	10	Presence of features of collective spatial identity

Source: Compiled by the author.

Table 2. Relationship between research questions and analytical categories (in this research)

Research questions	Variable
How visible is the linguistic landscape in the cultural landscape?	Serial number of the signs (1), Language of the sign (6), Number of languages on the sign (7)
What are the characteristics of the linguistic landscape?	Types of signs (contemporary period) /specificity of the scene (postcard) (2), Types of representation (3), Types of discourse (4)
Who plans the linguistic landscape?	Sign placement source (5)
Who is the linguistic landscape intended for?	Number of languages on the sign (7), Order of language on the sign (8), Whether there is language mixing (9)
How is spatial identity manifested?	Language of the sign (6), Whether there is language mixing (9), Presence of features of collective spatial identity (10)

Source: Compiled by the author.

during the golden era of the postcard, the proportion of linguistic signs found in Hungarian and German is unexpectedly low. Monolingual German signs accounted for only 9 percent, while Hungarian signs accounted for 5.6 percent. On bilingual and multilingual signs, the Croatian language is once again dominant, appearing as the first language in 95.4 percent of the samples. The most common combinations were Croatian-German (82.2%), Croatian-Hungarian (8.8%), Croatian-French (2.2%), and Croatian-German-Hungarian (2.2%). As a subordinate language, Croatian appeared in 4.4 percent of the samples, with German-Croatian (2.2%), and Serbian-Croatian (2.2%) being the most common combinations. It was observed that there were no bilingual or multilingual signs found without the Croatian language. After 1918, the German language was not used in the sampled postcards, and Hungarian was only present on two language signs in the research sample. Interestingly, on one of them (a Vinkovci postcard from 1926), in addition to the Croatian language, there was also a Hungarian language sign which the publisher had crossed out due to the changed political situation, but not skilfully enough, so it can still be read.

Upon analysing the contemporary linguistic landscape, it appears that the Croatian language still maintains its dominant position and autonomy. In fact, a vast majority of monolingual signs (81.5% in Baranja, and 47.4% in Daruvar) are in the Croatian language. The Croatian language also appears as the primary language in 58.8 percent of multilingual inscriptions in Baranja, and 66.6 percent in Daruvar. In multilingual inscriptions, the Croatian language is most combined with English (57.5% in Daruvar). Other languages spoken by national minorities, who have the right to bilingualism in the area, such as Czech in Daruvar, and Hungarian in the municipalities of Kneževi Vinogradi (Hercegszőlős in Hungarian), and Bilje (Bellye in Hungarian), are less commonly used in combination with the Croatian language. In Daruvar, Czech appears as the only language on the language sign in just 3.8 percent of cases, and as the primary language in multilingual combinations in 21.2 percent of cases. The Hungarian language in Baranja appears as an independent language in 3.5 percent of combinations and as a primary language in 17.6 percent of language combinations (as a second language in 35.3% of multilingual combinations).

Studies on the linguistic content of postcards have revealed the presence of multilingualism using two or more language signs in the same space. This often involves du-

plicating the same language sign in several languages. The occurrence of such duplications suggests that social multilingualism is at play, alongside individual monolingualism. Research into the linguistic landscape of modern times has shown that multilingualism is to some extent hidden in the cultural landscape. This is because different versions of language signs appear on separate supports, making the multilingual message less immediately visible to readers. This type of hidden multilingualism takes on partial linguistic content when a linguistic sign is written in one language and translated into at least one other language. It also manifests as complementary linguistic content when linguistic signs are present in multiple languages, and each sign complements the others. The ability of the population to read complementary language signs indicates the presence of many multilingual individuals (polyglots) *(Photo 1).*

What are the characteristics of the linguistic landscape?

Postcards can be categorized into two types, topographical postcards that show settlements and geographical areas, and thematic postcards that have a specific theme such as congratulations or propaganda (advertisements) (Bogavčić, I. 2015). Postcards can be categorized into different types based on their specific features such as art nouveau, composite, potpourri, and photo-postcards (Houška, M. 2000). However, for this research, the decorations, or the size of the displayed area on the postcard were not important so they aren't considered. The topographical postcards can be further divided into views, narrow motifs like streets and squares, and those that show isolated objects or a group of objects like churches, schools, stations, factories, hotels, hospitals, etc. In the first comparative period, the most frequently depicted scenes with linguistic content were panoramas and isolated objects, each with around 45 percent representation. Fewer postcards depicted narrower motifs like streets and squares, which only accounted for 5.2 percent, and thematic-propaganda postcards were even lesser at only 3 percent. Further analysis revealed that they mostly depicted the structure of the settlement (58.2%), followed by individual institutions (12%), companies (10.4%), and private objects like houses and villas (7.5%). The least represented categories were sacral (5.2%) and tourist facilities (3.7%).

In the modern period, advertising ads and inscriptions (44.2%) and road signs (26%) were the most represented language signs. Other types of language signs included nameplates (15.1%), posters (6.7%), street signs (5.2%), and commemorative plaques

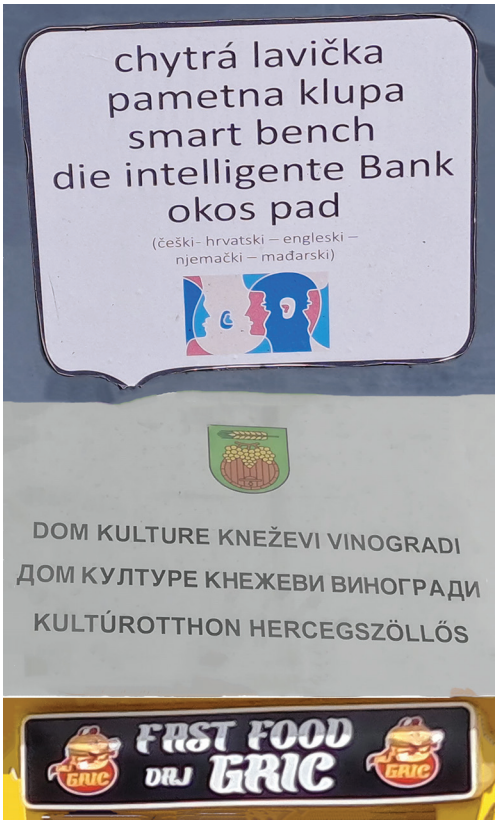


Photo 1. Various examples of language mixing in field examination

(1.1%). In that period, linguistic signs mostly represented individual companies and institutions (58.3%), and there was a significant decrease in linguistic signs representing touristic (11.4%), sacred (7.8%), cultural (1.5%), sports (1.1%), and other facilities (19.8%).

Linguistic signs can be broadly classified into three types based on the nature of discourse they convey – city-regulatory (and infrastructural), commercial, and transgressive. City-regulatory signs are usually placed by official bodies and include traffic signs, public announcements, and warnings. Commercial signs are placed by private individuals such as businessmen and traders and include signs on shops and business advertisements. Transgressive signs are placed by individuals and typically express social protest like graffiti, which violates the semiotics of place. Postcards serve as an excellent source of research to study the specificities of linguistic signs. In case of postcards at the turn of the 19th and 20th centuries, it was discovered that postcard publishers were the primary source of city-regulatory linguistic signs, and not official state bodies. Out of all the language signs found, most of them were official signs (74.6%), followed by commercial signs (20.2%) and mixed city-regulatory and commercial signs (5.2%). No transgressive signs were found. In the present linguistic landscape, local or state authorities are responsible for installing city-regulatory signs, which constitute the majority (56.4% in Daruvar, and 69.3% in Baranja). Commercial signs make up 41 percent in Daruvar, and 28 percent in Baranja, while transgressive inscriptions comprise 2.6–2.7 percent and are not commonly found.

Who plans the linguistic landscape?

From a top-down perspective, an analysis of historical samples from the turn of the 19th to the 20th century showed that only 5.2 percent of language signs on postcards represented government buildings or street names with official inscriptions. This means that the government had minimal influence on the linguistic landscape found on postcards (bottom-up). Instead, businessmen, shop owners, and postcard publishers had a greater impact on the language content. The language used on postcards was not prescribed by any government decision, but rather depended on the publisher's decision and the needs of the market. The languages used on postcards in our research (Croatian, German, and Hungarian) are a true reflection of the ethnic composition of the population in general, and specifically in Slavonia and Baranja where our research was conducted. The number of multilingual inscriptions on postcards is not surprising, as this was a potential market interested in postcards. It was also not uncommon for people who sent or published the postcards to cross out unwanted languages to save circulation, giving primacy to the language more acceptable to them at the time.

Upon analysing the linguistic landscape in the modern era, it was discovered that the situation is opposite of what was expected. While the government (top-down) sets a major part of the linguistic landscape (58.3%) *(Photo 2)*, business entities (bottom-up) also significantly contribute to the setting of language signs and play a passive yet significant role in planning and creating the linguistic landscape (41.6%). Private individuals (also bottom-up) have a minimal impact on the linguistic landscape with transgressive inscriptions (0.1%).

Who is the linguistic landscape intended for?

The linguistic landscape is created for its users. Depending on the ethnic diversity of its users, it can be either homogeneous or heterogeneous. The dominance and autonomy of the Croatian language is noticeable in both the researched periods. However, the presence of other languages in the linguistic landscape has changed depending on the socio-political context. The English language has mostly replaced the former German and Hungarian languages today. The only exceptions are bilingual environments, which



Photo 2. The modern language signs set by authorities (top-down)

have the constitutionally guaranteed right to bilingualism due to the ethnic composition of the population. Under the Croatian Constitution, national minorities have the right to bilingualism. However, it is observed that they do not fully utilize this right. For instance, Czechs are entitled to bilingualism in 9 areas, but they only practice it in two. Similarly, Hungarians have the right to bilingualism in 38 areas, but they use it only in 8, and Serbs have the option in 21 areas, but they use it in only 7 (The Office for Human Rights and Rights of National Minorities). To determine the status of the linguistic landscape in ethnically specific areas, such as Daruvar (Czechs), and the municipalities of Kneževi Vinogradi and Bilje (Hungarians), were selected for research in the modern period. In any other part of Croatia (considering the ethnic homogeneity of the population), the linguistic heterogeneity would be even smaller and would be reduced mainly to the dominance of Croatian and the subordinated position of the English language. The process of globalization greatly affects changes in today's linguistic landscape. The mostly monolingual signs in some tourist areas have long since given way to multilingual ones. However, the type of area being investigated should also be considered. Urban areas, due to their multicultural nature, are more susceptible to this process, while rural areas are usually more homogeneous in terms of linguistic signs and are dominated by the Croatian language.

In areas with greater ethnic diversity, especially where the Constitution guarantees multilingualism, it is expected that the national minority language will have a greater presence. In Daruvar, the Czech language is predominantly present in the České beseda building complex, which is almost the only public space where the language is used *(Photo 3)*. Language is an important symbol



Photo 3. Linguistic signs in the building complex of the České beseda

of identity, and it is not surprising that a national minority will defend its identity by preserving its language if it feels threatened. If it does not feel threatened, it may have already assimilated or be on the path to assimilation. This appears to be happening with the Czech language and the Czech community in Daruvar. The situation with the Hungarian language in the Baranja municipalities is different because communal signs and notices are written in both Croatian and Hungarian, and Hungarian also appears on signboards and advertisements.

How is spatial identity manifested?

Our personal identity is not fixed at birth but is constantly being built throughout our life. While some elements of our identity such as our name and ethnicity are determined at birth, other aspects such as our spatial and linguistic identity can change over time. Language is an important aspect of our identity, which can be shaped by social factors. For instance, we may choose to modify the way we speak to fit into a particular social group or to appear more educated. We may also choose to speak in a particular dialect or standard literary language depending on the context. Ultimately, language serves as a powerful symbol of our representation.

Changes in socio-historical context led to changes in the linguistic landscape and, consequently, to changes in our identity (changes in countries, official languages, and spatial identity). In the early 20th century, language mixing was rare, occurring in only 7.5 percent of samples, such as the German-Croatian combination found in Chavrakova ulica. Multilingualism was common, but usually manifested as duplication, in which one language sign was translated into several languages, as seen in examples like Osijek,

Eszék, Essek: Sudbena palača, Justizpalais, or Lipik (Croatian), Cursale (German); Gyógytermek (Hungarian), Grandes salles et théâtre (French) *(Photo 4)*. Changes in the linguistic landscape also allowed us to follow the development of some toponyms (Osiek, Essek, Eszék, Essegg, Osijek), or patronymics (Pejachevich, Pejacsevich, Pejačević; Chavrak, Čavrak). In the modern period, language mixing is rare, occurring in only 2.5 percent of samples in Daruvar and 0.8 percent of samples in Baranja. When it does occur, it is complementary, such as in combinations like Juvelir (Bosnian) Veritas (Latin), or Fast food (English) Daj gric (Croatian).

Collective identity characteristics were present in Slavonia and Baranja at the beginning of the 20th century were most visible in specific elements of the cultural landscape – ergonyms and toponyms. These linguistic signs include horonyms (Slavonia), hydronyms (Bosut, Sava, Šumetlica), ojkonyms (Daruvar, Osijek, Vinkovci, Aljmaš, Slavonski Brod), and hodonyms (anthropohodonyms such as Čavrakova ulica, Mollinaryevo šetalište, Ulica Franje Josipa, Ulica Franje Ferdinanda, Jelačićeva trga, endonymous ethnonyms such as Deutsche Gasse, endonymous anthropohodons such as Ferencz József-út, Franz-Josef Platz). In this sense, full names are a symbol of the identity of a mostly national (less often regional) community. Ergonomics appear in the space in various forms such as Brodska imovna općina, Salon mode Mijo Rajal i sin (Michael Rajal and Son), Villa Dr. Breitwieser, Hotel and Restaurant Lifkay, kasarna vojvode Mišića, vojarna Trenk, pivana Alex Boskowitz.

Similar identities are also found in modern linguistic content (in 21.8% of samples in Daruvar, and 12.3% of samples in Baranja), and in space, they are manifested in the same forms as on postcards – horonyms (Slavonia, Baranja), hydronyms (Drava,



Photo 4. Postcard of Lipik in several languages

Danube, Toplica), ojkonyms (Bilje, Tikveš, Kneževi Vinogradi, Daruvar), and hodonyms (anthropohodonims such as ulice Lajoša Košuta, Svetozara Miletića, kralja Zvonimira, Stjepana Radića, Republike Hrvatske, dvorac Eugena Savojskoga) *(Photo 5)*. Full names serve as symbols of the identity of national or regional communities. In the modern space, ergonyms can take the form of various establishments such as smještaj Jurini Dvori, pekarnica Edi, cvjećarnica Lana, Ribarnica Čizli, kickboxing klub Princ Eugen Savojski (in Baranja), lječilišni park Julijev park, dvorac grofa Antuna Jankovića, Češka škola Ferdy Mravence, Savez Čeha Jednota (in Daruvar). These full names are a representation of the local or regional community's identity. In today's linguistic landscape, not only are important people from the past recorded, but there are also many ergonyms where full names related to the present era are mentioned. Full names play a significant role in contributing to the multilingual character of the community's spatial identity.



Photo 5. Examples of language signs that show characteristics of collective identity. (Photos taken by the author.)

Discussion

This research can be linked to the findings of Reh, M. (2004), who studied visible and hidden multilingualism in the Ugandan town of Lira. The primary difference between Lira and Slavonia and Baranja is their official language. English is the official language in Lira, but most of the population speaks Luo. In contrast, Croatian is the official language in Slavonia and Baranja, but most of the population also speaks English. Despite these variations, both surveys showed similar results – most of the population is bilingual. While government institutions and non-governmental organizations use the official language in both regions, the unofficial language is used in all areas of economic activity in Slavonia and Baranja, unlike Lira, where it is primarily used among the agricultural population. As a result, it can be inferred that the social and linguistic dichotomy is not as pronounced in this research as it is in Lira.

It's reasonable to wonder how the English language fits into our contemporary identity. Is it only used to create a fashionable, cosmopolitan image? The dichotomy between the English and Croatian languages has likely affected the entire country. In today's globalized world, English is considered a *lingua franca*. According to the Encyclopaedia Britannica (Crystal, D. and Potter, S. 2024), English is the official language of almost 60 countries, is the mother tongue of more than 350 million people and is one of the most

widely spoken languages in the world (about 1.5 billion speakers). It is also the most learned language. Most scientists publish their works in English today, and most international conferences are held in English or in multilingual combinations that include English. However, the English language has not only spread in science (Fuerst-Bjeliš, B. 2021). Thanks to the increasing cultural globalization in the world, including in Croatia, the influence of the English language is growing stronger in all aspects of our lives, including the linguistic landscape. More English linguistic signs are often found in marketing discourse and on graffiti (House of LoVra, Aurora beauty, Kickboxing club Princ Eugen), but not to the expected extent. Therefore, this research confirms the findings presented by Stolac, D. and Hlavač, J. (2021) in their research on Rijeka's linguistic landscape.

That research analysed the representation of English language signs in the Rijeka area and identified several new marketing trends. The study found that some advertisements use English abbreviations such as "OMG" (meaning "Oh, my God!") in Croatian language signs, while in other cases, English letters are used to write Croatian names (JSL – Je si li?), although they are not commonly used in the Croatian language. Additionally, some English words are used to avoid Croatian diacritical marks (Beertija → Birtija; Boonker → Bunker; Kolach → Kolač; Chevap → Ćevap). Although the use of English in the Slavonia and Baranja regions has not yet become widespread, some trends towards its use are visible. For example, certain businesses such as "Caffe bar PUBLIC" (coffee bar near cinema) use English in their names. Perhaps the linguistic landscape of Osijek would be like Rijeka (regional centres of equal size), but this requires further investigation. Study focused on these areas because of their minority ethnic composition and their languages. However, the study found that these languages are unlikely to be replaced by English soon.

The use of English words in the Croatian language has been criticized Opačić, N. (2007, 24) who pointed out that the world is threatened with the loss of autochtonousness (and diversity!) and that a world of one product is being created in which "local cultures and identities are eradicated and replaced". Language is an important part of spatial identity, and the decline in awareness of its importance and the introduction of English words may lead to a modification of identity (this research did not determine any modification). Although the use of English has not yet become widespread enough to require revitalization of the Croatian language, the study suggests that the Czech language in Daruvar and Hungarian in Baranja may need revitalization, as the ratio of linguistic signs in these languages is approximately equal to that of English.

The Croatian language has been a matter of concern during significant historical and political events in the past. For instance, in the 1990s, Croatia gained independence. Another example is when it joined the European Union in 2013. However, taking care of one's language should not be a sporadic effort (Vrcić-Mataija, S. and Grahovac-Pražić, V. 2006) as it contributes to preserving our cultural and spatial identity. While it is not necessary to avoid English idioms in the linguistic landscape entirely, we should sort them out using scientific principles (Štimac, V. 2003).

Conclusions

In the modern period, official inscriptions on public institutions in Croatia are written in the Croatian language and the Latin script. In ethnically diverse areas, these inscriptions are bilingual, but not to the extent allowed by the Croatian Constitution. Surprisingly, there are more unofficial inscriptions in Croatian standard language than expected. Croatian is the primary language in most of inscriptions. The Companies Act requires store names to be in Croatian, but the situation is different and many store names are multilingual, although their meaning usually corresponds to what is offered within. In the early 20th century, the planning of the linguistic land-

scape was left to individuals, businessmen, and merchants, but their influence today is not as significant as it was then. While they still play a role in shaping the linguistic landscape, other factors are more influential in the modern period.

The linguistic landscape, both in the past and present, is visible through various inscriptions on shops, craft stores, state institutions, and street names. The most common type of linguistic landscape refers to specific isolated objects such as companies and institutions. In the early 20th century, this type of landscape represented 45.5 percent of all samples, while in the contemporary period, it represents 58.3 percent. It is noteworthy that propaganda language content was the least common in the past (3%), while today it accounts for the majority (44.2%). The source of the signs that convey urban-regulatory discourse differs between the past and contemporary periods, which is closely related to the dynamics of linguistic landscape planning. Commercial discourse has always been present in the space in a significant proportion, whereas transgressive discourse rarely appears.

The homogeneity or heterogeneity of the linguistic landscape users determines its appearance. The dominance and autonomy of the Croatian language are visible in both researched periods, given that Croats are the most numerous ethnic group in the area. However, the status and dominance of other languages have changed, depending on the complex political and linguistic past of the region. Migration has significantly contributed to the linguistic richness of the environment, which is further fueled by the increasingly strong process of globalization in this modern period.

The study has confirmed that the linguistic landscape reflects the spatial and ethnic identity of the population. The study has confirmed that the linguistic landscape reflects both the spatial identity as well as the heterogeneity and multilingualism of the linguistic landscape in urban and rural areas. Language communication can only be fully understood when a spatial context is considered. Landry, R. and Bourhis, R.Y. (1997) identified two functions in the linguistic landscape: informative and symbolic. In this study, the informative function was observed through horonyms, hydronyms, and ojkonyms, which remained constant in both time periods analysed. The symbolic function, on the other hand, was found to be changeable, and was expressed through ergonyms and hodonyms. The status of the Croatian language was not only reflected in its appearance but also in the symbolic meaning that language signs conveyed to their users. The naming of businesses, streets, and squares after people and events from the past is particularly significant because it indicates the presence (and meaning) of features of collective spatial identity, as well as its changes over time.

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The influence of urban green and recreational areas on the price of housing in Zagreb

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Abstract

Urban green and recreational spaces are important for residents and one of the foundations for the functioning of cities. They offer numerous benefits, including the influence on the price of real estate as an economic benefit. In this paper, the influence of green and recreational areas in Zagreb on the price of apartments in residential buildings is analysed using the hedonic pricing model. The data for the study was processed and analysed using a geographic information system. A local hedonic price model was developed. The results show that some of the observed green and recreational areas increase the price of housing due to their proximity, while others decrease it. Some areas have no influence on the price of housing. The influence of the observed areas on housing prices was heterogeneous. Spatial differences were also found in the influence of the observed areas on housing prices. The most attractive factors when choosing a place to live are Jarun and the parks in the city centre. The price of apartments that near the Jarun increases by 41 EUR/m^2 if the apartment is 100 m closer to the Jarun. The price of the apartment increases by 91 EUR/m^2 the closer the apartment is to the parks in the city centre (per 100 m). Apartments near Jarun and the parks in the city centre are not available for residents with lower socio-economic status. The forest areas, Maksimir Park and the banks of the Sava river are not favoured when choosing a place to live. Neighbourhoods near these areas are available to the lower socioeconomic status population. Bundek raises the price of one part of the apartments and lowers the price of the other. The results of this study can contribute to the study of green gentrification in Zagreb, but further research is needed on socio-economic indicators and other changes in the region.

Keywords: urban green areas, recreational areas, hedonic model, geographically weighted regression, real estate

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Introduction

A city is a space that is characterized by a compact structure and whose elements are in constant interaction. One of the elements of the functional-spatial structure of the city are recreational areas. Recreational areas are open spaces with built infrastructure intended for recreational activities. Their basic characteristics are the predominant natural environment, which includes vegetation, i.e. greenery (forest, grass, flowers), and often also water areas (river, canal, lake) and a certain number of built objects (paths, roads, buildings, playgrounds, sports halls, sports facilities). These areas are used by users for recreational activities. The largest recreational areas are generally located on the outskirts of the city, as this is where the largest open spaces are available. Green areas in the city consist of parks, gardens, urban forests, promenades and other smaller areas that are covered with vegetation but have fewer or no buildings (they may include walking paths, benches and other rest areas). In addition to other functions, the green areas integrated into the urban structure also serve active and passive recreation.

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Green and recreational areas in the city play an important role in the functioning of the city and its inhabitants. Sustainable urban development has recognized the importance of cultural, historical and natural values that are irreplaceable and therefore non-renewable (Pacione, M. 2009). In addition to historic neighbourhoods, this category includes parks and natural landscapes that provide space for play, recreation and access to nature. In addition to economic vitality, an ideal sustainable urban community is characterized by ecological integrity (clean environment, access to natural areas) and social well-being (equitable access to housing, recreational activities, etc.) (Pacione, M. 2009).

The importance of planning and incorporating green spaces into urban design stems from the benefits they provide to city residents. Tyrväinen, L. and Miettinen, A. (2000) emphasize the aesthetic, ecological and economic benefits of forests, the positive influence on people's mental health and the opportunities for recreation. Swanwick, S. *et al.* (2003) have categorized the benefits of green areas into four groups: social benefits (access for all population groups, educational benefits), health benefits (outdoor exercise, psychological benefits), ecological benefits (preservation of biodiversity and cultural heritage, reduction of air and water pollution, positive impact on urban climate) and economic benefits (employment, attraction for businesses and tourists, value of nearby real estate). Harnik, P. and Crompton, J.I. (2014) distinguish between the direct and indirect economic value of parks.

The direct economic value includes the economic profit from park visitors and the profit from the provision of some services in the park. Visitors give funds to the municipality in the form of taxes by paying gas, groceries, restaurant meals or hotel accommodation. The municipality uses some proportion of this money to reinvest in tourism and the promotion of the parks.

The indirect economic value of parks relates to the impact on property values, reducing flooding, reducing air pollution, improving health and general social benefits. Olbińska, K. (2018) categorizes the benefits of urban green areas into three groups: economic (impact on property value, rent, real estate market activity, jobs, tourism), environmental (increased biodiversity, air temperature balancing, reduced pollution, improved drainage, flood risk reduction, noise reduction), social benefits (they enable sports and recreation, socialization, education, usually have a positive impact on health).

The public interest in the city's green and recreational areas arises from all the benefits mentioned and not mentioned. They are public goods and as such have often been regarded as free of charge. Nevertheless, they contribute to the economy through their existence and use. The economic value of a public good is made up of a market value and a non-market value (Lockwood, M. and Tracy, K. 1995). The greatest economic value of a public good, recreational resources, cannot usually be expressed through a price mechanism. The non-market value consists of a user component and a non-user component. The user component results from the use of the content. The non-user component relates to the legacy for other generations and the awareness of the existence of such a space.

As recreational and green areas are not traded on the market, it is possible to use non-market valuation methods for their valuation (Logar, I. 2019). Non-market valuation methods are based on individual perceptions and include revealed preference and stated preference methods. Revealed preference methods determine utility values and reveal the individual preferences of individuals by observing their actual market behaviour. The hedonic price method belongs to this group of methods. The hedonic price method (hedonic price model) is based on the assumption that goods and services from the environment influence market prices. It follows that the price of a market good (e.g. a property) is related to its characteristics, but also to the characteristics of the environment. It is often used when assessing the impact of public goods on real estate prices.

The aim of this thesis is to investigate the impact of green and recreational areas in the city of Zagreb (settlement) on the prices of apartments in residential buildings. There are two hypotheses of the study are. First, green and recreational areas influence on the higher price of real estate in Zagreb. Second, there are spatial differences in the impact of individual green and recreational areas in the city of Zagreb on real estate prices.

Literature preview

An overview of previous research shows that the topic of the influence of green and recreational areas on the price of real estate has become more frequent in the last thirty years. The papers analysed show studies conducted in cities in Europe, the USA, Turkey, China, Indonesia and Malaysia. The studies differ according to the type of green areas. Some authors included all green areas in the city in the analysis (Jim, C.Y. and Chen, W.Y. 2006; Conway, D. *et al.* 2010; Liebelt, V. *et al.* 2017, 2018, 2019; Nur Syafiqah, A.S. *et al.* 2018; Czembrowski, P. *et al.* 2019; Daamsa, M.N. *et al.* 2019). Other authors differentiated the green areas and analysed them individually according to their type. Green areas predominate in the analyses, while recreational areas are less well represented. Most authors are of the opinion that recreation is one of the functions of green areas.

In terms of property types, apartments predominate over houses. Of all the studies examined, mainly sold or for-sale properties were analysed, only Liebelt, V. *et al.* (2017, 2018, 2019) examined rental properties. Most of the studies analysed the property prices achieved, while only Herath, S. *et al.* (2015), Bonetti, F. *et al.* (2016), and Liebelt, V. *et al.* (2017, 2018) examined advertised prices.

The research also differs in terms of the environmental variables examined. The environmental variables depend on the assumptions of the research, the availability of data and the characteristics of the area studied. The most common is the distance from green and recreational areas.

Some authors used GIS to prepare variables and process data (e.g. Lindsey, G. *et al.* 2004; Kong, F. *et al.* 2007; Poudyal, N.C. *et al.* 2009; Panduro, T.E. and Veie, K.L. 2013; Wu, J. *et al.* 2015; Franco, S.F. and Macdonald, J.L. 2018; Heymana, A.V. and Sommervollb, D.E. 2019). In some studies, the GIS was used to collect data in the form of a survey (Czembrowski, P. *et al.* 2016; Daamsa, M.N. *et al.* 2019).

In most studies, the results showed a positive influence of green areas on real estate prices, i.e. an increase in real estate prices with proximity to green areas. Tyrväinen, L. and Miettinen, A. (2000) report results for the Solo district in Finland, according to which increasing the distance of apartments to a park by 1 km reduces the price of real estate by an average of 5.9 percent and apartments with a view are on average 4.9 percent more expensive. Studies by other authors show that green and recreational areas increase the price of real estate (Tyrväinen, L. 1997; Morancho, A.B. 2003; Conway, D. *et al.* 2010; Bark, R.H. *et al.* 2011; Kolbe, J. and Wüstemann, H. 2014; Norzailawati, M.N. *et al.* 2015; Trojanek, R. 2016; Harnik, P. *et al.* 2017; Trojanek, R. *et al.* 2018; Liebelt, V. *et al.* 2019).

In some studies, the results showed the opposite effect of green areas. Liebelt, V. *et al.* (2019) found that in the vicinity of large green areas, the price of real estate increases with the distance to them, citing overcrowding, noise and a large number of cars as reasons for this. Czembrowski, P. *et al.* (2019) state that not all characteristics of green areas are desired by buyers in Stockholm. There are many high-quality green areas in upscale neighbourhoods, which should be a reason to invest in green areas elsewhere. Bonetti, F. *et al.* (2016) find that proximity to a natural watercourse is a negative factor for the price and lowers it, while proximity to a built canal is a positive factor and increases it. Bark, R.H. *et al.* (2011) state that the value of houses decreases when they are next to or near a park, as parks are large, noisy, crowded and less safe, and also have questionable maintenance that leads to the death and drying out

of vegetation. Hu, S. *et al.* (2016) found that larger lakes in Wuhan lower house prices in their vicinity due to clutter, while smaller lakes increase house prices.

In the context of customer preferences for green areas, research has shown that in addition to distance to green spaces, multi-functionality (Czembrowski, P. *et al.* 2019), a certain type and size of green areas (Melichar, J. and Kaprová, K. 2013) and the extent of overall greening (Franco, S.F. and Macdonald, J.L. 2018) also play a role. The social aspect of this topic includes the impact of real estate values on the local population. The process of green gentrification is explained in the urban literature. Green gentrification is a process in which the removal of pollution or the provision of green amenities increases local property values and attracts more affluent residents to a previously polluted or disenfranchised neighbourhood (Dooling, S. 2009). As a result of policies to improve the characteristics of green and recreational areas in deprived neighbourhoods, the "green space paradox" emerges (Wolch, J.R. *et al.* 2014; Anguelovski, I. *et al.* 2022). Urban strategies to restore degraded urban environments, create green spaces or deploy climate-adapted green infrastructure improve the attractiveness of an area. At the same time, they lead to higher housing prices and the physical displacement of working class residents and racialized groups and cultures. This is the factor behind green gentrification.

Environmental injustice appears when not all city dwellers have equal access to green and recreational areas. Disadvantaged residents living close to green spaces not only have less access to green areas, but are also characterized by a shorter length of stay and may end up being "trapped" far from green areas (Łaszkiewicz, E. *et al.* 2018).

Methodology

The hedonic pricing model is one of the methods used to determine customer preferences. The data is analysed using multiple regression analysis, which measures the influence of individual variables on the price of a property (Logar, I. 2019). The hedonic model contains three groups of variables: structural, neighbourhood and environmental variables. Structural variables show the characteristics of the property. The neighbourhood variables determine the location of the property in relation to other elements in the space. The environmental variables show the location of the property in relation to the green and recreational area. They show how much users are willing to pay for the environmental benefits they receive. Some authors have also included the socio-economic characteristics of the area in the model (Liebelt, V. *et al.* 2018; Panduro, T.E. *et al.* 2018). The variables are selected by the author depending on the research assumptions, data availability and other conditions.

The hedonic model can be global and local. The global hedonic model processes the data using the least squares method and provides unique coefficients for the entire study area, ignoring the specific characteristics of the individual parts of the study area. This is the main disadvantage of this method. The local hedonic model provides the geographical variation of the coefficients for each independent variable. This is a geographically weighted regression (GWR) that uses the coordinates of each sample point and includes the characteristics of neighbouring observations in the analysis. The geographically weighted regression equation is:

$$y_i = \beta_0(u_i, v_i) + \sum_k^p \beta_k(u_i, v_i) x_{ki} + \varepsilon_i,$$

where y_i is the real estate price and represents the dependent variable, β_0 is the independent coefficient that is estimated, k is sumation index, p is the number of independent variables in regression and the highest value of k, u_i and v_i are the geographic coordinates, β_k are the coefficients of the independent variables, x_{ki} is the kth independent variable at location i, and ε_i is the standard error.

Study area

The study covers the area of the city of Zagreb as a settlement with an area of 304 km^2. According to the 2021 census, Zagreb has 663,592 inhabitants. Zagreb is the largest urban centre in Croatia with various attractive factors for migration to the city and change of residence within the city. The city is of great importance for all aspects of life in Croatia, including leisure activities. Zagreb was selected due to the availability and volume of data, as it represents the largest and most dynamic real estate market in Croatia.

Zagreb was established at the foot of Medvednica Hill, where the old city centre is located. With urban development from the 19th century to the present day, the city spread southwards across the Sava river. The development and expansion of the city of Zagreb to the east and west is due to the extension of the Medvednica in a southwest-northeast direction. The expansion to the north was limited by the Medvednica, which is covered by forest and protected by the status of a nature park. In the general city plan, forests occupy the largest area in Zagreb (more than 25%). Forest areas also extend along the foothills of the Medvednica and are used as public green areas (about 7% of the city area). A large area is also occupied by agricultural land, more than 23 percent. They are mainly located on the south-eastern and south-western outskirts of the city and on the foothills of the Medvednica. Residential areas cover about 18 percent of the city of Zagreb. The highest building density and the largest number of residential areas can be observed in the wider centre of the city (districts of Gornji grad-Medveščak, Donji grad, Trnje, Trešnjevka-north) *(Figure 1).*

The subject of interest are the green and recreational areas in Zagreb. The most important recreational areas in the city of Zagreb are the Recreational Sports Center (RSC) Jarun, the Sports Recreational Center (SRC) Bundek and the Sava dam. Green areas in the city of Zagreb are attractive for recreation, such as forests and parks. The planning document of the General Urban Plan of Zagreb distinguishes between urban park forests and park foreststs (Generalni urbanistički plan 2016, Articles 54 and 92). The spatial data on the location of the forests was provided by the City Office for Economy, Environmental Sustainability and Strategic Planning in dwg format. Maksimir Park was included separately in the analysis, as well as other larger parks in the wider centre of Zagreb. The parks were digitized in GIS by the authors.

Data

The information about real estate was provided by the online classifieds Njuškalo.hr. The advertisements refer to 15 March 2023. The data were collected for apartments in a residential building for which precise location information is available (geographical coordinates available). The dependent variable in the hedonic model is the asking price of the property per square metre.

The independent variables are divided into three groups: structural variables (S), neighbourhood (N), and environmental variables (E). Due to the lack of data, the following characteristics were included: the area of the apartment in square metres, the number of rooms in the apartment and the floor on which the apartment is located. These are structural independent variables. A total of 2314 apartments were included in the analysis.

The neighbourhood variables were determined with the help of GIS tools *(Table 1).* For this purpose, spatial data were collected on the locations of public sports fields (e.g. children's playground, basketball courts, sports fields), sports facilities (e.g. swimming pool, stadium, tennis court), cultural facilities (e.g. museums, cinemas, libraries), kindergartens, elementary school, secondary schools, higher education facilities, health centers, hospitals, public garages, bus, streetcar and train stops (GeoHub ZaGreb 2023). The locations of shopping centers and streetcar hubs were digitized by the author on the basis of location data and a cartographic background.

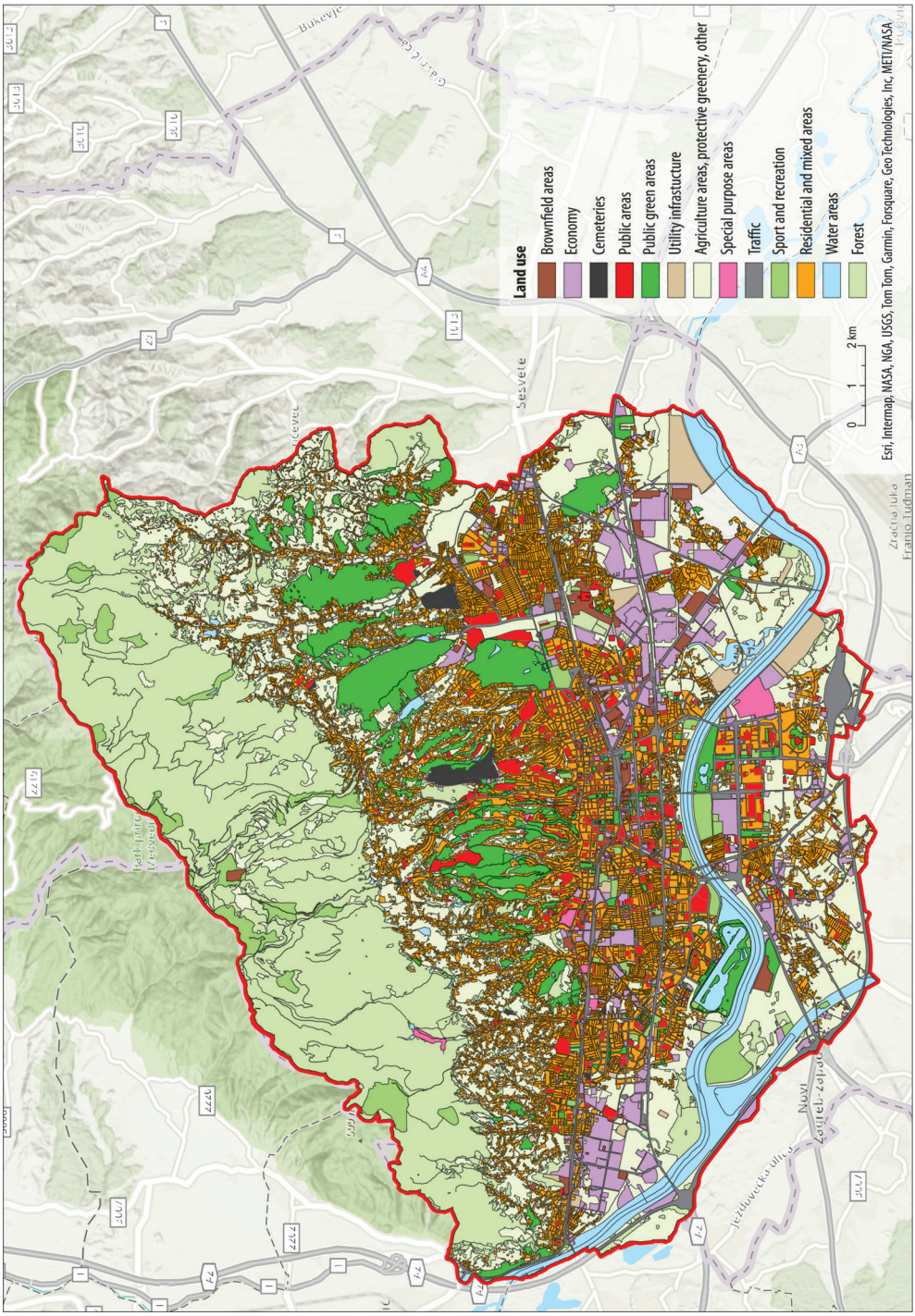


Fig. 1. Land use map of Zagreb. *Source:* Compiled by the authors, data from https://geoportal.zagreb.hr/Karta

Table 1. Variables of the hedonic model

Variables	Variable category	Variable explanation	Expected sign
Dependent variable			
price_m2	–	Advertised price of the apartment in m^2	+
Independent variables*			
area	Structural (S)	Apartment area in m^2	-
rooms**		Number of rooms	-
floor		The floor where the apartment is located	+
dist_centar**	Neighbourhood (N)	Distance from the city centre (Bana Josip Jelačić square)	-
dist_public		Distance from the nearest public transport station	-
dist_stat		Distance from the nearest station or tram interchange	-
dist_kinder		Distance from the nearest kindergarten	-
dist_elem		Distance from the nearest primary school	-
num_high**		Number of secondary schools within a radius of 500 m	+
num_fax		Number of higher education institutions within 500 m	+
dist_shop		Distance from the nearest shopping center	-
dist_ind		Distance from the nearest industrial area	+
dist_health		Distance from the nearest health center	-
dist_hosp		Distance from the nearest hospital	-
num_kult		Number of cultural institutions within 500 m	+
num_sportobj		Number of sports facilities within 500m	+
num_sportigr		Number of sports fields within a radius of 500 m	+
dist_gara**		Distance from the nearest public garage	-
dist_otp**		Distance from the landfill	+
dist_zona	Environmental (E)	Distance from the nearest green or recreation area	-
dist_forest		Distance from the forest	-
dist_jarun		Distance from RSC Jarun	-
dist_bundek		Distance from SRC Bundek	-
dist_bank		Distance from the Sava embankment	-
dist_maksimir		Distance from Maksimir Park	-
dist_park		Distance from the nearest park	-

*The unit of measurement for distance is the metre. ** Variables were omitted due to autocorrelation.
Source: Authors' own elaboration.

Spatial data on industrial areas, the boundaries of the urban area of Zagreb and streetcar and railroad lines were downloaded from the Geofabrik service (2023) (Geofabrik.de).

Environmental variables are: distance of apartments from the nearest forest (park forest and urban park forest), distance from RSC Jarun, distance from SRC Bundek, distance from the Sava dam, distance from Maksimir Park and distance from nearest park in the city centre. All distances are in metres. The data was prepared and processed in ArcGIS Pro 3.1.0.

Local hedonic model

Using the defined variables, a local hedonic model was created in the form of a geographically weighted regression. It was assumed that green and recreational areas have an influence on the higher prices of real estate in Zagreb and that there are spatial differences in the influence of individual green and recreational areas in the city of Zagreb on the price of real estate.

The problem of autocorrelation or mutual correlation of two independent variables in the regression was eliminated with the Pearson correlation coefficient (r). If the Pearson-coefficient $r > 0.7$, the variable is removed from the model due to correlation with another independent variable (Oliveira, S. *et al.* 2014) (see *Table 1*). If possible, highly correlated independent variables should be avoided, but in many cases this choice does not exist (Newbold, P. 2010), for

example when mutually correlated variables are of great interest for research. Since the environmental variables are of interest, none of the highly correlated variables were omitted. Due to the use of georeferenced data, only the results of the local hedonic model are presented in this paper.

The geographically weighted regression was performed with 120 neighbours. The Gaussian weighting method was used, according to which the weight decreases exponentially the further the point is from the observed point.

Results

The spatial autocorrelation in the local hedonic model was tested with the Moran I index, which is 0.185698 (p-value = 0.00000, z-score = 12.780390) and shows a statistically significant clustering of the analysis results. The coefficient of determination is R2 = 0.4090 and the adjusted coefficient of determination is adj. R2 = 0.3616 *(Table 2).* There are differences in the coefficient of determination between the apartments *(Figure 2).* The highest coefficients of determination are observed west of Maksimir Park and in the western part of Novi Zagreb (Kajzerica). The lowest coefficient of determination is observed in the wider surroundings of the city centre (Donji grad, Trnje).

The statistical significance of the model was tested at the 10 percent level (p-value < 0.1, t-value > 1.660). Since the attractiveness of certain factors in space is determined by their proximity (distance) to the apartment, a geographically weighted regression was used to account for apartments that are up to

Table 2. Local (GWR) model coefficients

Variables	Coefficients		
	min	mean	max
Intercept	-36,531.74	-1808.923	18,759.15
Structural variables (S)			
area	-7.01288	-3.596185	-0.424051
floor	-7.27306	54.1917	221.9165
Neighbourhood variables (N)			
dist_public	-0.490508	1.27809	4.15467
dist_kinder	-0.91591	0.558948	2.48765
dist_elem	-2.562863	-0.014774	3.054714
num_fax	-1404.26	6.95362	206.193
dist_shop	-1,533588	-0,084314	0,841975
dist_ind	-1.073735	0.209952	2.349503
dist_health	-1.153004	0.250067	2.759074
dist_hosp	-0.606382	0.154938	2.718514
num_kult	-111.232	7.15274	176.7045
num_sportobj	-114.2322	-11.7921	173.7824
num_sportigr	-277.8436	-3.03338	558.92
Environmental variables (E)			
dist_zona	-5.15309	0.079955	3.65268
dist_forest	-3.542074	0.075858	5.27866
dist_jarun	-2.05610	0.972864	8.43639
dist_bundek	-14.39090	0.983093	12.36982
dist_bank	-14.45573	-1.035173	17.62028
dist_maksimir	-2.89827	0.507891	5.95143
dist_park	-4.37027	-0.664219	0.91697
N	2314		
R^2	0.4090		
Adjusted R^2	0.3616		

Source: Authors' own elaboration.

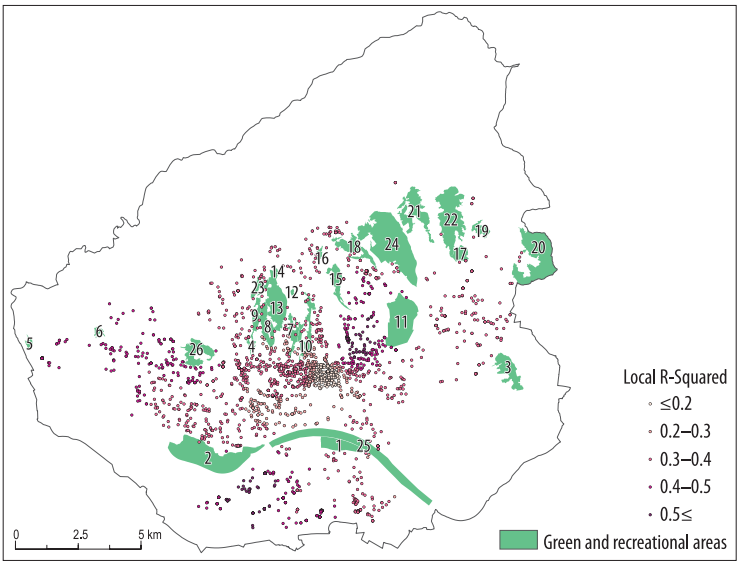


Fig. 2. Coefficient of determination R^2 in the local hedonic model. 1 = SRC Bundek, 2 = RSC Jarun. *Urban park-forests*: 3 = Čulinečina, 4 = Šestinski dol, 5 = Susedgrad, 6 = Lisičina, 15 = Mirogoj, 16 = Remetinski kamenjak, 17 = Granešina (Urban of Youth), 18 = Remete, 19 = Oporovec, 20 = Novoselčina, 21 = Miroševečina, 22 = Dankovečina, 23 = Zamorski Breg, 24 = Dotršćina, 26 = Grmošćica. *Park-forests:* 7 = Zelengaj, 8 = Jelenovac, 9 = Vrhovec, 10 = Tuškanac-Dubravkin put-Cmrok, 12 = Kraljevec, 13 = Pantovčak, 14 = Prekrižje. 11 = *Maksimir Park*, 25 = Sava dam. *Source:* Compiled by the authors.

2000 m away from a green or recreational area *(Table 3).* The distance given is the upper limit for a walk (about 25 minutes). Some studies have shown that the influence of the observed environmental elements on the property price extends up to a maximum distance of 2000 m (Melichar, J. and Kaprová, K. 2013), in some cases also over a shorter distance (Tyrväinen, L. and Miettinen, A. 2000; Biao, Z. *et al.* 2012; Daamsa, M.N. *et al.* 2019).

Although the neighbourhood variables are not the direct object of interest of this research, they should be briefly commented on. According to their mean values of the coefficients, four variables increase the value of real estate with their attractiveness (when all other variables in the regression are constant) (see *Table 2*). These are the distance from the elementary school, the distance from the shopping center, the number of higher education institutions and the number of cultural institutions within 500m of the apartment. The average of the coefficients shows a high value for the variables number of higher education and cultural institutions. The proximity of the shopping center is an attractive factor despite the crowds, noise and large built-up areas (buildings, parking lots, roads).

Other neighbourhood variables show unattractive factors for housing. Increasing the distance from health institutions (health center, hospital) increases the price of real estate, which is contrary to expectations. The same was expected for the variables distance from the nearest public transport station and the nearest kindergarten. The coefficients of the variables number of sports facilities and number of sports fields within 500 m of the property show the opposite of what was expected. Increasing the number of such facilities reduces the price of real estate. Possible causes are crowding and noise.

The results of the local hedonic model (GWR) show that there are large ranges of variation in

Table 3. Results of the local hedonic model for apartments up to 2000 m away from a green or recreational area

Variables	Count				Percentage			Statistic for significant properties (coefficients)			Part of the apartment price* in EUR		
	Non sign	Sign**	Sign -	Sign +	Sign	Sign -	Sign +	min	max	mean	min	max	mean
dist_zona	930	1202	609	593	56	51	49	-5.153090	3.652680	0.083059	-515	365	8
dist_forest	852	723	143	580	46	20	80	-3.542070	5.278660	0.337271	-354	528	37
dist_jarun	188	213	212	1	53	100	0	-0.621160	0.296880	-0.406531	-62	30	-41
dist_bundek	66	89	50	39	57	56	44	-1.512264	0.631705	-0.231906	-151	63	-23
dist_bank	486	38	3	35	7	8	92	-0.432529	1.285763	0.705826	-43	129	71
dist_maksimir	180	190	0	190	51	0	100	0.167898	2.580130	0.623056	17	258	62
dist_park	620	487	457	30	44	94	6	-1.945374	0.908357	-0.907034	195	91	-91

*Part of the apartment price for statistically significant apartments by individual variable, the change was estimated for every 100 m of distance from a green or recreational area. The Sign (-) shows a decrease in price with increasing distance from the observed green or recreational area, and the Sign (+) shows the inverse relationship. The unit of measurement is EUR/m^2. **Statistically significant ($p < 0.1$). *Source:* Authors' own elaboration.

the coefficients of the individual environmental variables (see *Table 2*). These results should be viewed with caution as they include apartments for which a single environmental variable is not statistically significant. For this reason, we will not interpret them here. We will interpret the results for the apartments for which the environmental variables are statistically significant ($p < 0.1$, $t > 1.660$) and which are located at a distance of up to 2000 m from the observed green or recreational area (see *Table 3*).

The variable distance to the nearest green or recreational area (dist_zona) is statistically significant for 56 percent of the apartments. It has a negative sign for 51 percent of the apartments, which means that proximity to this area increases the price of the apartment. Analogous to the coefficients, the value range of the price share associated with this variable ranges from -515 to 365 EUR/m^2, with an average of 8 EUR/m^2 (see *Table 3*). The geographical distribution of the coefficients *(Figure 3)* shows that the coefficients with a negative sign are concentrated in the western and south-western part of the city, while the coefficients with a positive sign predominate in the rest of the city, with the exception of the area around the forests of Mirogoj, Remetinski kamenjak and Remete.

Proximity to an urban park-forest or park-forest (dist_forest) has a statistically significant effect on 46 percent of apartments up to 2000 m away. The coefficients of the variables have a positive sign for most apartments (80%). According to the coefficients, the share of housing price attributable to proximity to the nearest forest ranges between -354 and 528 EUR/m^2, i.e., the extreme values, and the mean value is 37 EUR/m^2 (see *Table 3*). The coefficients with a negative sign (the variable increases the price of the apartment with decreasing distance from the forest) are located near the seven park-forests in the area of the historic city centre (Park-forests Zelengaj, Jelenovac, Vrhovec, Tuškanac-Dubravkin put-Cmrok, Kraljevec, Pantovčak and Prekrižje) and two urban park-forests (Zamorski Breg, Šestinski dol). It can be seen that other forest areas lower the price of housing the closer they are to the forest (coefficients with a positive sign) *(Figure 4).*

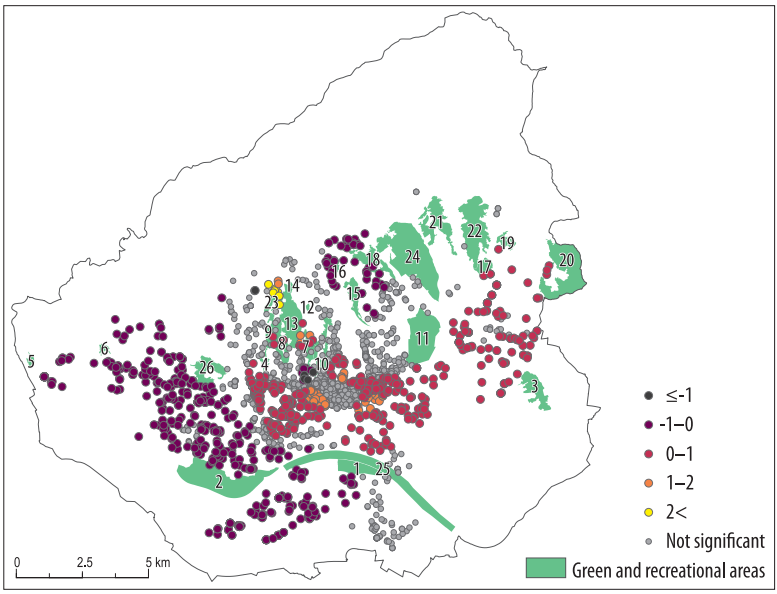


Fig. 3. Coefficients of the variable distance to the nearest green or recreational area. Numbers 1–25: see *Fig. 2. Source:* Compiled by the authors.

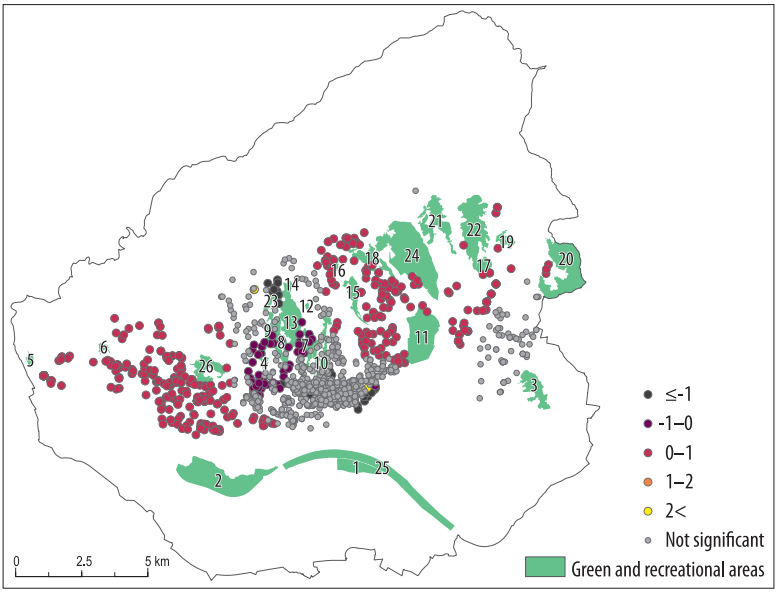


Fig. 4. Coefficients of the variable distance to the nearest urban park-forest or park-forest. Numbers 1–25: see *Fig. 2. Source:* Compiled by the authors.

The variable distance from RSC Jarun (dist_jarun) is statistically significant for 53 percent of the apartments at a distance of up to 2000 m. Almost all dwellings have a negative sign (212 out of 213 apartments), indicating that the price of apartments under the influence of Jarun increases when the apartment is closer to Jarun *(Figure 5).* The part of the apartment price that is close to the Jarun RSC averages 41 EUR/m^2, with values ranging from -62 to 30 EUR/m^2 (see *Table 3*). Given the relatively small range of coefficient values, *Figure 5* shows that all apartments are in the same class. Jarun also affects the price of apartments south of the Sava.

The variable Distance from SRC Bundek has the lowest number of dwellings included in the analysis of all environmental variables, which is due to a lower number of advertisements. The variable is statistically significant for 57 percent of the apartments (it has a positive sign for 44% of the statistically significant apartments, and a negative sign for 56%). The data show that proximity to the SRC Bundek influences the price of an apartment between -151 and 63 EUR/m^2, but on average 23 EUR/m^2 (see *Table 3*). The geographical distribution of the coefficients of the variable distance from Bundek (see *Figure 5*) shows that the variable is not statistically significant for the majority of apartments south of Bundek and is statistically significant for a large proportion of apartments north of Bundek, but also north of the Sava. A grouping of coefficients with a positive sign is observed in the western part of the observation area and with a negative sign in the eastern part of the observation area *(Figure 6).*

The distance variable from the bank of the Sava (dist_bank) has a statistically significant effect on the smallest proportion of apartments in its vicinity, namely only 7 percent of them. In 92 percent of the apartments for which the variable is statistically significant, the coefficient of this variable has a positive sign. The share of the price of an apartment near the Sava embankment ranges from -43 to 129 EUR/m^2, with an average of 71 EUR/m^2 (see *Table 3*). The geographical distribution of apartments *(Figure 7)* observed by this vari-

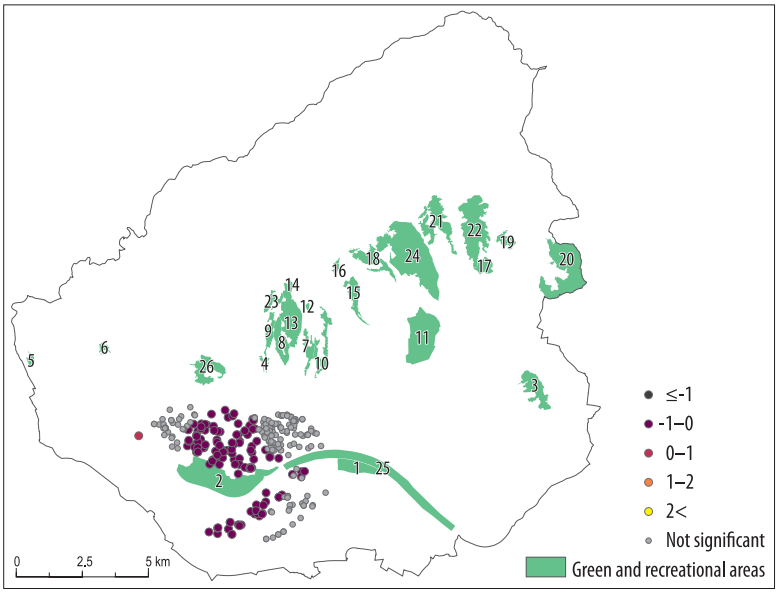


Fig. 5. Coefficients of the distance variables from RSC Jarun. Numbers 1–25: see *Fig. 2. Source:* Compiled by the authors.

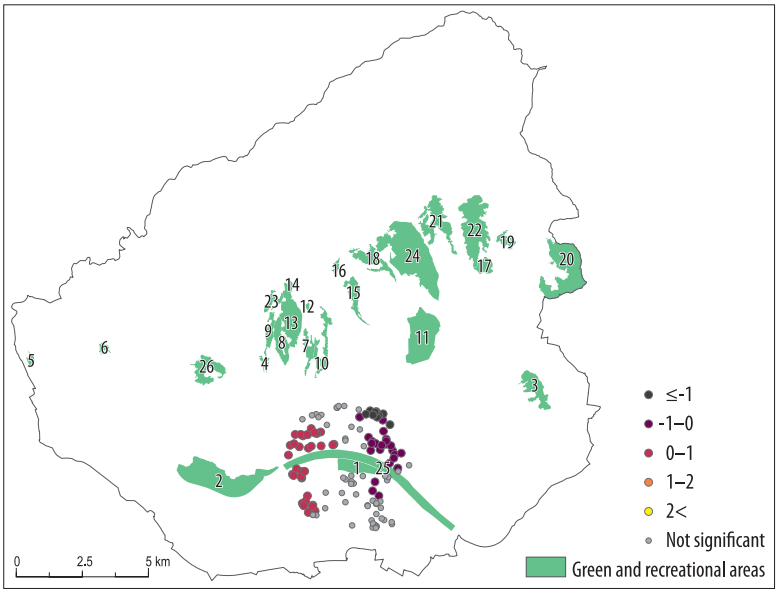


Fig. 6. Coefficients of the distance variables from SRC Bundek. Numbers 1–25: see *Fig. 2.*
Source: Compiled by the authors.

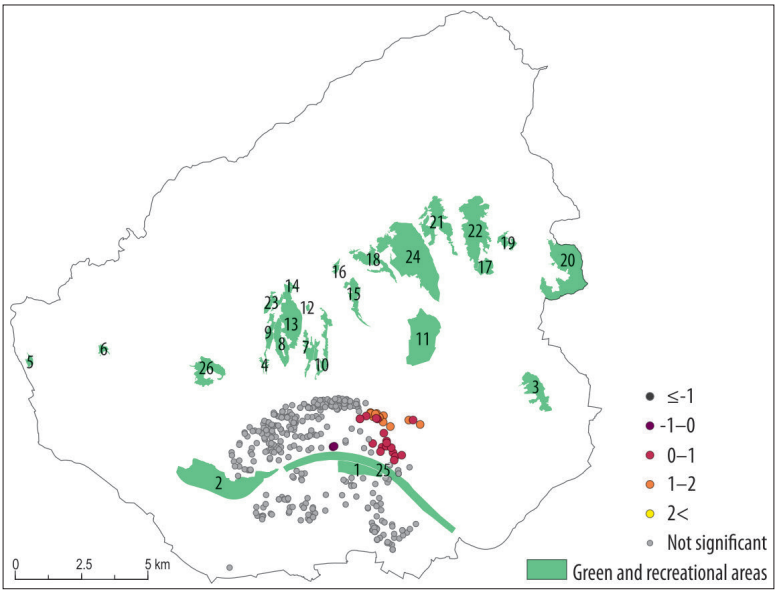


Fig. 7. Coefficients of the variable distance from the Sava dam. Numbers 1–25: see *Fig. 2.*
Source: Compiled by the authors.

able shows that the apartments for which the variable is statistically significant are located only in the Prisavlje area.

The variable distance to Maksimir Park (dist_maksimir) is statistically significant for 51 percent of the apartments at a distance of up to 2000 m. The sign of the coefficients of the variable is positive for all apartments, which shows that Maksimir Park lowers the price of apartments in the immediate vicinity and increases the price the further away the apartments are. On average, the price of an apartment that is 100 m away from Maksimir Park is 62 EUR/m^2 higher (see *Table 3*). The geographical distribution of apartments near Maksimir Park *(Figure 8)* shows that the variable distance to the park is statistically significant for apartments located west of the park. It can be seen that the coefficients of the variables are higher the further west the apartments are from Maksimir Park.

The variable for the distance to the nearest park (dist_park) is statistically significant for 44 percent of the apartments. The sign is negative for most apartments (92% of the apartments for which the variable is statistically significant). The share of the apartment price resulting from the distance to the nearest park is on average 91 EUR/m^2, which shows that the price of the apartment increases the closer the apartment is to the park. The value range of the share of the variable in the apartment price ranges from 195 to 91 EUR/m^2 (see *Table 3*). The geographical distribution of the apartments shows that the parks have the greatest influence on the apartment price for the apartments closest to the parks. The coefficients are somewhat lower (closer to zero) for apartments that are slightly further away from parks *(Figure 9).*

Discussion

The aim of the work is to investigate the influence of green and recreational areas in the city of Zagreb on the price of apartments in residential buildings. The research method is the local hedonic model. The results of the hedonic model show that green and recreational areas influence the price of apartments. They are therefor among the preferences of buyers when choosing a place to live.

The local hedonic model, created by geographically weighted regression, provides regression coefficients for each individual apartment. The model created in this study has a higher coefficient of determination than global models. Similar to the work of Sander, H.A. and Zhao, C. (2015), this study also shows that the global hedonic model provides poorer results because it generalizes. The local hedonic model differentiates the individual parts of the study area and therefore provides spatially clearer data. The coefficients of determination are spatially different, which indicates that a different part of the property price is explained by the variables of the model.

The direction of the influence (sign of the coefficient) of the green or recreational area on the price of the apartment is completely consistent for the variables distance from Jarun and distance from Maksimir Park.

The proximity to Jarun is an attractive factor for an apartment. The residential district of Trešnjevka-South, which was built in the last thirty years, extends north of Jarun. The development of the area near Jarun was mainly stimulated by the development of Jarun into a recreational area for the needs of the Universiade in 1987 and the construction of a streetcar line. The results of this research point to an obvious green gentrification. It is necessary to examine the socio-economic characteristics of the residents of this area in order to speak with certainty about environmental injustice and green gentrification.

For all apartments, the presence of Maksimir Park reduces the price of the apartment the closer the apartment is to it. These results contradict expectations, and it is necessary to find out more about this through further research. It can be assumed that the further one goes away from Maksimir Park, the closer one gets to the historical core, which means that the strict city centre and the main square are more attractive than

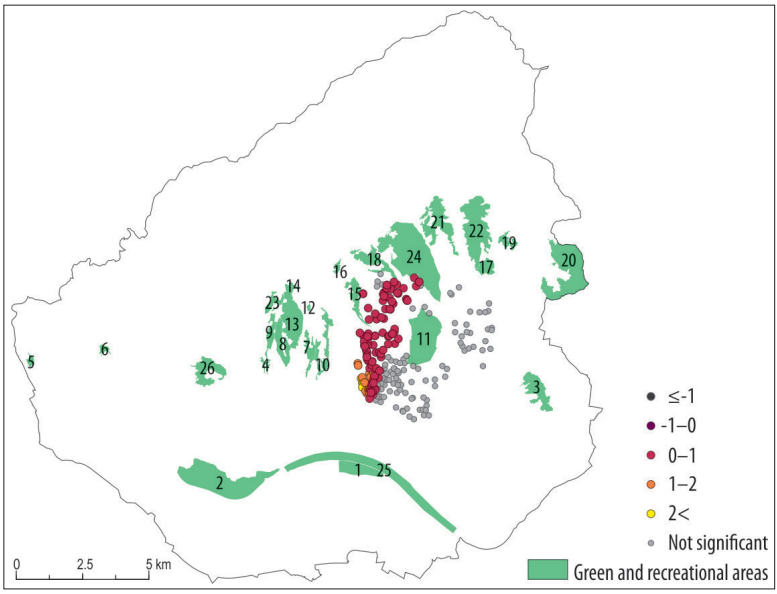


Fig. 8. Coefficients of the variable distance to Maksimir Park. Numbers 1–25: see *Fig. 2.*
Source: Compiled by the authors.

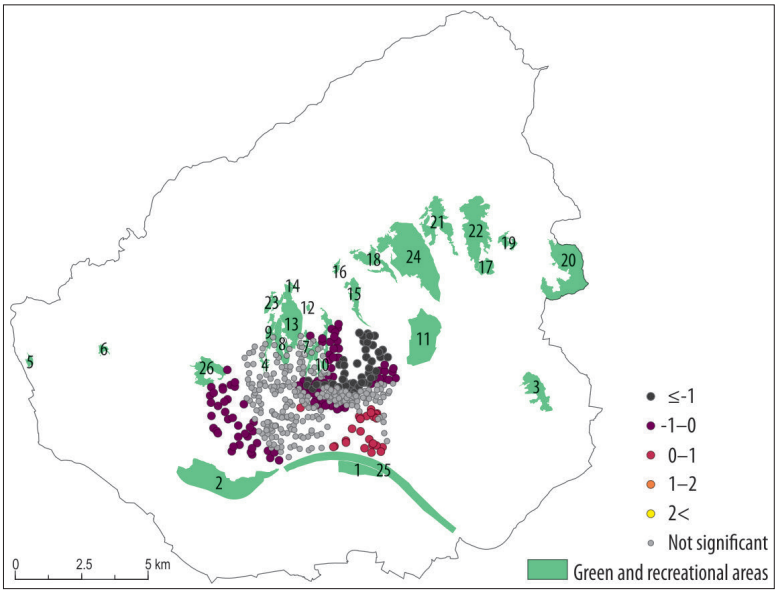


Fig. 9. Coefficients of the variable distance to the nearest park. Numbers 1–25: see *Fig. 2.*
Source: Compiled by the authors.

the large green city park. Maksimir Park is a well-maintained and large park and offers numerous recreational activities and rest.

A greater difference in the proportion of apartments with a positive and a negative coefficient of a statistically significant variable can be observed for the variables distance to the nearest park, distance to the Sava dam and distance to the nearest forest area. The results show the attractiveness of the parks due to their layout and their location in the wider city centre. The parks are well maintained, have recreational facilities (benches, fountains, walkways), landscaped vegetation (trees, lawns suitable for picnics) and occasionally host social events. Some of the parks are important tourist destinations in the city (Zrinjevac and Tomislavac parks). The parks in the city centre are small but important for the population, as they are located in a densely built-up part of the city where there are few green areas. Other green and recreational areas are located further away from the city centre. Regarding the availability of housing around the parks in the city centre, it can be said that it is not available for residents of lower socio-economic status. Due to the high building density, the proximity of parks is highly appreciated by the residents of Zagreb.

The distance to the nearest urban forest lowers the price in 80 percent of the apartments, the closer the apartment is to the urban forest. These results are contrary to expectations. The results of the local hedonic model suggest that forest areas are not an attractive factor for the location of the apartment in the vast majority of cases. The reason for this could be the poor organization of some of the observed forest areas (fewer recreational opportunities, lower diversity of vegetation, poor maintenance, overgrown vegetation), weaker promotion as a place for recreation and the proximity of the Medvednica Nature Park as a large forest area. Some of these reasons are mentioned by Bark, R.H. *et al.* (2011) and Hu, S. *et al.* (2016). Indeed, the proximity of Medvednica forest means a distance from the city centre, a certain peripheral location and a distance from numerous urban facilities, and the forest itself offers recreational opportunities only in two places of the long forest front of over 25 km. Investing in and promoting urban forests as places for recreation can increase their attractiveness, which could lead to the "urban green paradox". For the population with a lower socio-economic status, housing near forests is not available due to the increase in property values.

Looking at the variable of distance from the bank of the Sava river, the least number of apartments is included. Most of the apartments have a positive sign for the coefficient. According to these results, the Sava embankment lowers the price of apartments the closer they are to it. We can only speculate about the cause. Perhaps the cause is the extremely elongated shape of the area or the unattractiveness of the watercourse, as in the work of Bonetti, F. *et al.* (2016). On the embankment along the Sava river from SRC Jarun in the west to the Bridge of Youth and RSC Bundek in the east, there are well-maintained paths for recreation (walking, running, cycling, etc.) and places to rest. Numerous other recreational facilities have been established along the embankment. Our results suggest that the Sava dam is also accessible to residents of lower socio-economic status, as it does not increase the price of housing due to its proximity.

If we look at the nearest green or recreational areas and the Bundek, we can see a double effect on the price of housing in their vicinity. They increase the price of one part of the apartments, while they decrease the price of the other part because they are closer to them.

According to the local hedonic model, the most attractive factors when choosing a place to live are the RSC Jarun and the parks in the city centre. It is important to note that the urban forest parks and the forest parks, the Maksimir Park, and the banks of the Sava are not preferred when choosing a place to live. Bundek is partly a preference and partly not.

The results of this study can contribute to the study of green gentrification in Zagreb, but further research is needed that also takes into account socio-economic indicators and

other changes in the region. It needs to be clarified whether there is green gentrification in Zagreb and what impact other changes in the region have on gentrification in relation to green areas.

Conclusions

This article investigated the influence of green and recreational areas on the price of housing and provides indirect information on preferences in the choice of residential location. The results are largely consistent with previous studies. Green and recreational areas can drive up the price of housing, but also the price of housing in their vicinity. Some areas have no influence on the price of housing.

The first hypothesis can be partially accepted. Green and recreational areas have an influence on the higher price of real estate in some parts of Zagreb. Heterogeneity was found in the type of influence (sign and size of the coefficients of the hedonic model) of the observed green and recreational areas on real estate prices. In addition, spatial differences were found in the way the observed areas influence house prices. Some areas increase the price of some apartments in their neighbourhood, while the price of some other apartments decreases. The second hypothesis can be accepted. There are spatial differences in the impact of individual green and recreational areas in the city of Zagreb on real estate prices.

Some limitations were identified during the preparation and execution of the study. It is necessary to include in the models some other variables describing the characteristics of the area (distance from roads, distance from the Medvednica Nature Park, topography, characteristics of the neighbourhood).

The uniqueness of the study lies in the fact that it is the first study on the influence of green and recreational areas on housing prices in Zagreb, which indicates the importance of the results obtained and the possibility of their application. The results can be used for decision-making in the management of green and recreational areas in Zagreb as well as for real estate brokerage. Another special feature of this work compared to similar works is the use of a geographic information system (GIS) in the preparation and processing of the data.

Further research will focus on the influence of green and recreational areas on real estate prices. It will also include the socio-economic characteristics of the population and their desire to change residence. Future research will contribute to gaining new insights into green gentrification.

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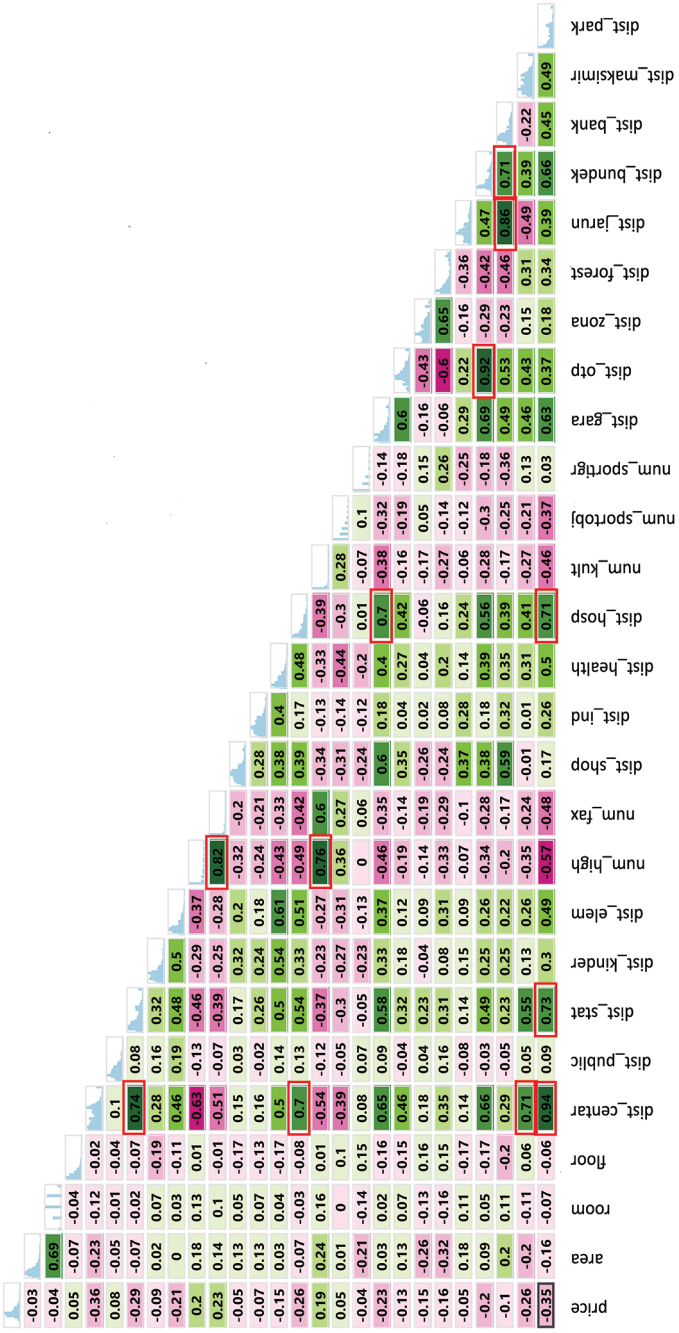
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Appendix - Correlation coefficient matrix (Pearson's correlation coefficient r)



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Assessing heatwave resilience in municipalities around Lake Balaton: A comparative analysis

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Abstract

Changing climate patterns represent a major challenge for Hungarian municipalities, particularly with regard to the increasing severity and frequency of heatwaves. As a result of the COVID-19 lockdowns, thousands of people moved to communities around Lake Balaton; therefore, cities and villages should place more emphasis on their long-term sustainability and climate resilience. This article addresses the literature gap in assessing the heatwave resilience of Hungarian settlements, focusing on the municipalities of the Lake Balaton Resort Area. Our main objective was to uncover spatial and temporal patterns in the 180 settlements involved in the analysis by using an indicator-based comparative method. The set of indicators included nine sensitivity and six adaptive capacity measures referring to the base years 2015 and 2022. Our results show heterogeneous spatial patterns across the analysed categories; however, several regional clusters can be identified: 1) in general, settlements from the northern part of the study area had above-average adaptive capacity, while the southern and south-western municipalities had significantly lower values, 2) only one micro-regional cluster can be defined in terms of sensitivity values in the northern part of the study area; 3) below average resilience values were found in the south-western and southern areas; 4) finally, neither sensitivity nor adaptive capacity nor overall resilience scores had changed significantly over time at the regional level. The applied methodology can easily be adopted in other Hungarian or even Central and Eastern European cities; consequently, new results can contribute to a better understanding of inter- and intra-regional patterns of heatwave resilience at the local level.

Keywords: heatwave resilience, adaptive capacity, municipalities, Lake Balaton, Hungary

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Introduction

Climate change is significantly impacting almost every settlement in the world by increasing the magnitude and frequency of extreme weather events (Wamsler, C. *et al.* 2013; IPCC 2018, 2021). Although the challenges are global, local-level solutions and detailed analysis are required to effectively increase the resilience of various stakeholders (Aboagye, P.D. and Sharifi, A. 2023). The number of publications addressing aspects of climate resilience at the local level has increased significantly in recent years (Woodruff, S. *et al.* 2021; Datola, G. *et al.* 2022), as the need for local governments to strengthen their capacities and develop their own climate policies increases (Reckien, D. *et al.* 2023). The dynamically changing external factors require quantitative and qualitative approaches to increase the co-benefits of mitigation and adaptation activities (Sharifi, A. 2021); also to avoid unintended long-term effects, so-called lock-ins (Ürge-Vorsatz, D.. *et al.* 2018; Buzási, A. and Csizovszky, A. 2023). In general, vulnerability and resilience-oriented topics have received increasing attention in academia, particularly with

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regard to heatwave-related challenges (Tong, P. 2021; Kiarsi, M. *et al.* 2023). There are numerous works in the literature that demonstrate the relevance of heatwave-related resilience factors through cross-country comparisons or individual assessments (Alonso, L. and Renard, F. 2020; Arshad, A. *et al.* 2020; Shi, Y. *et al.* 2021). The growing body of literature contributes to a better understanding of the general characteristics of heatwave resilience at the local scale. However, since adaptation problems strongly depend on local characteristics, there is undoubtedly a need to carry out comparative assessments at the regional level in order to deepen the existing knowledge about problems at the local level.

According to regional climate models, Hungary is facing significant changes in climate patterns: an increasing number of days with heatwaves (Torma, C.Z. and Kis, A. 2022; Simon, C. *et al.* 2023) when the average daily temperature exceeds 25 °C (Uzzoli, A. *et al.* 2018), and heavy rainfall (Jakab, G. *et al.* 2019; Schmeller, G. *et al.* 2022) are expected. Apart from these external factors, numerous indicators dealing with social issues point to potential sustainability problems: a decreasing size of the total population, a negative migration balance, especially in small settlements (Ritter, K. 2018), or an aging population (Menyhárt, O. *et al.* 2018) all contribute to the increasing vulnerability of the Hungarian society (Uzzoli, A. *et al.* 2018). However, more papers can be found in the literature that address local climate adaptation issues in Hungarian settlements from different perspectives (Li, S. *et al.* 2017; Patkós, C. *et al.* 2019; Szalmáné Csete, M. and Buzási, A. 2020 Szalmáné Csete, M. and Buzási, A. 2020; Kiss, E. *et al.* 2022; Jäger, B.S. and Buzási, A. 2023), it can be noted that comparative analyses involving a higher number of Hungarian municipalities are still almost completely missing, which represents a relevant literature gap. The same argument was put forward (Ferenčuhová, S. 2020) by analysing the existing literature on post-socialist cities in light of the challenges related to climate change. It is explained that current studies focusing on the local level of Central and Eastern Europe are quite rare and underdeveloped. Consequently, further studies and critical assessments are needed to improve the capacity of local stakeholders to address the negative impacts of climate change. Local governance and related bodies play a crucial role in reducing vulnerability at the settlement level by making climate change adaptation more integral to everyday decision-making and planning practices (Óvári, Á. *et al.* 2023). However, limited capacity in climate governance has been revealed by Óvári, Á. *et al.* (2024), therefore, the analytical assessment of non-planning aspects of Hungarian settlements can contribute to a better understanding of the local status of resilience production practices.

Therefore, our paper aims to analyse the heatwave resilience of a large number of Hungarian settlements by applying an indicator method. In this topic, a limited number of previously published papers can be found in the literature.

This paper focuses on the municipalities surrounding Lake Balaton, the so-called Lake Balaton Resort Area (*Balaton Kiemelt Üdülőkörzet* in Hungarian, and its short form "BKÜ" in the following), which involves 180 settlements. Lake Balaton has been the focus of numerous works from different scientific areas, however, the local level is rarely studied as the lake itself is taken into account instead. Most commonly, water quality and related problems, challenges, and potential opportunities have been analysed in terms of climate change (Kutics, K. and Kravinszkaja, G. 2020; Istvánovics, V. *et al.* 2022) or human activities as main drivers and their impacts on water balance (Rizk, R. *et al.* 2021; Kocsis, M. *et al.* 2024). In addition to the natural science studies, several papers addressed more holistic sustainability issues: Pomucz, A.B. and Csete, M. (2015), and Lőrincz, K. *et al.* (2020) analysed various aspects of sustainable tourism considering the Balaton region; Marton, I. (2006) developed a set of indicators to describe complex development patterns at the community

level; Molnár, T. and Molnár-Barna, K. (2019) assessed settlements in Veszprém County from a development policy perspective; finally, Obádovics, C. (2020) provided population development forecasts in the Balaton resort area and argued that the proportion of people over 65 years of age could reach 35 percent by 2062. This latter analysis sheds light on the importance of climate-related assessments in the region, taking into account the continuously aging population.

The present paper reflects the literature and scientific gap by analysing the resilience patterns of the municipalities of BKÜ. The scientific novelty of this paper is based on the study area since similar research focusing on these settlements cannot be found in the literature, especially not with regard to heatwave resilience. Secondly, the applied set of indicators derives from publicly available databases; therefore, it can easily be adapted to other Hungarian settlements or regions. Finally, our analysis not only provides a snapshot of resilience values but uses data from 2015 and 2022 can also reveal spatiotemporal patterns that also contribute to identifying regional differences and hotspots.

Literature review

In the pages of the Hungarian Geographical Bulletin, there are several examples where scientists focused on climate adaptation issues at the local level. One of the first results was published by Gál, T. *et al.* (2016) and analysed urban heat island patterns in Szeged using different local climate zones. According to their results, dense urban areas are significantly hotter, than surrounding zones, which is a thought-provoking result given the increasing development rate in the BKÜ settlements over the last 10 years. Since the study area is associated with Lake Balaton as an attractive tourist destination (Medarić, Z. *et al.* 2021), the tourism sector and its vulnerability are relevant factors to be analysed in previously published works. Csete, M. *et al.* (2013) found that the Lake Balaton region has medium vulnerability with above-average exposure, which is, however, complemented by high adaptive capacity. A more recent article from the Hungarian Geographical Bulletin (Kovács, A. and Király, A. 2021) assessed the climate exposure of tourism in Hungary and argued that a significant decline in climatic conditions is observed in summer - precisely the time when most tourists arrive in the surrounding settlements at Lake Balaton and possibly worsened the resilience of the communities. Since an intensive urbanization process can be seen in numerous settlements from the BKÜ, those studies that focused on microclimatic peculiarities in the sense of different or changing land use patterns should be mentioned. Gál, T. *et al.* (2021) analysed various cities in the Carpathian Basin regarding their thermal comfort issues in light of changing climate patterns in the 21st century. Their results indicate that an increase in the number of tropical nights is associated with densely populated urban areas compared to rural areas. Since Szeged is one of the most studied Hungarian cities with regard to the challenges related to climate change, another article by Kolcsár, R.A. *et al.* (2022) analysed the urban green space provision of different population groups. Since urban green spaces play a crucial role in mitigating the severity of heatwaves. In addition, it is assumed that the settlements around Lake Balaton will become more urban in the future. Finally, intensive urbanization contributes to an exacerbation of the urban heat island effect, which disproportionately affects the local population, as shown Szemerédi, E. and Remsei, S. (2024) in the case of Győr.

At the LAU-1 level, two comprehensive assessments can be found in the literature (Uzzoli, A. *et al.* 2018, 2019) that focus on micro-regional differences in heatwave vulnerability patterns in Hungary. The set of indicators used consists of exposure, sensitivity and adaptive capacity indicators based on public databases. Second, Farkas, J.Z. *et al.* (2017) provided a detailed analysis of climate vulnerability at the regional scale by

focusing on the Southern Great Plain and including more than 250 settlements in their studies. In addition to the results of regional climate models, the authors also measured the ecological and socioeconomic aspects of climate vulnerability using the CIVAS model (Pálvölgyi, T. and Czira, T. 2011). One of the most recent settlement-scale studies addressing climate vulnerability was developed by Lennert, J. *et al.* (2024), who adopted the CIVAS model to develop a multi-indicator method that assesses exposure, sensitivity and adaptive capacity at a local level taken into account. The results show an above-average risk to settlements around Lake Balaton. Therefore, it prepares the ground for the present study to highlight the spatiotemporal dynamics of these settlements in terms of their heatwave resilience.

Methodology

The study area is located in western Hungary, embedded between the central and southern Transdanubian NUTS 2 region *(Figure 1).* At its heart lies Lake Balaton, a natural wonder and the largest freshwater lake in Central Europe. Within this area, there are 45 coastal settlements, 7 of which are directly adjacent to the coast and 128 of which have no direct access to it. The BKÜ includes 180 towns in the three counties of Veszprém, Somogy and Zala. According to the Hungarian Central Statistical Office database, the total population of the BKÜ is about 270,000 people, occupying an area of about 3,884 km^2. Several important cities shape the region's landscape: Balatonalmádi, Balatonfűzfő and Balatonfüred are rapidly developing urban centres on the north-eastern shore of Lake Balaton. Notable attractions on the western side include Tapolca, known for its natural treasures such as sea caves, and Keszthely, the third largest city in Zala County, which serves as a centre for culture, trade and education in the region. In the southeast, Zamárdi and Siófok offer special attractions. Zamárdi hosts various festivals, while Siófok offers a wealth of permanent events that appeal to both tourists and locals. The towns in this defined area have a vibrant culture and benefit from excel-

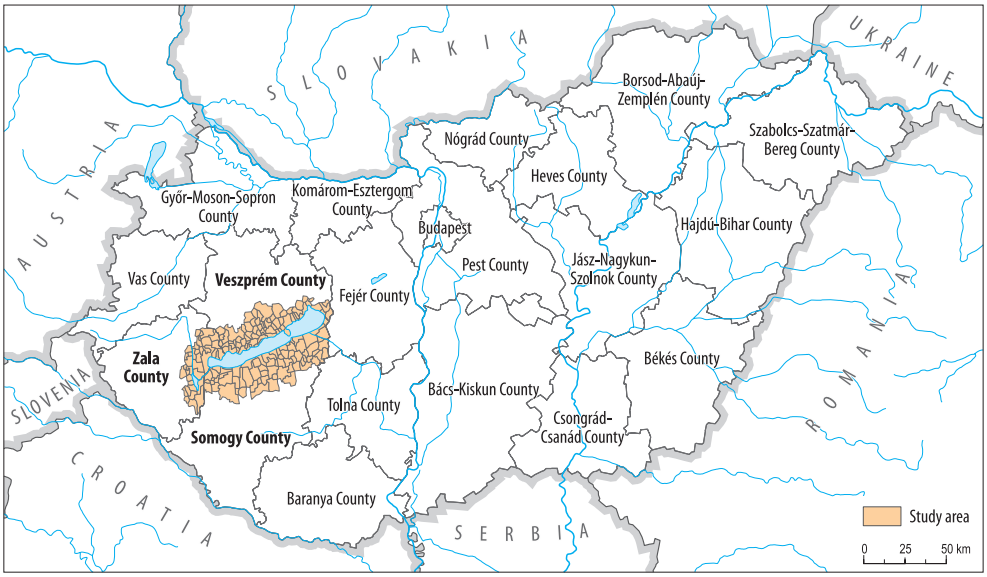


Fig. 1. The study area situated around the Lake Balaton

lent natural conditions, making them popular destinations for residents and visitors alike.

In the following paragraphs, the socio-economic background of the study area is introduced by emphasizing selected statistical data. Firstly, the social composition of Hungary is characterized by aging and this phenomenon can also be observed in the study area *(Figure 2)*. In 2015, Kisberény had the lowest aging index, with 38 elderly people per 100 children and minors. This year, Szigliget had the highest number of people aged 65 and over with 416.4 per 100 children and minors – the highest in the region. However, by 2022, this number had declined as the number of young people and children increased from 61 to 75, while the number of older people also increased from 254 to 279. In 2022, Tikos had the lowest aging index with 28 elderly people per 100 teenagers and children. Notably, Tikos reduced its aging index from 2015 to 2022 as the number of young people and children increased from 17 to 42, while the number of older people decreased by 3. Meanwhile, in Balatonszepezd, the aging index increased from 305 in 2015 to 559 in 2022, indicating a significant increase in the proportion of elderly people compared to children and adolescents. Overall, the aging index in the study areas was calculated as 167 in 2015, rose to 197.40 in 2022. It is worth noting that the National Aging Index was 123.6 in 2015 and 142.5 in 2022, according to the Hungarian Central Statistical Office.

Secondly, the number of taxpayer under HUF 300,000 annual consolidated tax base income band per year allows us to draw conclusions about the financial situation of the area, as the more people there are, the more people live in extreme poverty. Among the municipalities in the study area, Siófok had the highest population included in the indicator for both 2015 and 2022. However, it is encouraging to note that this number has decreased from 2,313 in 2015 to 2,151 in 2022. In 2015, the municipality of Óbudavár had no residents in the lowest income group, but by 2022 the number had increased to 10. In 2022, Kékkút had the fewest inhabitants living in extreme poverty, with only 4 residents, down from 13 in 2015, indicating an improvement in its situation. In the entire study area, 24,170 people belonged to this poverty group in 2015; by 2022 the number fell to 22,731. At the national level, 681,765 people belonged to one of the most vulnerable social groups in 2015, with the number decreasing slightly to 674,536 by 2022. If we

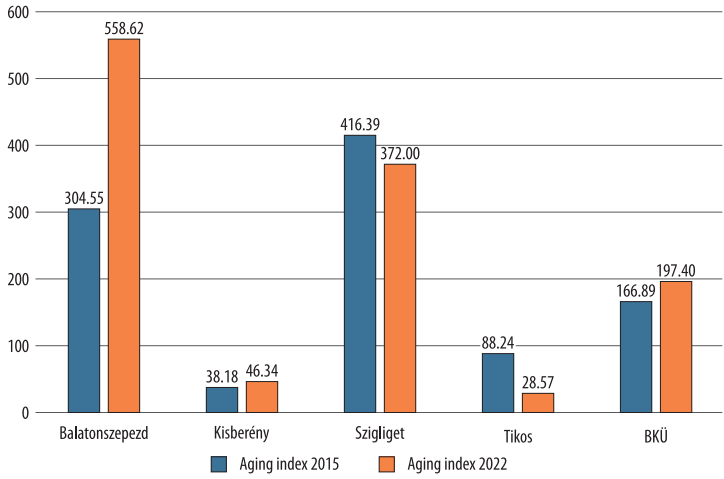


Fig. 2. Aging index in selected settlements from the study area. *Source*: Compiled by the authors.

examine the study area in the national context, we see that 3.54 percent of the country's population in 2015 in the income range under HUF 300,000 lived and this percentage fell to 3.37 percent by 2022.

From a climate policy perspective, it is worth noting that several settlements are members of a Hungarian umbrella organization, the so-called Alliance of Climate-Friendly Settlements: Balatonfőkajár, Küngös, Zalaszántó and Gyenesdiás. However, this does not mean that every municipality has a publicly available climate strategy; nevertheless, Gyenesdiás and Tapolca have uploaded their thematic strategies to public websites. Both policies have focused on extreme heat events with varying degrees of emphasis, although Tapolca pays much more attention to this issue. In addition, Balatonfüred, Tab and Zalacsány are signatories of the Covenant of Mayors of Europe with available Sustainable Energy and Climate Action Plans or climate strategies, which distinguish heat waves as one of the most serious threats to everyday tourism, alongside above-average vulnerability of lake shores.

The applied assessment methodology is based on the 2014 IPCC framework. We selected social, environmental and economic data from the National Spatial Development and Planning Information System (TeIR), that formulate sensitivity and adaptive capacity indicators, which would be separated into sensitivity and adaptation indicator groups. The observed years were 2015 and 2022; the starting date refers to the last year when the list of BKÜ settlements was finalized (when Balatonkenese and Balatonakarattya were divided); moreover, 2022 has begun an endpoint in this analysis due to the full availability of statistical data. *Table 1.* summarizes the applied set of indicators, representing their names, units of measure, and years.

Sensitivity indicators reflect the intrinsic characteristics of a particular system in terms of climate change; therefore, sensitivity value indicates the negative or positive effects of climate change affecting the system both directly or indirectly (Füssel, H.M. and Klein, R.J.T. 2006). The indicator "number of residents per general practitioners" shows the workload of doctors. When the indicator is high, doctors cannot efficiently care for locals suffering from diseases caused by climate change. People aged 0-2 and 60+ years are sensitive to the negative effects of climate change, such as heat waves (Smith, C.J. 2019). According to several European and North American studies, there is a positive association between heat waves and mortality, with older people and women at greatest risk (McMichael, A.J. *et al.* 2006). Nowadays, natural gas is a critical resource in Hungary due to its quantity and price. We assumed that the price of the resource is high, and locals then have to pay a higher share of their income, which reduces the well-being of the population, leading to lower adaptive capacities.

The next indicator was the total number of municipal green spaces in relation to the size of the settlement. Green spaces have numerous benefits from a sustainability and climate adaptation perspective: they provide natural shade, increase urban biodiversity, reduce the urban heat island effect (Szabó, B. 2015), protect against UV radiation, and thereby reduce numerous health problems (Coutts, C. and Hahn, M. 2015). The smaller the green area, the greater the sensitivity of the settlement; however, it is worth noting that the indicator we applied in this paper only refers to green spaces owned by the municipality. In addition, there may also be privately owned green spaces in the municipality, which can change the status of the indicator. The indicator of the ratio of taxpayers for an annual tax base under 300,000 HUF reflects the number of the poor population, which may be economically and socially sensitive. This population cannot move away or recover from climate damage due to lower income; in addition, the health of poorer people is at greater risk from extreme weather events (Sarkodie, S.A. *et al.* 2022). The number of heat wave days is expected to increase, which will also have a negative impact on people with cardiovascular diseases, which is why

Table 1. The applied set of indicators for 2015 and 2022

Indicator type	Name of indicator	Unit
Sensitivity	Number of residents per general practicioners	person
	Proportion of people aged 0–2 and 60–x in relation to the resident population	%
	Gas supplied for households (without conversion)	m^3
	Total municipally-owned green areas in relation to the size of the settlement	%
	Ratio of taxpayers for under HUF 300,000 annual tax base	%
	Per capita sales of medicines purchased for circulatory diseases	person
	General practitioner attendances and visits per capita	person
	Number of newly built flats / 1000 flats	pcs
	Population density	ppl/km^2
Adaptive capacity	Total municipally-owned green areas per capita	m^2/capita
	Net domestic income per capita	HUF
	Forest land per capita	ha
	Electricity supplied to households	kWh
	Passenger cars per 1000 capita	pcs
	Number of pharmacies and branch pharmacies per 100 capita	pcs

Source: Compiled by the authors.

the health of city residents is also sensitive. Therefore, we used an indicator of per capita sales of drugs for circulatory diseases and per capita attendance and visits to general practitioners, as the high values may indicate poor health and reflect a high level of sensitivity.

Adaptation is the ability to help systems, institutions, and people adapt to the negative impacts of climate change and also provide the means to respond to the consequences (Sharma, J. and Ravindranath, N.H. 2019). Since the study area faced above-average population growth during the first years of the COVID-19 pandemic, two statistical data (the number of newly built flats per 1000 flats; population density) refer to the related challenges from a social perspective.

As we mentioned in the previous part of this study, green spaces, and forests can improve the adaptive capacity of the analysed municipalities. Reforestation of slopes prevents landslides and the growth of green spaces creates a comfortable environment against heat waves (Donatti, C.I. *et al.* 2020). In order to describe the adaptive capacity of the selected settlements, indicators for the total municipal green space per capita and the forest area per capita were selected; higher values of both indicators mean improved adaptive capacity. An indicator of net domestic income per capita is an economic index that can reflect the well-being of local residents. In this case, the higher income of locals indicates higher adaptive capacity. As previously mentioned, heat wave days are expected to increase, and these negative impacts will be stressful for locals; therefore, we aimed to monitor this effect using the household electricity indicator. Our hypothesis is that a higher electricity supply leads to households using air conditioning, which helps reduce heat stress. On the other hand, we must highlight that air conditioning has two negative effects, both of which increase the sensitivity of settlements. First, they increase the urban heat island effect and are associated with enormous energy consumption, which is a problem when the energy does not come from renewable sources (Lundgren, K. and Kjellstrom, T. 2013). Resilience and mobilization can increase adaptability because, during heat stress, which can cause illness, locals can more easily reach another city with a hospital. For this reason, we chose the indicator "passenger cars per 1000 per capita", where a higher number of indicators means higher mobilization and, therefore, increased adaptive capacity. As already mentioned, the nega-

tive effects of climate change can affect the health of local people, which can be a major social and economic problem. Therefore, a well-developed health infrastructure is very important and also ensures an above-average ability to cope with the adverse effects of climate change. To highlight the situation in municipalities, the indicator "number of pharmacies and branch pharmacies per 100 capita" was used, with a lower value indicating a lower level of adaptive capacity.

In this study, we applied a weighted indicator-based approach consisting of socio-economic and environmental data from publicly available data sources by adopting the IPCC 2014 framework of climate change vulnerability assessments. From the selected statistical data, we constructed different indicators for 2015 and 2022 and then categorized them into adaptation and sensitive indicator groups. We first calculated the minimum and maximum values of the indicator for the observed years and then normalized the indicators for each city. To facilitate comparison, the indicators were sorted into a range from 0 to 1 using the following equation:

$$x' = \frac{x - \min(x)}{\max(x) - \min(x)}, \quad (1)$$

where x' is a normalized value, x is the value of the official indicator, $min(x)$ and $max(x)$ are the minimum and maximum values of the indicator. If the value of indicators showed lower resilience (Number of residents for one doctor, Proportion of people aged 0–2 and 60-x in relation to the resident population, Gas supplied for households (without conversion), Ratio of taxpayers for under HUF 300,000 annual tax base, per capita sales of medicines purchased for circulatory diseases. General practitioner attendances and visits per capita), we used the following equation:

$$x' = 1 - \left(\frac{x - \min(x)}{\max(x) - \min(x)}\right), \quad (2)$$

We scaled the indicators in the range 0–l so that the settlements could be compared. For adaptation, a value of 0 indicates low adaptive capacity, and a value of 1 indicates this feature higher. For sensitivity, the value 0 represents high sensitivity, and the value 1 represents low performance. Then, we separated the adaptation and sensitivity indicators for the observed years 2015 and 2022 by calculating the average of the adaptation and sensitivity indicators and then averaged the average values of the adaptation and sensitivity indicators to obtain a resilience score for 180 settlements. For the overall calculated resilience score, a value of 0 means low abilities and a value of 1 means the opposite, representing a resilient settlement.

Results

In this section, we present our results using QGIS to better visualize the regional patterns we can reveal and identify based on the calculated categories. It is important to note that municipalities are ranked on a scale of 0 to 1. Values close to 0 indicate low adaptive capacity and resilience with high sensitivity, while a value of 0.5 indicates moderate levels of adaptive capacity, sensitivity and resilience. The analysed settlements were divided into different colour groups; those with values around 0 were shown in red, while those around 0.5 were shown in blue. It is noteworthy that there were minimal differences between the calculated normalized values of the municipalities. Consequently, settlements were generally ranked at around 0.5, facilitating comparisons between them.

The sensitivity values from 2015 and 2022 show minimal regional clustering; however, several spatial trends can be identified. First, northern settlements, especially those in the first and second tiers from the lake shore, are generally more sensitive than those in the southern part. Sensitive clusters are notable on the western side of the Tihany Peninsula, particularly around the northwestern basin of Lake Balaton. A common feature of the most sensitive settlements is the frequent absence of general practitioners; in the applied methodology, we assigned a value of "0" when the number of residents

per GP and the number of GP attendances and visits were zero, indicating the highest level of sensitivity due to the lack of available healthcare services. Furthermore, the proportion of municipal green spaces was, in many cases, below average, reflecting a lower ability to contain heatwaves in these settlements. Apart from these similarities, the most sensitive settlements have different weaknesses across all indicators, without any clear clusters emerging between them. With regard to the change in values over time, *Figure 3* shows a relatively stable situation without any significant shifts in the relative positions of the municipalities.

The spatial characteristics of the adaptive capacity values are fundamentally different from the sensitivity performances discussed previously *(Figure 4)*. However, a limited number of settlements along the northern border of the study area may be characterized by low sensitivity and relatively high adaptive capacity, making them among the most resilient in the BKÜ. In general, northern coastal communities have significantly greater adaptive capacity compared to their southern counterparts, particularly those settlements further from the lake. A clearly defined collection of above-average values can be seen around the Káli Basin, west of the Tihany Peninsula. This area is characterized by high well-being factors, which is consistent with the existing literature: the higher the well-being, the greater the ability to deal with the negative impacts of climate change. Micro-regions with low adaptive capacity can now be identified in the southwest corner and the southern part of the study. Similar to the highly sensitive

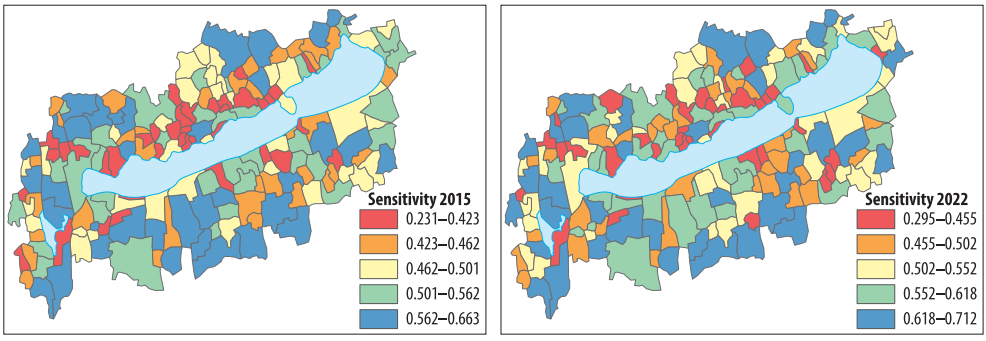


Fig. 3. Sensitivity averages for the settlements of the study area, 2015 and 2022. *Source*: Compiled by the authors.

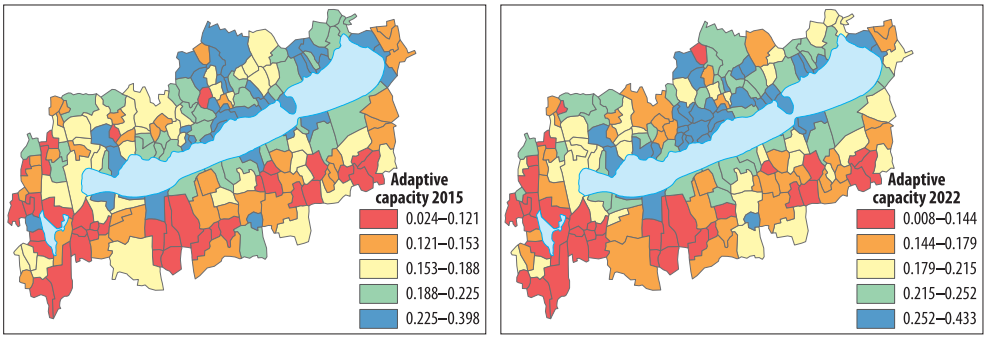


Fig. 4. Adaptive capacity averages for the settlements of the study area, 2015 and 2022. *Source*: Compiled by the authors.

settlements, two indicators contribute to the low adaptive capacity of these communities: public green spaces and the lack of pharmacies. Consequently, it is evident that poor healthcare and limited public green spaces are the main contributors of reduced resilience to extreme heat events in the region.

Since resilience values are based on the averages of sensitivity and adaptive capacity categories, no large regional clusters were identified in either 2015 or 2022 *(Figure 5).* However, highly resilient clusters of settlements were observed in three areas: 1) along the northern lakeside, west of the Tihany Peninsula; 2) in the north-western corner of the study area; and 3) on the opposite side of the first cluster, in some municipalities further from the lake. Meanwhile, two intraregional clusters, consisting of relatively small villages in the south-western and southern regions, exhibited the lowest resilience. As it was seen regarding sensitivity and adaptive capacity categories, the overall resilience values and quintiles remained relatively the same without huge changes over the analysed 7 years.

Discussion

In addition to the regional resilience patterns we previously identified, the relationship between population size and sensitivity, adaptive capacity and resilience requires further investigation. Using normalized data, R^2 correlation coefficients were calculated for 2015 and 2022, as shown in *Table 2.* The analysis shows that there is no significant correlation between population size and the analysed resilience dimensions. This suggests that local characteristics and related socioeconomic factors play a more important role in determining resilience at the local level. This finding is consistent with the nature of climate adaptation, where the effectiveness of responses largely depends on local characteristics and tailored solutions to standardized climate-related challenges. Our results highlight the importance of locality, as evidenced by cases where settlements from the highest and lowest quintiles in terms of sensitivity, adaptive capacity, and resilience are situated next to each other, despite facing similar challenges.

Our study has several limitations regarding the applied methodology. The first cohort of limitations relates to the selected indicators due to their limited availability in our analysis. The set of indicators would be

Table 2. Correlation coefficients between population size and the analysed categories

Category	Year	R^2 values
Sensitivity	2015	0.152
	2022	0.160
Adaptive capacity	2015	0.112
	2022	0.148
Resilience	2015	0.075
	2022	0.028

Source: Compiled by the authors.

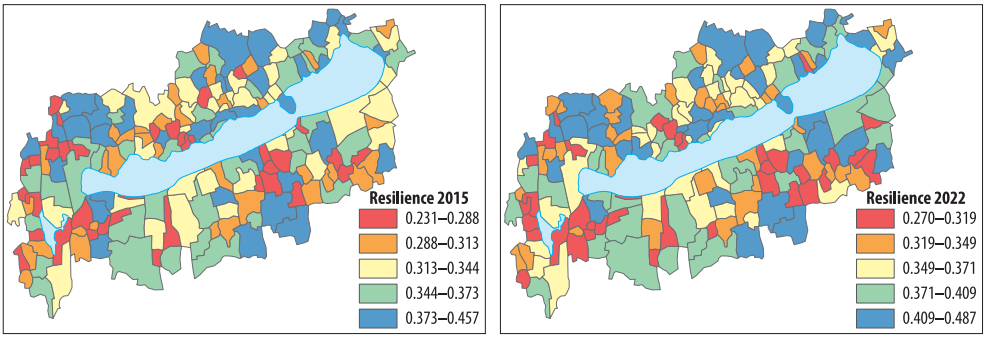


Fig. 5. Resilience averages for the settlements of the study area, 2015 and 2022. *Source*: Compiled by the authors.

expanded to include measures highlighting the speed and effectiveness of emergency responses, the availability of higher-level health facilities, and heatwave-related mortality and morbidity incidence, to name just a few statistical indicators. Apart from this, it would be useful to study land use and land cover dynamics over a longer period of time to identify the changes in artificial and natural areas that play a crucial role in identifying vulnerable settlements. The second limitation has its origins in the comparative nature of our analysis. Although the selected indicators are available for all settlements, a comparative study always encounters significant limitations due to the very different sizes and capabilities of the settlements. In our study, the number of municipalities analysed is 180, meaning that settlements with inherently different socioeconomic, environmental and institutional backgrounds were involved. Consequently, the calculated resilience, sensitivity and adaptive capacity values should be interpreted with this limitation in mind and accept the fact that all colours and values are based on the study area and do not have universal meaning.

In addition to the limitations mentioned here, some future research directions can also be identified: 1) detailed analysis of land use and land cover changes over time using remote sensing data for all settlements; 2) calculation of heatwave-related mortality to reveal regional patterns in the most vulnerable communities.

Conclusions

The aim of this study was to analyse the heatwave resilience of BKÜ settlements by using a set of indicators, including aspects of sensitivity and adaptive capacity. For this purpose, we collected social, economic and environmental statistical indicators from the National Information System for Spatial Development and Planning; then, average values for each category were calculated using the normalization method to compare and synthesize different units. Our dataset covered the years 2015 and 2022 to analyse changes in individual values and regional patterns over time. The number of assessed settlements allowed us to draw conclusions about the applicability of our methodology with a view to a possible future analysis of Hungarian settlements: it can be noted that all indicators are available at the local level; therefore, the calculations can be easily repeated to assess heatwave aspects in the Carpathian Basin. Our results also shed light on previously unknown regional patterns.

Regarding the adaptive capacity values, the northern part of the BKÜ can be characterized by higher values, while the southern and west-south micro-regions had below-average values and, therefore, lower adaptive capacity. However, intraregional clusters cannot be formulated in either 2015 or 2022. Furthermore, these values appeared to be quite stable over time. Finally, the overall resilience values showed the same spatial characteristics over time: north-eastern and north-western settlements were less vulnerable, while south-western communities can be characterized as less resilience to heatwave problems. Our study can pave the way for further analysis of the heatwave resilience of different Hungarian cities and villages based on the easy-to-apply methodology and country-specific set of indicators. Although there is an emerging gap in the literature in this research area, this paper can contribute to filling this gap and drawing the attention of policy makers to climate adaptation aspects on a local level as a new input for planning processes.

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Post-pandemic pursuits: Activity preferences of rural tourists in Western Transdanubia

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Abstract

This study examines the changing preferences of rural tourists in Western Transdanubia, Hungary, in the wake of the COVID-19 pandemic. We aim to uncover how rural tourism has changed and identify the new winners of the shifting demand. In 2021, we conducted a comprehensive survey with 925 participants and introduced a novel activity-based segmentation of rural tourists, revealing a strong preference for complex service packages. Practically, our findings highlight that village caterers who have strategically segmented the market have emerged as winners, successfully attracting different age groups and genders with customized packages. Cluster analysis revealed a segment of rural tourists who, without exception, were enthusiastic about diverse activities. In particular, our cross-cluster analysis points to a significant amount of potential demand among middle-aged tourists. These findings help practitioners develop a targeted product mix and marketing strategy to meet the changing demands of rural tourism.

Keywords: rural tourism, hospitality, crisis, COVID-19 pandemic, post-COVID, family travellers, entertainment, gastronomy, recreation.

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Introduction

The COVID-19 pandemic hit the tourism sector the hardest all over the world (Gössling, S. *et al*. 2020), including Hungary. Researchers have pointed out that the COVID-19 pandemic has created an opportunity for the tourism industry to revise its services in terms of community-based, socialized tourism services (Higgins-Desbiolles, F. 2020; Menon, D. *et al.* 2022). Many mentioned, that in addition to exploring innovative business models that generate new revenue streams (Breier, M. *et al.* 2021; Škare, M. *et al.* 2021), tourism managers must understand that in today's uncertain world, what are the viable services and attractions provided to domestic tourists in order to keep the business alive if, for example, international demand ceases due to a future crisis (Tomassini, L. and Cavagnaro, E. 2020).

In the aftermath of the COVID-19 pandemic, just as the world was beginning to recover, the war in Ukraine disrupted many parts of the economy, with the tourism sector being one of the hardest hit. This conflict triggered a new cost-of-living crisis, persistent inflation, and soaring energy prices, all contributing to a sharp decline in demand. However, due to its proximity and offering of quieter, healthier recreation options, rural tourism emerged as a viable alternative, providing urban inhabitants with affordable relaxation and recreation opportunities (Wang, J. *et al.* 2022).

This study examines the recovery of rural tourism, focusing on people's attitudes

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in the post-pandemic period, to reveal how rural tourism has evolved and identify the new beneficiaries of this demand. A questionnaire survey conducted in 2021 with 925 respondents examined their motivations for rural travel. The results show that 49 percent of family travellers are open to or actively seeking new experiences and entertainment, whether gastronomic or sporting. In addition, the results indicate that middle-aged families are the most reliable and active participants in rural tourism. Finally, village restaurateurs who have strategically segmented the market have emerged as winners, successfully attracting different age groups and genders with customized packages. The results contribute significantly to informed destination development and management, a better understanding of markets and modern marketing practices, and professional approaches to holistic and sustainability-enhancing management.

The present article is organized as follows: an in-depth literature review of rural tourism is presented, then an introduction to the methodology used, the analysis and discussion of the results. Finally, the conclusions and limitations of the study are included.

Literature review of rural tourism

Consumers' tourism decision is a very complex process, the result of which the decision is the selection of an action alternative. In general, this is influenced by many factors (Shuai, M. *et al.* 2022), such as age, income, education, family structure, the purpose of the trip, motivation, benefit, or activity etc. Furthermore, it is also important that every decision is made in some environment, which also limits the range of possible decisions (Belényesi, E. and Bokor, T. 2022). Finally, the images of the destination also play an important part in influencing the decision (Wookhyun, A. and Alarcón, S. 2021).

The most important driver of profitability in the tourism industry is customer satisfaction. Satisfaction with services results in either repeat visits or recommendations that motivate other travellers to visit that destination (Huang, S. and Hsu, C.H.C. 2009).

Rural tourists turn out to be relaxed and hedonistic, they primarily seek facilitated consumption experiences and privacy. Moreover, former research revealed that travel characteristics influence tourism decisions more than sociodemographic characteristics (Juschten, M. and Hössinger, R. 2021). Rural tourists are assumed to be less interested in crowded, tourist-attraction places. However, it should not be forgotten that there are various niche markets, such as hiking or golf, which are also forms of recreation, but more active ones (Frochot, I. 2005).

Botero, C. *et al.* (2013) studied 435 beach users and found a significant difference in the motivations of urban and rural beach users: those who preferred water and sand activities preferred urban beaches, while those who preferred better water and sand quality preferred more rural, secluded beaches. As different beaches attract tourists with different motivations, it is essential and incomplete to investigate which local characteristics attract tourists (Dodds, R. and Holmes, M.R. 2020).

Pesonen, J.A. *et al.* (2011) argued that tourists are driven by their own motivation to places where they expect their needs to be satisfied. These push motivators are recognized as the starting point for travel (Leiper, N. 1990). Once the desire to travel exists, pull motivators attract people to specific destinations (Crompton, J.L. 1979). These are destination-specific attributes such as natural attractions, food, people, recreational facilities, or activities. Thus, pull motivators determine which destination a traveller will select in line with the traveller's push motivators.

Factors determining the demand for rural tourism

Without rural tourism, we cannot talk about tourism or hospitality. Rurality is often defined in opposition to urbanity, while rural tourism is often described as the consumption of an idealized tradition (Helgadóttir, G. and

Dashper, K. 2021). OECD (1994, 59) defines rural tourism as firmly based on the specific features of the rural world: open space, contact with nature, rural heritage, and society.

The distinguishing elements of rural tourism are the local, authentic gastronomy; the remote landscape with beautiful panorama, animals, as well as renovated and converted farm buildings. Consequently, Helgadóttir, G. and Dashper, K. (2021) noted that the demand for rural tourism is rooted in tourists' attraction to traditional values and their need for quiet, idyllic domesticity. Moreover, Maestro, R.M.H. *et al.* (2007) highlighted that rural tourism is typically a short stay. Rosalina, P.D. *et al.* (2021) found that location is paramount and best understood from a geographic and social perspective; however, the presence of indigenous communities is also essential to providing rural experiences.

Besides closeness to nature, culinary pleasures have also become one of the driving forces of rural tourism. The "foodies" knowledge of local dishes is the determinant for the choice of destination and it is an essential variable in the composition of tourist satisfaction in the travel experience (Martín, J.C. *et al.* 2020). Because rural areas are inherently very different and unique, hence there is a wide range of needs they can meet and satisfy. Consequently, many scholars urged to segment the market in order to have the right value proposition for the target segment. These segments are closely linked to new trends in rural tourism, where tourists show respect for culture and tradition, authenticity, and sustainability (Martín, J.C. *et al.* 2020).

Several researchers have been working on segmenting the demand for rural tourism, and their analyses focus on various types of motivation, which (Chen, L.C. *et al.* 2013) summarized, highlighting the importance of factor-based motivation testing. Park, D.B. *et al.* (2014) found 5 segments according to the benefits sought by tourists in rural settings: the pursuit of spending time with family, the pursuit of escape from the daily routine, the pursuit of learning and socialization, the pursuit of rural experience, and the pursuit of education.

Frochot, I. (2005) segmented the Scottish market by factor-cluster analysis. As a result of his research, active, rural, resting, and contemplative types emerged from the data. Taking it a step further, Kaptan, A.C. *et al.* (2020), as well as Roberts, L. and Hall, D. (2004) are the one of the many authors who describe rural tourism as a tourist activity associated with farm-based tourism, nature-based tourism, adventure tourism, wellness tourism, spiritual tourism, nostalgia tourism, heritage tourism, cultural tourism, agrotourism, and ecotourism.

However, in their research Bel, F. *et al.* (2015) distinguished the group of people interested in gastronomy, with special attention to traditions, and formed a separate cluster in French rural tourism. They urged to include gastronomic tourism and its connection to local products and services as the future research direction of rural tourism. Agrotourism offers an opportunity to restore and maintain the well-being of rural areas and to solve social problems (employment, health, education, leisure).

Eusébio, C. *et al.* (2017) in their research, also examined rural tourism in the Portuguese interior, which has many similarities with the rural space in Hungary. Based on the activities of tourists in the countryside, 4 clusters were formed: 1) Active visitors; 2) Passive nature observers; 3) Inactives, and 4) Summer family vacationers. The tasting of local food and wine was investigated, and involvement in the cultivation of climate-specific products (olives, grapes); however, no details of the content of food and drink were included. Darabos, F. and Printz-Markó, E. (2018) use the distinguished two main segments among Hungarian rural tourists: first, the holiday seekers at a wine or palinka maker, and second, the active recreation in a village house with potential cycling activity or organized nature tours.

The very many outdoor activities available in rural settings are important drivers for rural tourism since for example, hiking is an important leisure activity for urban populations visiting rural areas for recreation and well-being (Rodrigues, A. *et al.* 2010), as it offers a relatively simple wellness experience in nature. These activities are summarized in *Table 1.*

Table 1. Summary of motivation-based factors affecting rural tourism decisions in former research

Authors	Motivation-based factors									
	Learning	Relaxation, self-fulfilment	Accessibility	Rural heritage, nature	Outdoor activities, sports	Novelty, Excitement	Socialization	Sun and beach	Gastronomy	Family togetherness
Frochot, I. 2005.	–	X	–	X	X	–	–	–	–	–
Pesonen, J.A. 2012.	–	X	X	X	–	–	–	–	–	X
Chen, L.C. *et al.* 2013.	X	X	X	–	X	X	X	–	–	–
Rid, W. *et al.* 2014.	X	–	–	X	–	–	X	X	–	–
Bel, F. *et al.* 2015.	–	X	–	X	X	–	X	–	X	–
Pesonen, J.A. and Tuohino, A. 2015.	–	X	–	–	X	–	–	–	–	X
Eusébio, C. *et al.* 2017.	–	–	–	X	X	–	X	X	X	–
Remoaldo, P. *et al.* 2020.	X	–	X	–	–	X	X	–	–	X
Wookhyun, A. and Alarcón, S. 2021.	–	–	–	X	X	–	–	–	–	X

Source: Authors' own elaboration.

The former research highlighted that there could be a significant variance in the motivation of tourist sub-groups (Zimmer, Z. *et al.* 1995; Chen, L.C. *et al.* 2013; Rid, W. *et al.* 2014; Remoaldo, P. *et al.* 2020). Relaxation and escape from everyday life were some of the critical motivations for rural tourism. In addition, several factors can stimulate the decision at the same time, such as a desire for historical or natural attractions. Some authors have distinguished between family gathering and socialization, where the latter refers to meeting the locals. At the same time, rural tourism can be good for refreshment, seeking novelty and excitement, but also for relaxation, immersion in nature and complete relaxation. In essence, both are driving forces for escape from everyday life. Finally, as *Table 1* shows, getting to know nature, history or other cultures is also an important factor.

Besides the motivation to engage in certain activities, tourist demographics were questioned to play a significant role in rural versus urban holiday decisions *(Table 2).* Pesonen, J.A. and Komppula, R. (2010) created the profile of the Finnish rural tourist, in which the typical representative of the segment is the one who has been growing for 45–54 years, with a high education, and a household income is medium.

The correlations between demographic, and social factors and participation in rural tourism were analyzed in

Table 2. The former research on rural tourists' demographics

Authors	Age	Gender	Occupation	Income	Education	Rural origins	Number of visits	Travel with	Residence
Frochot, I. 2005.	X	–	X	–	–	–	–	–	X
Molera, L. and Albaladejo, I.P. 2007.	X	X	X	X	X	X	X	X	X
Pesonen, J. *et al.* 2011.	X	X	–	X	X	X	X	X	–
Pesonen, J.A. 2012.	X	–	–	X	X	–	–	–	–
Bel, F. *et al.* 2015.	X	–	–	X	X	–	–	–	X
Shuai, M. *et al.* 2022.	X	X	X	X	X	–	–	–	–

Source: Authors' own elaboration.

China (Shuai, M. *et al.* 2022). The researchers found that gender, age, occupation, education, and family structure did not significantly affect the choice of leisure agricultural trips. However, men's consumption expenditures exceed those of women, which may be related to the fact that women are more cautious than men in the consumption process, or men bear the greater part of the expenses incurred during the journey of lovers. Bel, F. *et al.* (2015) found no socio-demographic differences in France between domestic tourists in the countryside and in the city in terms of age, educational attainment, household income, etc., are very similar. According to the study of Andriotis, K. (2011), in the rural area of Archaneas (a Greek county), the tourists are younger and more highly educated than tourists visiting Athens.

For our research, important analyses were carried out by (Bel, F. *et al.* 2015) in the three rural regions of Aquitaine, Auvergne, and Rhône-Alpes in France. The results overlap with studies in Scotland (Frochot, I. 2005), Spain (Molera, L. and Albaladejo, I.P. 2007), and a study in Finland (Pesonen, J.A. 2012). Bel, F. *et al.* (2015) noted the main target group in rural tourism market segments are those interested in outdoor activities, excursions or family vacations. Families with children or groups of young adults are looking for outdoor activities. While those interested more in rural culture and visiting natural as well as heritage sites are typically older, lower- and middle-class tourists. Finally, they also found evidence that gastronomic tourism attracts tourists who spend more. All of these scholars nevertheless argue that in order to meet the demand, the product development activity must be adapted to the needs of the target groups.

Succeeding in post-COVID times as a rural destination

In practice, the competitiveness of a destination depends to a large extent on the service experience: consumers evaluate the service not only in terms of its utility, but also ex-

perience it in an emotional, sensorial, and symbolic way (Lane, B. and Kastenholz, E. 2018). Today, according to Ellis, G.D. and Rossman, J.R. (2008) the "experience economy" is characteristic of all areas of life, where valuable resources (time, money, or other personal alternative costs) are exchanged for a benefit that is also associated with an experience. Thus, the experience of a trip is defined not only by the cleanness or beauty of the destination, etc., but – often more importantly – by the emotional and motivational states experienced during the time spent there. In this way, experience when it is created to enhance the value of a product or service, or it is provided as an independent entity (Knutson, B.J. and Beck, J.A. 2004).

The tourist experience is a very complex, multidimensional, highly subjective and dynamic phenomenon, and it usually lasts over time; at the same time, from the point of view of tourism demand, the experience lived in the destination is crucial (Huang, S. and Hsu, C.H.C. 2009; Kastenholz, E. *et al.* 2018). The challenge from the point of view of suppliers is that experience is individualized, determined largely by the different backgrounds, values, attitudes, and beliefs of each tourist; they "experience" it through their individualized "glasses". Consequently, no matter how hard someone tries to visualize an experience others are likely to end up saying, "You should have been there" (Knutson, B.J. and Beck, J.A. 2004, 25).

Today's affluent and demanding consumers along with the challenges such as the COVID-19 pandemic together are escalating the competitive rivalry in the industry (Komodromos, M. *et al*. 2022). Kastenholz, E. *et al.* (2012) prove that rural tourism retains its importance because tourists are increasingly looking for authentic experiences. The analysis of target groups involved in rural tourism is also interesting because potential tourists consider these rural destinations to be safer, where the possibility of spreading the coronavirus is lower (Lopes, A.S. *et al.* 2021). Hall, C.M. and Seyfi, S. (2021) citing UNWTO data, found that the COVID-19 pandemic has reduced the number of international tourists by approximately 1.1 billion, putting 100 to 120 million jobs at risk. Özdemir, M.A. and Yildiz, L.D.S. (2020) have drawn attention to meeting the needs of post-pandemic tourists who want stress relief and refreshment in a natural environment through rural tourism. According to Zhu, H. and Deng, F. (2020), Wen, J. *et al.* (2021), and Vaishar, A. and Šťastná, M. (2022) the post-covid satisfaction of needs for physical and psychological well-being was considered to be solvable by rural tourism.

The demand segmentation of rural tourism has been carried out based on the motivation of tourists, benefits, and activities in recent scientific research (Wookhyun, A. and Alarcón, S. 2021). For example, Pesonen, J.A. and Tuohino, A. (2015) used factor analysis to divide demand into three types of activities, bathgoers, well-being lovers and sporty.

The commonality in these studies is that they arrive at very diverse results, difficult to compare as the locations – country specificity – largely determine the underlying motivations. Pesonen, J.A. *et al.* (2011) noted that positive prior experience with rural tourism is likely to result in repeated travel. They also argued that international tourists differ in their demand, and there is great variance among the factors that attract various nationalities to different destinations. For example, rural tourism for Germans is about closeness to nature and the farm lifestyle.

In summary, the COVID pandemic has affected the entire tourism industry. However, scholars (cf. Kumar, A. and Nayar, K.R. 2021) have also pointed out that the COVID-19 epidemic has mental health and psychosocial consequences in addition to other health symptoms reported worldwide. On the one hand, the quarantine disrupted people's usual activities and daily routines, often leading to livelihood problems, and on the other hand, the constant stream of media (including social media) increased people's sense of loneliness and isolation. Mood and emotional outbursts also became more frequent. In addition to anxiety and depression, panic and stress symptoms have increased.

Others reported that once the travel restrictions were lifted, people were keen to make up the lost opportunities and the tourism industry demonstrated its unique ability to bounce back (UNWTO, 2023). But the war in Ukraine since February 2022 has interrupted the stronger than expected recovery of the travel sector, due to factors such as persistent inflation, high energy prices, cost-of-living increases, and labour shortages at airports. Rural tourism, however, has become one of the driving forces of post-covid tourism, as its offer and its typically short distances make it a perfect way to satisfy people's need for health, relaxation, and recreation (Wang, J. *et al.* 2022).

The effects of COVID-19 on rural attractions

In the post-COVID years hence the role of rural areas as tourism is expected to grow (Liu, Y. *et al.* 2022) and the need to better understand the drivers and motives of rural tourists has become critical. Consequently, the present research fulfils an important role in investigating these preferences in order to facilitate a more resilient as well as effective rural tourism supply.

Before the pandemic, guests sought "immersive" and "amazing" experiences, while after, they craved "reassuring", "sociable", and "unparalleled" gastronomic experiences, as well as an experiential home service delivery. Following the outbreak of the pandemic, there has been an increase in perceived risk related to eating at a restaurant and a notable change in the usual clientele (e.g. an increase in younger customers), with a consequent change in customer needs. (Bonfanti, A. *et al.* 2023). Wine tourism has also been negatively affected by the COVID-19 pandemic, and previous perceptions of safety in rural destinations may no longer hold (Niklas, B. *et al.* 2022).

The post-COVID tourism market is undergoing a period of significant transformation (cf. Kim, Y.-J. *et al.* 2021; Chin, C.H. 2022; Huang, T. *et al.* 2024). To illustrate, the competitive advantages typically associated with urban destinations, such as the creation and support of resources, are also evident in rural offerings. Conversely, traditional rural factors, such as inherited resources, are not always considered to be decisive in the competition between rural and urban tourism. It is posited that rural tourism has witnessed an increase in longer-term stays (Lyu, J. *et al.* 2021), potentially attributable to the heightened challenges associated with overseas travel. New activities have emerged, including camping, drive-through destinations, and cycling (Chen, J. *et al.* 2023). Rural wine tourists are equally motivated by hedonistic and wine-specific activities (Gaetjens, A. *et al.* 2023). The appeal of ecological and natural tourist sites has notably increased, largely because these destinations offer tranquil atmospheres and a lower density of visitors, allowing tourists to avoid close contact with others (Baloch, Q.B. *et al.* 2023). Moreover, the difficulties associated with overseas travel have contributed to an increase in the length of stay in rural areas.

In light of the aforementioned evidence, the present study aims to test the following hypotheses:

- H1/A: There is a significant difference in respondents' gender and gastronomic programs.
- H1/B: There is a significant difference between respondents' gender and their preference for touristic programs.
- H2/A: There is a difference between respondents' age and their participation in tourist attractions.
- H2/B: There is a difference between respondents' age and their participation in gastronomic events.
- H3: There is a significant difference between tourists' education and their wine-drinking preferences.

Methodology

Our research focused on the COVID-19 crisis in the tourism industry for the period from 2019 to 2023. By conducting a questionnaire survey in 2021, we aimed to understand the social and

economic processes in tourism after the pandemic and their impact on rural tourism. To gain an in-depth understanding, we analyzed secondary data sources to track trends in guest nights and examined how different types of accommodations were affected by the crisis. In particular, we compared the responses of smaller rural tourism accommodations with those of hotels. The tourism sector, which is sensitive to crises, also has a remarkable capacity for rapid regeneration. With this assumption in mind, the study also examined whether recovery has occurred, the duration of this recovery, or if it is still ongoing. Within this framework, we have contextualized the relationship of the clientele surveyed to rural tourism.

The data for this research was gathered during the period of the COVID-19 pandemic, between January and June 2021, and the survey aims to examine demand in rural tourism focusing on being able to design optimal offers in the period following the pandemic. The topic of this study is the examination of holiday habits in Hungary with special regard to rural tourism. The sampling frame consisted of small and large families mainly from the Western Transdanubian region. The area under study is located in the "Golden Triangle" Vienna–Bratislava–Budapest, an economically developed region, and the Benedictine Abbey of Pannonhalma, which is located here, was declared a World Heritage Site by UNESCO in 1996. The sample is not representative, the respondents were selected using an arbitrary method. The formal questionnaire was divided into four parts. The length of stay was measured in days on an eight-point Likert scale, and the priority of tourism and gastronomic events was measured on a four-point Likert scale. A score of one meant strongly agree, and a score of eight meant strongly disagree. In addition to demographic data (age, gender, educational attainment, residence), information was gathered about the willingness to spend (on food and accommodation), length of stay in rural settings, travelling habits, participation in gastronomic events, participation in tourism attractions, and so on. All together a total of 28 questions were set in the survey.

To answer our research question, we employed a segmentation methodology. A priori, or common-sense segmentation, groups tourists by known characteristics like age or gender. In contrast, a posteriori, or post-hoc, data-driven segmentation analyzes data to identify segments based on similarities and differences. While a posteriori segmentation requires more technical skill, it enables researchers to delve deeper into the data and uncover hidden insights. This method often uses symptomatic bundles of advantages sought, travel motivations, activities, perceived destination qualities, and preferences to define segments (McKercher, B. *et al.* 2023a).

Moreover, many studies have identified activities as an effective basis for segmentation. Activities are a crucial link between travel motivation and destination choice, influencing the image and reputation of a tourist destination. For example, Pesonen, J.A. and Tuohino, A. (2015) argue that the activities offered play a significant role in shaping how a destination is perceived and chosen by tourists. However, there are inherent limitations in surveying a specific, limited area. Mostly, the results may not be generalizable to the population as a whole. Nevertheless, such surveys can provide valuable insights for theory-building, especially regarding the evolution of representations and consumption patterns in rural areas (Eusébio, C. *et al.* 2017). They underline the importance of the sought activities as a relevant segmentation basis for visitors (Mumuni, A.G. and Mansour, M. 2014; McKercher, B. *et al.* 2023b).

Results

Analysis of the periods before and after the pandemic

In 2019, the KSH (Central Statistical Office of Hungary) stopped monitoring private accommodation, and data on rural tourism are included in the special accommodation statistics.

According to *Table 3*, other accommodations also affected by rural tourism could not withstand the impact of COVID-19, with a decrease in the number of guest nights in all regions (KSH 2024a). The average decrease was 17.3 percent. The rate of decrease was smallest in Pest County, Central Transdanubia, Northern Hungary, and was the greatest (above average) in the Northern and Southern Great Plain regions, and in Western Transdanubia. The recovery process has already begun in 2021. In Central and Southern Transdanubia regions, and Pest County the values exceeded the number of guest nights in 2019; approached it in Northern Hungary and Southern Great Plain. In 2022–2023, these values were above those of 2019 everywhere (KSH data includes both other and private accommodation).

The number of guest nights in larger hotels and hotels, which are therefore more dangerous in the crisis, has suffered a more significant decrease than in other accommodations (KSH 2024b) *(Table 4).* The average decrease is 44.5 percent, which is 2.5 times the decrease in rural tourism. The rate of decrease was above average in Pest County, Western Transdanubia and Northern Great Plain. In Pest County, the largest decrease in the number of hotel nights is matched by the smallest decrease in other accommodations. Central Transdanubia and Northern Hungary performed below average in both accommodation types (below average decrease), but the rate of hotel decrease was closer to average (higher) than other accommodation values. The recovery process for hotels and pensions has been slower and lasted until 2023, and the inflation period has even been brought to a halt. Full catch-up with 2019 could take two or three times longer period than in rural accommodation.

Overall, it was found that guest nights in other and private accommodation facilities are also affected by economic crises and health constraints. However, it can be concluded that, in times of crisis, tourists turn more towards other and private accommodation, which also occurs in the countryside, than towards hotels; And there they can cause

*Table 3. Number of guest nights in special accommodation in statistical regions between 2019 and 2023**

Year	Statistical region								Pest County	
	Western Transdanubia		Central Transdanubia		Southern Transdanubia		Northern Hungary		Northern Great Plain		Southern Great Plain			
	Nights	(%)	Nights	(%)	Nights	(%)	Nights	(%)	Nights	(%)	Nights	(%)	Nights	(%)
2019	1,243,805	(100.0)	1,082,747	(100.0)	476,175	(100.0)	870,229	(100.0)	697,442	(100.0)	715,551	(100.0)	254,621	(100.0)
2020	937,063	(75.0)	984,223	(90.9)	402,333	(84.4)	707,839	(81.3)	455,502	(65.0)	550,367	(76.9)	244,613	(96.0)
2021	1,111,389	(89.3)	1,116,898	(103.1)	487,158	(102.3)	855,335	(95.9)	546,287	(78.3)	704,114	(98.4)	263,582	(103.5)
2022	1,549,724	(124.5)	1,363,485	(125.9)	1,951,926	(409.0)	1,307,427	(150.0)	919,558	(131.8)	1,069,941	(149.5)	439,591	(172.6)
2023	1,515,717	(121.8)	1,319,834	(121.8)	1,943,328	(408.0)	1,264,496	(145.0)	935,271	(134.0)	1,011,916	(141.4)	412,451	(161.9)

*2019 as the base period. *Source:* KSH, 2024a.

*Table 4. Number of guest nights in hotels and pensions in statistical regions between 2019 and 2023**

Years	Statistical region						Pest County
	Western Transdanubia	Central Transdanubia	Southern Transdanubia	Northern Hungary	Northern Great Plain	Southern Great Plain	
	Nights (%)	Nights (%)	Nights (%)	Nights (%)	Nights (%)	Nights (%)	Nights (%)
2019	5,142,889 (100.0)	2,176,176 (100.0)	1,973,766 (100.0)	2,165,444 (100.0)	1,942,467 (100.0)	1,571,414 (100.0)	1,184,949 (100.0)
2020	2,482,695 (48.0)	1,328,011 (61.0)	1,212,993 (61.4)	1,318,695 (60.8)	1,040,762 (53.5)	896,115 (57.0)	541,690 (45.7)
2021	3,068,402 (59.6)	1,392,571 (63.9)	1,332,775 (67.5)	1,362,097 (62.9)	1,178,760 (60.6)	1,050,281 (66.8)	658,914 (55.6)
2022	4,636,882 (90.1)	2,057,974 (94.5)	1, 929,925 (97.7)	1,986,820 (91.7)	1,845,365 (95.0)	1,548,552 (98.5)	1,171,814 (98.8)
2023	4,472,784 (86.9)	2,051,654 (94.2)	1,740,504 (88.1)	2,068,114 (95.5)	1,805,403 (92.9)	1,513,659 (96.3)	1,170,180 (98.7)

*2019 as the base period. *Source:* KSH, 2024b

an increase in the number of guest nights even during the crisis. The economic crisis has affected accommodation less negatively than COVID. Significant territorial differences can be detected in the country, according to which the rural accommodation facilities of the more developed regions (e.g. Pest County and Western Transdanubia), and places with traditional offers (e.g. Northern Hungary), hardly react to negative financial flows. However, COVID makes more developed areas more resilient in this area as well. The recovery process can take up to a year for village accommodation and 3–4 years for hotels.

Results of the survey

In the survey, all 925 respondents were validated. Three different age groups were defined. Based on the biological criteria, young respondents belonged to the group between 16 and 29 years old, the second group was that of middle-aged respondents between 31 and 50 years, while 51 or older respondents belonged to the senior group. The sample is dominated by female respondents (59.9%) and also by people living in urban areas (53.8%) including the capital all together above 75 percent of the respondents. Most respondents have at least secondary education (52.0%) although 47 percent of them have graduated in higher education. This is very important, as education level is found to be a strong driver for travel decisions (cf. Zimmer, Z. *et al*. 1995). Young people are underrepresented in the sample. Five-day stay was the typical length of time spent in rural destinations. The distribution of the studied sample is shown in *Table 5*.

Regarding the willingness to spend, results show that senior tourists are likely to spend the most on accommodation (mean 2.39) followed by the middle-aged (mean 2.35) and finally the youngsters (mean 2.29). The youngsters spend more on food and drinks (mean 2.95) spend much more than the elderly (mean 2.90) and middle-aged (mean 2.76). On average tourists spend between 9.9 EUR

Table 5. Distribution of the sample

Variable	N	%
Gender		
Male	371	40.1
Female	554	59.9
Age		
Youngsters (16–29 years)	143	15.5
Middle-aged (30–50 years)	568	61.4
Elderly over 51 years	214	23.1
Educational attainment		
Higher education	434	47.0
Secondary	482	52.0
Primary	18	1.0
Residence		
Capital	207	22.4
Urban	498	53.8
Sub-urban	220	23.8

Source: Authors' own elaboration.

and 14.8 EUR for one person/attraction. When attending gastronomic programs, the expenditures are higher, between 12.3 and 24.6 EUR. It is important to highlight that in the survey Forint, the Hungarian national currency was used and then converted to Euro (Exchange rate: 1 EUR = 406.09 HUF).

To gain better insights into the tourists' profiles, a continuous factor analysis was performed. Factor analysis can be one of the possible methods of multivariate statistical analysis, it defines a structure, while it reduces the amount of data. The Kaiser-Meyer-Olkin (KMO) value is > 0.6 and the p-value in Bartlett's test is less than 0.01 ($p < 0.01$), which indicates that the scale is suitable for continuous factor analysis. Moreover, when the coefficient is greater than 0.60 (0.817), this indicates that the questionnaire has good reliability, and continuous analysis can be retained. The procedure measures all possible combinations of the questions the questionnaire contains, the coefficient of reliability can be a number between 0 and 1. The closer the coefficient is to 1, the more reliable the data of the survey are. If the coefficient is between 0.9 and 1, they are excellent, between 0.8 and 0.9 they are good, between 0.7 and 0.8 they are acceptable, between 0.6 and 0.7 they are acceptable, between 0.5 and 0.6 they are weak, and a coefficient below 0.5 is considered unacceptable (Sajtos, L. and Mitev, A. 2007).

Using SPSS 25.0 five factors were gained out of the original set of sixteen *(Table 6)*, that explain more than 60 percent of total variance. Regarding the hypothesis testing, there are no significant gender differences in attending gastronomic events, hence H1/A has been rejected. Regarding other activities, we found that females tend to attend more of the local attractions ($\chi^2 = 9.839$, $p \leq 0.01$), local heritage ($\chi^2 = 17.58$, $p \leq 0.01$), or cultural and religious events in the neighbourhood of the destination ($\chi^2 = 15.70$, $p \leq 0.001$). Other activities, such as hiking or cycling revealed no gender differences. That is why H1/B is only partially accepted.

In line with the expectations, age affects greatly the tourists' interest. The middle-aged are more likely to be interested in outdoor activities, such as hiking or biking ($\chi^2 = 30.967$, $p \leq 0.01$), they are also likely to be interested in socializing with others and attending events where this is facilitated, such as family fun ($\chi^2 = 51.642$, $p \leq 0.01$) or folklore events ($\chi^2 = 18.265$, $p \leq 0.01$). That is why H2/A is accepted.

The middle-aged respondents also tend to be more interested in food tours with local dishes ($\chi^2 = 15.986$, $p \leq 0.01$) or wine tours ($\chi^2 = 14.504$, $p \leq 0.01$). There were no differences in grilled or cauldron foods. Hence H2/B is also partially accepted.

The results showed no difference in preference for wine tours among the sub-groups by education level, hence H3 is rejected. Nevertheless, the higher educated sub-group tends to spend more than the tourists with primary or secondary education.

After the factor analysis, the obtained factors were sorted into K-centred clusters. One striking difference between the clusters is that there is at least one factor that is not preferred by the respondents in all clusters. The members of the first cluster (142 Persons) like to taste local dishes, experience tradition, have a drink, as well as connect with others, but they do not like outdoor activities, hence this group is named "No hiking". The

Table 6. Results of the factor analysis

Factors	Components				
	Food tours	Exploring tradition	Connecting with others	Drink tours	Outdoor activities
Grilled meats	.793	–	–	–	–
Cauldron foods	.706	–	–	–	–
Homemade ham, sausage, and cheese	.685	–	–	–	–
Turkey dinner	.638	–	–	–	–
Goose dinner	.612	–	–	–	–
Local dishes	.604	–	–	–	–
Visiting local heritage	–	.777	–	–	–
Visiting local attractions	–	.759	–	–	–
Attending cultural and/or religious events	–	.747	–	–	–
Family fun	–	–	.785	–	–
Folklore evening	–	–	.692	–	–
Horse-drawn carriage	–	–	.602	–	–
Homemade spirit tasting	–	–	–	.840	–
Wine tasting	–	–	–	.829	–
Cycling	–	–	–	–	.826
Hiking and tour guided walking tour	–	–	–	–	.820
Cronbach's Alpha	.732	.701	.622	.639	.607
Eigenvalues	4.171	1.779	1.454	1.197	1.076
% variance explained	26.068	11.118	9.085	7.480	6.723
Kaiser-Meyer-Olkin Measure of Sampling	.817	–	–	–	–

Notes: Extraction method: Principal Component Analysis; Rotation method: Varimax with Kaiser Normalization; Rotation converged in 5 iterations.
Source: Authors' own elaboration.

members of the second cluster (145 Persons) are not motivated to connect with others, hence this group is the "Just us". The third cluster (129 Persons) explores tradition and heritage around the destination, they rather prefer to do sports or taste wine and spirits. They are the "No tradition". The fourth cluster (170 Persons) consists of those people who are not motivated by drinking tours, hence they are called "No wine". The members of the fifth cluster are rather interested in outdoor activities only during their rural holidays. They are the "Sportive" tourists (82). Finally, the last cluster has no opposition toward any activity, they are motivated to try out many new things as shown in *Table 5.* Hence this group is called "go for it".

Looking into details of the composition of travelers 5 sub-groups are identified *(Table 7).* Travelers with partners are typically not looking for meeting new people and connecting with locals, but rather they look for togetherness and withdrawal from the crowd. They are typically active, 44 percent of them belong to the Sportive cluster. This is not surprising as they can refresh in nature while being active. Their travel decision is least motivated by visiting local heritage or tradition, probably the accessibility of nature – and the availability of hiking tracks for example – seems to be a decisive component.

Table 7. Final cluster centres

Activities 925 persons	Clusters					
	No hiking 142 persons	Just us 145 persons	No tradition 129 persons	No wine 170 persons	Sportive 82 persons	Go for it 257 persons
Food tours	.20708	.21863	.19719	.23477	-2.23890	.22232
Exploring tradition	.15755	.33572	-1.53306	.15871	-.22021	.45833
Connecting with others	.19328	-1.62302	.10031	.50187	-.04877	.44215
Wine tours	.02244	-.06909	.31182	-1.24974	-.04269	.71036
Outdoor activities	-1.61189	.22907	.35041	.34102	.02204	.35288

Source: Authors' own elaboration.

The "no drinks" is the largest, respondents travelling with family seem to be least interested in wine or spirit-tasting tours *(Table 8).* Nevertheless, it is surprising that respondents travelling with teams also score low on wine tours. 49 percent of large family travellers opt for the "go for it" option and are open to new experiences and entertainment, whether they come from gastronomic or sporting experiences. Moreover, taking it all together, app. 28 percent of the respondents are motivated to "go for it" when travelling to rural places.

Discussion

The COVID crisis has resulted in significant changes in the structure of tourism and the motivation of guests to travel. The recovery process following the downturn lasted up to 4 years in the case of commercial, larger-scale accommodation (hotels, pensions). Other smaller accommodations involved in rural tourism responded more flexibly and began to increase their visitor traffic within two years. People have turned away from mass tourism and have quenched their hunger for recreation accumulated during COVID-19 in smaller rural accommodations. Rural tourism offers a good opportunity to organise personalised, alternative, combined programmes; in a calm, healthy natural environment. Health and authenticity have become more valuable.

We investigated the post-covid motivations of rural tourists and identified different segments based on their motivations, leisure

Table 8. Distribution of family sub-groups by clusters

Family sub-groups No hiking		Clusters						
		No hiking	Just us	No traditions	No wine	Sportive	Go for it	*Total*
With family (parents + 2 children)	N	29	20	21	36	14	51	*171*
	%	20.4	13.8	16.3	21.2	17.1	19.8	*18.5*
With big family	N	21	17	22	42	10	49	*161*
	%	14.8	11.7	17.1	24.7	12.2	19.1	*17.4*
With team	N	16	9	13	13	5	30	*86*
	%	11.3	6.2	10.1	7.6	6.1	11.7	*9.3*
With my partner	N	47	79	56	37	36	79	*334*
	%	33.1	54.5	43.4	21.8	43.9	30.7	*36.1*
Alone	N	5	4	2	8	6	4	*29*
	%	3.5	2.8	1.6	4.7	7.3	1.6	*3.1*
With a small family (parents +1 child)	N	24	16	15	34	11	44	*144*
	%	16.9	11.0	11.6	20.0	13.4	17.1	*15.6*
Together	N	142	145	129	170	82	257	*925*
	%	100,0	100.0	100.0	100.0	100.0	100.0	*100.0*

Source: Authors' own elaboration.

habits, and expenditures. The study confirms that the spectrum of rural tourism is broad, but wine and spirit tasting was the least motivating factor in the sample. There are several possible explanations for this phenomenon, such as the over-representation of family travellers, or even the desire to compensate for increased stress and discomfort in the post-vacation period with healthier recharging, such as active recreation. Moreover, the increasing expense of food and beverages is likely to reduce the demand for such activities.

Nevertheless, the middle-aged group out of the three sub-groups was the most receptive to food tours (local tastings of village cold dishes, local wines, dishes prepared in a cauldron, and homemade cakes). On traditional events, they are likely to travel just to taste such dishes, for example on St. Marton's Day which is associated with eating roast goose.

Another result is that tradition and local heritage are less attractive in itself. The "go for it" type of tourists may participate in such an event, but for the destination having some historical or cultural heritage sites is usually not enough for demand generation. Also, kids may find it less attractive to visit ruins or monuments etc. hence families are likely to prefer activities which keep kids busy such as hiking or outdoor sports. Nevertheless, results may need to be confirmed by future research as the sample was dominated by families with kids.

Although the identification of the multi-experience seeker group, labelled as the "go for it" cluster, is not entirely novel, as previously noted in research (Rid, W. *et al.* 2014), it remains significant that rural tourism in the post-COVID era transcends mere privacy and quiet self-fulfilment. Rural destinations can appeal to these travellers by offering comprehensive packages. Biking and hiking trails, as well as creative, playful and family-friendly activities including affordable eating-out offers, are likely to be part of the value proposition. The possibilities are endless, nevertheless, treasure hunt activities in the proximity of a heritage site are likely to please the entire family, even if three generations come together.

In line with Bel, F. *et al.* (2015), and Eusébio, C. *et al.* (2017) findings there is an independent cluster for gastronomic orientation. The locally provided specialities do attract some demand but much less than originally expected. Probably the supply side needs to identify new target customers or reposition itself to be more attractive to both families and team visitors. As discussed earlier, the current energy and cost-of-living crisis make tourists more concerned with the expenses and when several persons are eating out the expenses are likely to grow and families may lose motivation.

Age matters, middle-aged people are more likely to be interested in outdoor activities such as cycling and are also more interested in socializing with others and participating in events such as folklore activities. There is also significant interest in participating in gastronomy and wine tours among middle-aged people.

An important aspect of our research was to highlight the importance of authentic, personalized, unique offer elements in rural destinations. Our investigation put at the centre the question of whether it can be demonstrated that there is a scientifically supported correlation between individual sociodemographic factors and gastronomic, and other leisure between motivations. It has been proven that in rural tourism after the COVID period, the value of traditional, non-massive personalized service coupled with increased value. In particular, the cross-tabulation analysis has shown that in rural tourism, after the COVID-19 pandemic period, there is a significant interest in traditional, non-mass, and personalized services. This is also supported by the strong interest of the middle-aged group, which represents the above-mentioned reliable market demand. In order to meet the needs of this market segment and fully exploit the market potential, the activities offered must be provided in authentic and unspoiled rural environments. Regarding the gastronomic offerings, the findings suggest that the demand of middle-aged must be met in rural destinations.

In terms of gender, it is traditional visiting country houses is significant for females. The cross-tabulation analysis shows that, in terms of gender, visits to rural heritage sites are significant for women (hypothesis H1/B). However, urban residents, regardless of age and education, are particularly interested in rural touring, for whom socializing with locals is still attractive, but family activities are also an attraction.

The novelty of the research is the scientific verification of the complexity of the rural touristic demand as well as the rise of rural tourism as a lower-cost and healthy alternative to crowded tourist attractions.

For practitioners, the results are also thought-provoking. The rural destinations can benefit from the current international pressures and reap many of the traditionally urban tourists. The demand side seems growing and in case the supply side can satisfy the growing need, then rural tourism will be more popular. Tailored offers and carefully invested utilities (to improve accessibility of the destination) are essential for meeting the demand. In addition, the providers who effectively segment the market will be the winners as they can more easily provide value for the diverse motivations of rural tourists.

We found a connection with previous studies regarding wines since wine consumption is never alone, it is always together, whether in conjunction with gastronomic programs or during family and friend celebrations (Casadó-Marín, L. and Anzil, V. 2022).

Conclusions

Our research delved into the driving factors behind the choices made by rural tourists during the COVID-19 pandemic. By examining distinct groups of tourists with unique characteristics, preferences, recreational activities, and spending patterns, we uncovered valuable insights into rural tourism dynamics. The findings revealed that while rural tourism offers a variety of activities, wine and spirit tasting garnered the least interest. This trend may be attributed to the prevalence of family travellers seeking health-promoting, stress-reducing activities, and the rising costs of meals and drinks.

Middle-aged travellers exhibited the greatest interest in food excursions, relishing local foods, and engaging in traditional festivities. However, heritage and local traditions alone were not compelling enough to attract a broad audience. Specifically, families preferred activities that engaged children, such as hiking and outdoor sports, over visiting historical sites. This highlights the necessity for rural destinations to provide diverse and comprehensive experiences catering to various age groups and interests.

The "go for it" cluster, characterized by a strong inclination towards diverse and extensive experiences, is attracted to pursuits such as cycling, trekking, and family-friendly events. This suggests that rural areas can appeal to this group by offering innovative and inclusive travel packages. Notably, the current energy and cost-of-living issues have heightened tourists' awareness of expenses, particularly when eating out, impacting their motivation.

Age significantly influences choices, with middle-aged individuals showing a pronounced preference for outdoor activities and social events. Gender differences were also observed, with women demonstrating a distinct inclination towards visiting rural heritage sites.

Our study emphasizes the growing importance of authentic, personalized encounters in rural tourism post-COVID. The investigation established a strong association between sociodemographic characteristics and motivations, particularly indicating a preference for non-mass, traditional services. Middle-aged tourists represent an attractive market segment for these offerings, and it is crucial to fully capitalize on this potential.

These findings offer valuable insights for practitioners. The COVID-19 pandemic has accelerated a shift towards rural tourism, driven by a desire for well-being, authentici-

ty, and personalized experiences. By understanding and addressing the nuanced motivations of rural tourists, destinations can thrive in this evolving landscape. Rural destinations can capitalize on current trends and appeal to urban tourists by meeting the growing demand with tailored offerings and improved accessibility. Efficient market segmentation will enable providers to cater to diverse motivations, ensuring the continued popularity of rural tourism as an affordable and healthful alternative to overcrowded tourist spots.

In addition, the findings of this study contribute to the development of current theories. The results suggest that retrospective activity-based segmentation can be an advantageous methodological strategy. Additionally, this study adds to the ongoing conversation concerning shifts in tourist motivations in response to current crises, with a particular focus on changes in customer requirements. During the post-COVID period, rural tourism is transforming, moving away from the traditional focus on providing self-fulfilment and privacy. This indicates that rural regions have the potential to successfully attract tourists by offering comprehensive packages that include infrastructure such as bike and hiking trails, as well as creative, family-oriented activities and affordable dining options. Moreover, environmentally conscious activities should be considered to be part of the offerings to attract rural tourism travellers, as suggested by Chen, J. *et al.* (2023).

Overall, the results significantly contribute to informed destination development and management, providing a better understanding of markets and modern marketing practices, and professional approaches to holistic and sustainability-enhancing management. However, the study has two primary limitations. First, as mentioned in the methodology, there are inherent constraints in surveying a specific, limited area, making the results potentially non-generalizable to the broader population. Nonetheless, such surveys can provide valuable insights for theory-building, especially regarding the evolution of representations and consumption patterns in rural areas (Eusébio, C. *et al.* 2017). They underline the importance of sought activities as a relevant segmentation basis for visitors (Mumuni, A.G. and Mansour, M. 2014; McKercher, B. *et al.* 2023b). Furthermore, future research could extend beyond the current scope to investigate the attitudes and behaviours of solo tourists or those travelling only with their spouses, facilitating the discovery of any unique characteristics that may exist.

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A systematic literature review of slow tourism

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Abstract

This systematic literature review focuses on slow tourism, which grew in popularity during COVID-19. It highlights the gaps in the literature for future researchers by compiling the papers published on slow tourism between 2010 and 2021. In addition, the managerial suggestions we make serve as lessons for practitioners. Developed as a systematic literature review, we used different selection criteria including papers published in English in Q1 or Q2 journals between 2010 and 2021 in the sample. This study identified the following parameters: the number of publications, the most preferred research methodology and data collection methods, and the geographical coverage of slow tourism papers. The relationship between slow tourism and sustainability is strengthened by our analysis. We identified qualitative studies, particularly in-depth interviews, as the most popular data collection method for slow tourism studies. Australia, the United Kingdom, and Poland were the most popular destinations in terms of the geographical context of these studies, followed by Italy. As the literature is missing a unified definition of slow tourism, we propose one based on the four-pillar model.

Keywords: slow tourism, slow travel, slow city, sustainability, Cittaslow, systematic literature review

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Introduction

The positive and negative effects of globalisation are shaping how people live today. Positive effects, such as the spread of technology or easy access to new cultures, offer convenience. Despite these benefits, the concept of speed and fast living has entered our lives (Semmens, J. and Freeman, C. 2012). A faster way of living leads to faster spending and consuming. The faster we consume, the faster we become confused about the changes in traditional, cultural, spiritual, and social values and norms (Bekar, A. *et al*. 2015). In response to this rapid consumption, a new lifestyle debate has emerged (Rogovska, V. and Lackova, A. 2015) advocating slowness (Özüpekçe, S. 2021) and laying the foundations for the slow movement. The movement was promoted as a response to the opening of fast food outlets in Italy in the 1980s (Broadway, M. 2015; Pécsek, B. 2015; Bartlomiejski, R. and Kowalewski, M. 2019; Shang, W. *et al*. 2020a), which is well summarised by Pink, S. and Lewis, T. (2014, 696–697) as follows:

> "Carlo Petrini decided to resist the steady march of fast food and all that it represents when he organized a protest against the building of a McDonalds near the Spanish steps in Rome. Armed with bowls of Penne, Petrini and his supporters spawned a phenomenon. Three years later Petrini founded the International Slow Food Movement renouncing not only fast food but also the overall pace of 'fast life'."

The slow movement was soon adapted to the tourism industry (Serdane, Z. *et al.* 2020), with slow tourism and the Cittaslow movement (Pink, S. and Lewis, T. 2014; Karanikola, P. *et al.* 2018; Perano, M. *et al.*

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2019), with Italian cities becoming pioneers (Jazsczak, A. *et al*. 2020) and spreading across Europe to the United States of America (Dickinson, J.E. *et al.* 2010), where it continues to grow. Cittaslow is also a territorial certification that aims to protect the cultural and environmental values of small towns through a slower lifestyle, while improving the quality of life of its inhabitants (Brodzinski, Z. and Kurowska, K. 2021). By 2024, there were over 290 Cittaslows from 33 different countries, with towns of fewer than 50,000 inhabitants (Pécsek, B. 2015; Bartlomiejski, R. and Kowalewski, M. 2019; Brodzinski, Z. and Kurowska, K. 2021). In addition to Cittaslows, cities with more than 50,000 inhabitants can become Cittaslow Supporters while associations, private, and public companies in the tourism, services, and agriculture sectors can become a Cittaslow Friend (Pécsek, B. 2015, Cittaslow International 2023, 2024a). In June 2024, the top five countries with the highest number of Cittaslows were (in descending order) Italy, Poland, Germany, Turkey, and South Korea (Cittaslow International, 2024b).

The increasing number of tourists and their impact on the environment, are prompting destinations to look for sustainable models (Serdane, Z. *et al.* 2020). Slow tourism not only helps tourists escape from daily routines, but also focuses on the quality of life of local people (Ivancsóné Horváth, Z. *et al.* 2023). It adopts a community-oriented approach and encourages citizens to actively participate in local development (Park, E. and Kim, S. 2016). In addition, it promotes sustainability especially through slower modes of transport to reduce environmental impact (Karanikola, P. *et al.* 2018) and local production for residents, and supports improving the quality of experience for tourists (Kato, K. and Progano, R.N. 2017).

As a consequence of COVID-19, the tourism industry and the concept of mobility have never been more critical (Fusté-Forné, F. and Michael, N. 2021). Now we can talk about the reorientation and revitalisation of the tourism sector especially in the context of sustainability (Seabra, C. and Bhatt. K. 2022), so the popularity of new types of tourism, such as slow tourism, is expected to increase (Benjamin, S. *et al.* 2020; Özüpekçe, S. 2021; Wen, J. *et al.* 2021). More people are returning to nature and taking the time to slow down since the pandemic (Benjamin, S. *et al.* 2020). Changes in daily routines are bringing experiences that emphasise "slow leisure" or "slow tourism" (Breunig, M. 2020), as these concepts promote travel quality, local people, longer stays in a destination, and meaningful experiences (Wen, J. *et al.* 2021).

This paper assesses the state of research on slow tourism and proposes a research agenda. In the literature, slow tourism is usually explained by different concepts such as slow food, sustainability, and the impact of COVID-19 (Mavric, B. *et al.* 2021). Up to February 2023, four systematic literature reviews on slow tourism could be found. Three of these studies focused on a single database, either Web of Science (Mavric, B. *et al.* 2021) or Scopus (Werner, K. *et al.* 2021; Krešić, D. and Gjurašić, M. 2022). One study focused on several databases – Scopus, Web of Science, and Google Scholar – where a science mapping for "slow movements" was created (Klarin, A. *et al.* 2022). The authors included grey literature from Google Scholar, whereas we excluded it. They also focused on the concept of slow, including slow tourism, Cittaslow, and slow food as well as other emerging slow concepts: slow cinema, slow money, slow science, slow reading, slow research, and slow technology.

We provide a narrower perspective by including both the Scopus and ScienceDirect databases. In addition, we propose a definition of slow tourism. The study provides an opportunity for researchers to follow up on previous research on slow tourism and to stimulate reflection on research gaps. In addition, the managerial suggestions made serve as lessons for practitioners.

This study explores the concept of slow tourism in papers published in Q1 and Q2 level journals between 2010 and 2021 in the Scopus and ScienceDirect databases. In this context, the first part of this study presents a literature

review on slow tourism. The next sections describe the methodology, results, and discussion. The last section includes limitations and provides suggestions for further research.

Overview of the "slow tourism" literature

Slow tourism has gained popularity in the last decade (Sigurðardóttir, I. 2018) as an emerging and popular type of tourism (Özdemir, G. and Çelebi, D. 2018, 542) and as a new trend (Baletto, G. *et al.* 2020). Although mass tourism is still preferred, destinations have started to look for sustainable travel models to minimise environmental impacts (Serdane, Z. *et al.* 2020). Given the consensus that slow tourism is linked to sustainability and focuses on minimising environmental impacts, there is still no consensus on the definition of slow tourism (Oh, H. *et al.* 2016; Serdane, Z. *et al.* 2020; Shang, W. *et al.* 2020a, b). Hence different definitions of slow tourism can be found in the literature *(Figure 1).*

With the definitions, the specific characteristics of slow tourism have been highlighted. Slow tourism is identified as an alternative type of tourism (Serdane, Z. *et al.* 2020; Shang, W. *et al.* 2020a), an opposition, a contrast to mass tourism (Losada, N. and Mota, G. 2019; Shang, W. *et al*. 2020a), even an antidote (Baletto, G. *et al.* 2020, 4) or an experience (Lin, L.-P. *et al.* 2020). Each definition describes slow tourism from a different angle, such as its link to sustainability (Serdane, Z. *et al.* 2020; Shang, W. *et al.* 2020a), and how it encourages tourists to use slower modes of transport (Dickinson, J.E. *et al.* 2010; Karanikola, P. *et al.* 2018; Lin, L.-P. *et al.* 2020), or to extend their stay in destinations (Soler, I.P. *et al.* 2018; Wondirad, A. *et al.* 2021).

To capture all aspects of slow tourism, Pécsek, B. (2018) developed a four-pillar model that highlights the most important key features: locality, experience-focus, sustainability, and social well-being. We therefore developed a comprehensive definition of slow tourism, considering these four pillars:

> "An alternative type of tourism based on sustainability, which supports the preservation of local values, encourages tourists to have authentic experiences, and aims to improve the quality of life of local people."

According to Pécsek's slow tourism model, locality can address the existing demand for local production, which can create the need for new jobs. Slow tourism can provide experiences with a high degree of authenticity (Meng, B. and Choi, K. 2016a, 398) and allow tourists to interact with locals, including creating a people-friendly environment (Jazsczak, A. *et al.* 2020). The experience pillar highlights the importance of gaining unique experiences, which are more accessible in slow tourism as opposed to mass (fast) tourism (Shang, W. *et al*. 2020b). Additionally, slow tourism aims to create a longer relationship between

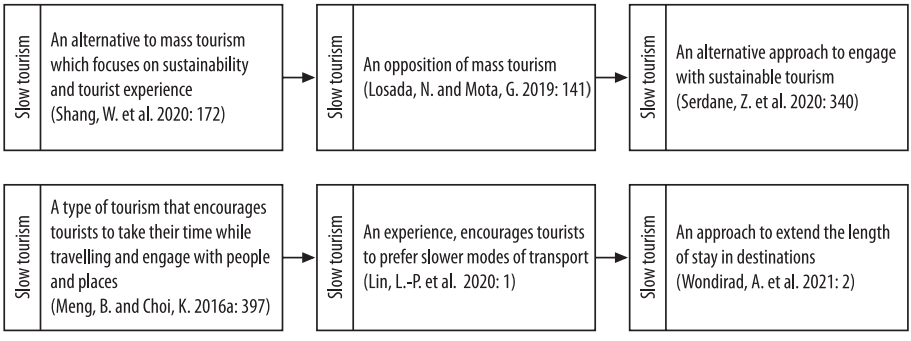


Fig. 1. Different definitions of slow tourism. *Source*: Authors' own elaboration.

tourists and destinations, which could be obtained through a variety of tourism products. Providing a huge variety of tourism products and focusing on authenticity might help tourists to have in-depth experiences which can result in tourists prolonging their stay in a destination (Kebete, Y. 2021).

The broader umbrella of sustainability first addressed environmental sustainability through sustainable transport alternatives, such as walking and cycling (Shang, W. *et al*. 2020b). Economic sustainability is also a goal for destinations and a sustainable experience is a goal for visitors (Shang, W. *et al*. 2020b). Sustainability encompasses the environment, economy, and society as a whole in slow tourism (Brodzinski, Z. and Kurowska, K. 2021).

In terms of social well-being, slow tourism can improve the quality of life and well-being of local people while slowing down the pace of Cittaslows (Pécsek, B. 2015; Brodzinski, Z. and Kurowska, K. 2021). The involvement of local people in local development is crucial (Pécsek, B. 2018). In addition to local people, the well-being of visitors is also at the centre of attention (Shang, W. *et al*. 2020b).

In the literature, the terms "slow tourism" and "slow travel" are often used interchangeably (Dickinson, J.E. *et al.* 2011; Kato, K. and Progano, R.N. 2017; Lin, L.-P. 2017), as both concepts encourage people to embrace slowness. Both aim to provide tourists with more authentic experiences by focusing on quality while reducing their carbon footprint (Dickinson, J.E. and Lumsdon, L.M. 2010; Fullagar, S.P. *et al.* 2012; Shang, W. *et al*. 2020b). Embracing local values and encouraging tourists to have local experiences are considered key features (Shang, W. *et al.* 2020a), as slow tourism aims to revalue quality leisure time (Fullagar, S.P. *et al.* 2012, 21). Tourists are also encouraged to stay longer at a destination and therefore travel less (Dickinson, J.E. and Lumsdon, L.M. 2010). Consequently, slow tourism is expected to contribute to sustainable tourism while promoting environmentally friendly modes of transport (Fullagar, S.P. *et al.* 2012) such as cycling (Karanikola, P. *et al.* 2018).

Methods

This research provides a comprehensive review of papers on slow tourism published between 2010 and 2021. In addition, it contributes to the development of the literature by providing more insights into the current focus of the literature. We used a "Process of Systematic Literature Review" according to Xiao, Y. and Watson, M. (2019) who pointed out that literature reviews can be prepared using different processes; however, all reviews use a common eight-step approach *(Figure 2)*.

Research Questions – We formulated two research questions to address our research purpose:

RQ1: What research methods were used to study the literature on slow tourism between 2010 and 2021?

RQ2: What was the geographical focus of slow tourism literature between 2010 and 2021?

Formulating the research problem – The formulation of the research question(s) helps the authors to determine the scope of the research. In this study, slow tourism was chosen as the primary motivation for visiting a destination (Chen, S.-H. *et al.* 2021, 292).

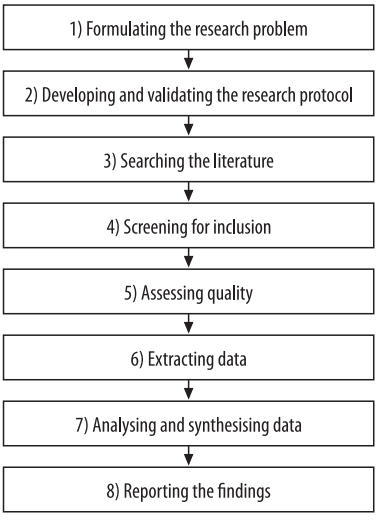


Fig. 2. Systematic literature review process. *Source*: Xiao, Y. and Watson, M. (2019)

Research protocol – The main aim is to highlight the current trends in the literature on slow tourism and to suggest future directions. Therefore, we developed a research protocol by identifying tourism and geography journals in the Tourism, Leisure, and Hospitality Management 2020 and Geography, Planning, and Development lists in the Scopus database. Based on these lists, only Q1 and Q2 rated journals were included. We chose the Scopus database because it is considered to be one of the largest databases of scientific journals (Singh, V.K. *et al*. 2021); the ScienceDirect database is also used as a supplement.

Once the list was completed, we analysed all the journals using the Boolean text search technique. We used the keywords "slow tourism", "slow city" and "Cittaslow" to determine the sample (Q1 n = 60, Q2 n = 25). The research phase was carried out between 20 January and 30 June 2022; only papers written in the English language were included in the sample.

Searching the literature – We used electronic database searches (Xiao, Y. and Watson, M. 2019) to search the literature. As only the Scopus and ScienceDirect databases were used, we excluded grey literature.

Throughout the study, we used language of publication and date range as filtering criteria. We included papers published in English and filtered the publication date between January 2010 and December 2021.

Screening for inclusion – We removed duplicate papers to avoid double counting. We examined the abstracts and keywords of the selected papers to determine whether they met the defined research criteria. We then skimmed the papers and excluded those irrelevant to slow tourism. In the end, we found 89 papers to be eligible.

Assessing quality – At this stage, we read the papers and reviewed them to see if the selected criteria were met. Assessing the criteria was a crucial step: "*The most important consideration for this stage is that the criteria are reasonable and defensible*" (Xiao, Y. and Watson, M. 2019, 106).

Four of the selected papers included a description of the selected keywords but did not elaborate on the concept thoroughly and focused on different concepts. We therefore excluded these papers and updated the total number of papers to 85 (Q1 = 60, Q2 = 25).

Data extraction – We used the data extraction process to identify the eligible studies for this review. *Appendix 1* summarises the papers included in the review including their year of publication and journal.

Findings

Evolution of publications on slow tourism

We examined 85 papers in this systematic review, 78 of which were research papers. In addition, we included three commentaries, two research notes, and two research letters.

Commentaries included an overview of slow tourism and the impact of COVID-19. Research notes focused on the challenges and opportunities of slow cities and their link to sustainability, and a content analysis of images on Instagram. Research letters focused on slow food behaviours and authentic experiences at a slow food festival.

The interest in slow tourism as a research topic has increased, especially since 2020 *(Figure 3)*. This can be explained by the emergence of the COVID-19 pandemic and the increasing popularity of the "slow development of the world" (Kucukergin, F.N. and Ozturk, Y. 2020, 749). In addition, papers written in 2020 include COVID-19 as a keyword and elaborate on the concept of slow tourism through the pandemic, with a particular focus on changes in people's behaviour. Apart from COVID-19, the concept of slow travel was one of the most popular topics explored in 2020 (Hoed, W. 2020; Jazsczak, A. *et al*. 2020; Sechi, L. *et al*. 2020) in a search for alternatives to air and car travel. As a key concept of slow tourism, slow travel encourages people to use more sustainable modes of transport with lower carbon emissions. Cycling is the most common alterna-

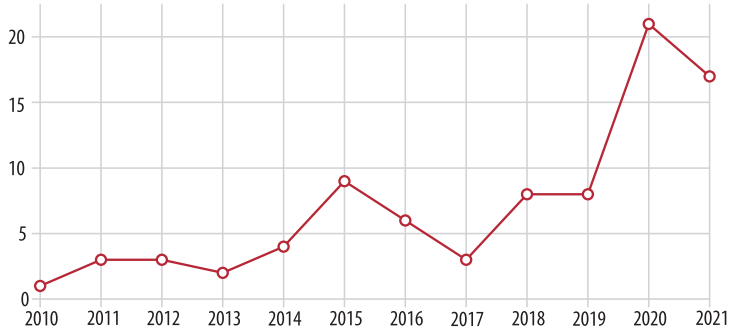


Fig. 3. Yearly number of papers published on slow tourism between 2010 and 2021. *Source*: Authors' own elaboration.

tive promoted to tourists in papers exploring the concept of slow travel.

Methodological perspective

Most of the selected papers are empirical research (71), but we also included literature reviews (14). The latter focused on a small fragment of slow tourism such as tourists' perceptions of slow food, slow events, or tourists' behavioural intentions. One paper was conducted as a systematic literature review focusing on slow events, using qualitative methodology. We therefore included it in both categories (literature review and qualitative methodology).

The most common data collection methods used in the papers, with a balance between in-depth interviews (used in 34 papers; 25 qualitative and 9 mixed methods) and surveys (used in 23 papers; 15 quantitative and 8 mixed methods). This was followed by literature review/conceptual papers used in 14 papers *(Table 1)*.

The majority of the studies that conducted qualitative research (40) focused on at least one of the tourism stakeholders, including local food and beverage providers, tourism entrepreneurs, tourism service providers, civil society representatives, destination marketing organisations, local government officials, officials responsible for Cittaslow projects. On the other hand, visitors and experts were more likely to be included in the sample of qualitative studies than locals.

There was only one study in the sample that attended to residents of Cittaslows through the concept of sustainability, specifically slower modes of transport (Hoed, W. 2020), indicating the lack of research using residents of slow cities as the main sample.

Geographical context

In terms of geographical context, Australia, Poland, and the United Kingdom are the most popular destinations when it comes to slow tourism studies with a total of 8 papers. This is followed by Italy (7), Turkey (6), South Korea (5), China (5), Taiwan (4) and Spain (4).

For Australia, two papers focus on Goolwa, the first recognised Cittaslow outside Europe (Cittaslow Goolwa 2023). Goolwa demonstrated the revival of local products after becoming a Cittaslow (Park, E. and Kim, S. 2016), while restaurants showed their significant contribution to sustainability (Higgins-Desbiolles, F. and Wijesinghe, G. 2019). Queensland, Victoria, Fremantle, and Brisbane were selected as other key destinations used in slow tourism papers. Among the papers using Australia as the main destination, the most popular concept was slow food. The concept was analysed in a variety of settings including restaurants, slow food festivals, food and wine shows, or virtual environments.

Table 1. Qualitative papers that involve at least one tourism stakeholder in their sample

Year	List of authors of the papers	Year	List of authors of the papers
2010	Dickinson, J.E. and Lumsdon, L.M.	2016	Foley, C. Oh, H. *et al.* Park, E. and Kim, S.
2011	Dickinson, J.E. *et al.* Lumsdon, L.M. and McGrath, P. Nilsson, J.H. *et al.*	2017	Kato, K. and Progano, R.N. Wilson, S. and Hannam, K.
2012	Semmens, J. and Freeman, C.	2018	Duignan, M.B. *et al.* Karanikola, P. *et al.* Özdemir, G. and Çelebi, D. Sigurðardóttir, I.
2013	Pink, S. and Servon, L.J.	2019	Higgins-Desboilles, F. and Wijesinghe, G. Lamb, D. Losada, N. and Mota, G. Serdane, Z.
2014	Ekinci, M.B. Jung, T.H. *et al.* Pink, S. and Lewis, T.	2020	Chen, X. *et al.* Chi, X. and Han, H. Farkić, J. *et al.* Gürsoy, İ.T. Lin, L.-P. *et al.* Serdane, Z. *et al.* Shang, W. *et al.*
2015	Broadway, M. Hatipoglu, B. Lee, K.-H. *et al.* Pink, S. and Servon, L.J. Presenza, A. *et al.*	2021	Jazsczak, A. *et al.* Kebete, Y. Kim, J.H. *et al.* Walker, T.B. and Lee, T.J. Wondirad, A. *et al.* Zielinska-Szczepkowska, J. *et al.*

Source: Compiled by the authors.

For the UK, each paper focused on a different destination, including Scotland (2) and Wales (3). Two main concepts were explored: slow transport and slow food. Campervan travellers were interviewed in the north of England and Scotland; cyclists were interviewed in Newcastle in a separate study. Cyclists and their active mobility have been shown to promote social and physical well-being (Hoed, W. 2020, 185). Another study, which surveyed travellers before and after their journeys within Europe, found that slow travel can be used as an alternative to air and car travel, reducing the carbon footprint (Dickinson, J.E. *et al*. 2010).

The slow food concept was analysed in the context of Wales (3) and Cambridge (1). Most of the studies conducted in Wales (2), concentrated specifically on Mold, the first Cittaslow in Wales. Slow food was identified as a major contributor to sustainable tourism development (Jung, T.H. *et al.* 2014, 432) which was found to have a direct impact on visitor's experience and satisfaction (Jung, T.H. *et al.* 2015, 277). In addition, cultural offerings that support small and micro producers in a city have been identified as an important contributor to authentic connectivity and slow visitor experiences (Duignan, M.B. *et al.* 2018, 350).

Two recurring themes can be seen in the papers written about Poland: local development and sustainability, in particular sustainable transport. Local development is part of the Cittaslow network, which aims to offer residents alternatives to living in big cities and improve their quality of life (Brodzinski, Z. and Kurowska, K. 2021). In addition, a study by Zielinska-Szczepkowska, J. *et al*. (2021) showed a reduction in unemployment

in slow cities due to revitalisation studies, which is not directly influenced by the revitalisation projects implemented, but nevertheless proves the potential of slow cities.

In terms of sustainable transport, as in other countries, cycling is being studied as one of the most environmentally friendly modes of transport. In the Polish context, cycling has been studied to understand how it is currently used in Poland and how well the infrastructure and road safety allow people to use it as a mode of transport (Jaszczak, A. *et al*. 2020). An interesting finding of the papers on Poland is that the majority concentrate on more than one city; usually a handful of groups of slow cities are highlighted in one paper (Bartlomiejski, R. and Kowalewski, M. 2020; Jaszczak, A. *et al*. 2020, 2021; Zielinska-Szczepkowska, J. *et al*. 2021).

In Italy, the pioneer of the Slow Food movement, a focus on slow food can be seen in the papers published before 2015 (Nilsson, J.H. *et al*. 2011; Frost, W. and Laing, J. 2013; Lee, K.-H. *et al*. 2015a). As slow food and slow tourism are intertwined, it is very likely that people first associate slow tourism with the food aspect, and therefore slow food is a popular topic of research for slow tourism researchers. We cannot separate slow tourism from local food culture, hence slow food, as it is mainly concerned with preserving the local heritage, environment and culture (Nilsson, J. H. *et al*. 2011). While destinations promote their local values through food culture, over-promotion can be dangerous. As slow tourism is strongly opposed to mass tourism, this needs to be managed carefully by Cittaslow officials.

Since 2015, the focus has shifted from slow food to the management and support of slow tourism and slow travel. A study conducted by Baletto, G. *et al*. in 2020 examined an ancient mining route – the Santa Barbara Walk – that is currently being promoted as a slow tourism area. Researchers aim to develop a dashboard to represent the characteristics and offers of this new tourist attraction, which will later be recognised as a network bringing together those interested in slow tourism (Baletto, G. *et al*. 2020). A separate study used slow travel options as a case study in Northern Sardinia. As Sardinia is a popular tourist destination, this slow travel route aims to develop tourism in inner cities near Sardinia through a combination of railway lines and cycle paths (Sechi, L. *et al*. 2020).

Additionally, there is also a tendency towards qualitative methods in studies focusing on Italy. Of all the papers we examined, one used quantitative methods (Perano, M. *et al*. 2019) and another used mixed method (Baletto, G. *et al*. 2020), while the rest used qualitative methods.

The papers elaborated on Turkey as a slow tourism destination, focusing either on the quality of life of local people or on slow tourism development. Slow tourism and the Cittaslow philosophy were analysed in terms of sustainable tourism development and how local governments can reassess the quality of life and visitor experience (Ekinci, M.B. 2014; Hatipoglu, B. 2015). In addition, Turkey's first Cittaslow, Seferihisar, was the subject of two papers. Another popular topic for Turkish researchers seems to be the analysis of existing Cittaslows. Özüpekçe, S. conducted a study to find out the changes in slow cities, looking at 17 Cittaslows in the country, and concluded that some show a more rapid expansion than others (Özüpekçe, S. 2021).

For South Korea, three papers focused on Busan. A popular tourist destination, Busan is a Cittaslow supporter and the second largest city in South Korea after Seoul. As regards accessibility, it is located close to the Cittaslows and is geographically easy to reach. It can be seen as a link between Busan and Cittaslows in South Korea, attracting tourists and promoting slow tourism.

Tourist behavioural intention was found to be the most popular concept among the papers focusing on South Korea. The slow value that a city offers to its visitors or the slow brand attitude that a city has was identified as contributing to visitors' intention to revisit a destination (Chung, J.Y. *et al*. 2018; Park, H.-J. and Lee, T.J 2019). Authenticity in slow tourism and a destination's authentic offerings were also found to be important

indicators of behavioural intention (Meng, B. and Choi, K. 2016a).

Three out of four papers written about China focused on Yaxi and the behavioural intention concept. Slow tourism products and services can positively affect tourists' affection, sense of belonging, loyalty, and future behavioural intentions (Chi, X. and Han, H. 2020, 2021). A separate study explored the relationships between brand experience, authenticity, and place attachment in Yaxi, China's first Cittaslow. According to the findings, destination brands were found to partially influence authenticity, but authenticity was found to significantly influence place attachment (Shang, W. *et al*. 2020a).

The concept of behavioural intention was popular in papers published in both South Korea and China. The former explored the slow value and slow brand attitudes that a city offers to visitors, which influence their future behavioural intentions (Meng, B. and Choi, K. 2016b; Park, H.-J. and Lee, T.J. 2019), while the latter explored the concept of behavioural intention through slow tourism products and services and how these can create a sense of belonging and loyalty (Chi, X. and Han, H. 2020, 2021; Shang, W. *et al*. 2020a).

The papers focusing on Taiwan were divided into behavioural intention, slow travel, and food concept. The concept of slow travel was analysed in the context of Taiwan and its unique offerings; the quality of transport and the benefits of tourism experiences highlighted as important drivers of future intentions to travel (Lin, L.-P. 2017, 2018).

The papers written about Spain are mainly about Cittaslow and local development. The Spanish Cittaslow towns of Lekeitio, Pals, Begur, and Rubielos de Mora have been studied to see how global and local values are intertwined and how the Cittaslow concept appeals to local city officials (Pink, S. and Servon, L.J. 2013, 2015).

European countries were examined in a total of 59 papers, followed by Asian countries with 16 papers. Other countries used by authors to explain the concept of slow tourism are the Caribbean (2), the USA (1), Ethiopia (2), Argentina (1), Small Island Developing States (SIDS) (1), and Tibet (1). In addition, 14 papers have no geographical focus and elaborate on slow tourism in a literature review *(Figure 4).*

The Cittaslow concept was elaborated in a total of 17 papers; 2 papers were carried out without focusing on a specific location (Presenza, A. *et al.* 2015; Kim, J.H. *et al.* 2021); the most popular case study destination was Poland (4), other case study destinations were Turkey (3), Australia (2), Spain (2), China (1), South Korea (1), and Italy (1). The papers built around the Cittaslow concept mostly deal with the sub-concept of "Cittaslow development" and analyse destinations that are recognised as "Cittaslows".

We used VOSviewer software to determine the strength of the co-authorship link between the contributing countries. Apart from the co-authorship link, the software identifies the most cited country. According to the analysis, the country that collaborates most with others is Australia, followed by Italy. The most cited country is the UK, followed by the USA and Australia *(Figure 5).*

We collected keywords used in the studies using an online word cloud program. Some keywords are seen more often than others when keyword frequency is checked: slow tourism, Cittaslow, sustainable tourism, slow food, slow travel, slow city, and sustainability. Other words associated with slow tourism include quality of life, cycle tourism, tourist experience, and cultural tourism *(Figure 6).*

Future research recommendations

This systematic literature review highlights the gaps in the literature for future researchers by compiling the papers published on slow tourism between 2010 and 2021. Although the number of published papers is increasing, there are still several concepts related to slow tourism that need further research.

The concepts of slow tourism/travel are widely covered, as can be seen in *Appendix 2*. Slow tourism and slow travel concepts have been examined as general concepts in most

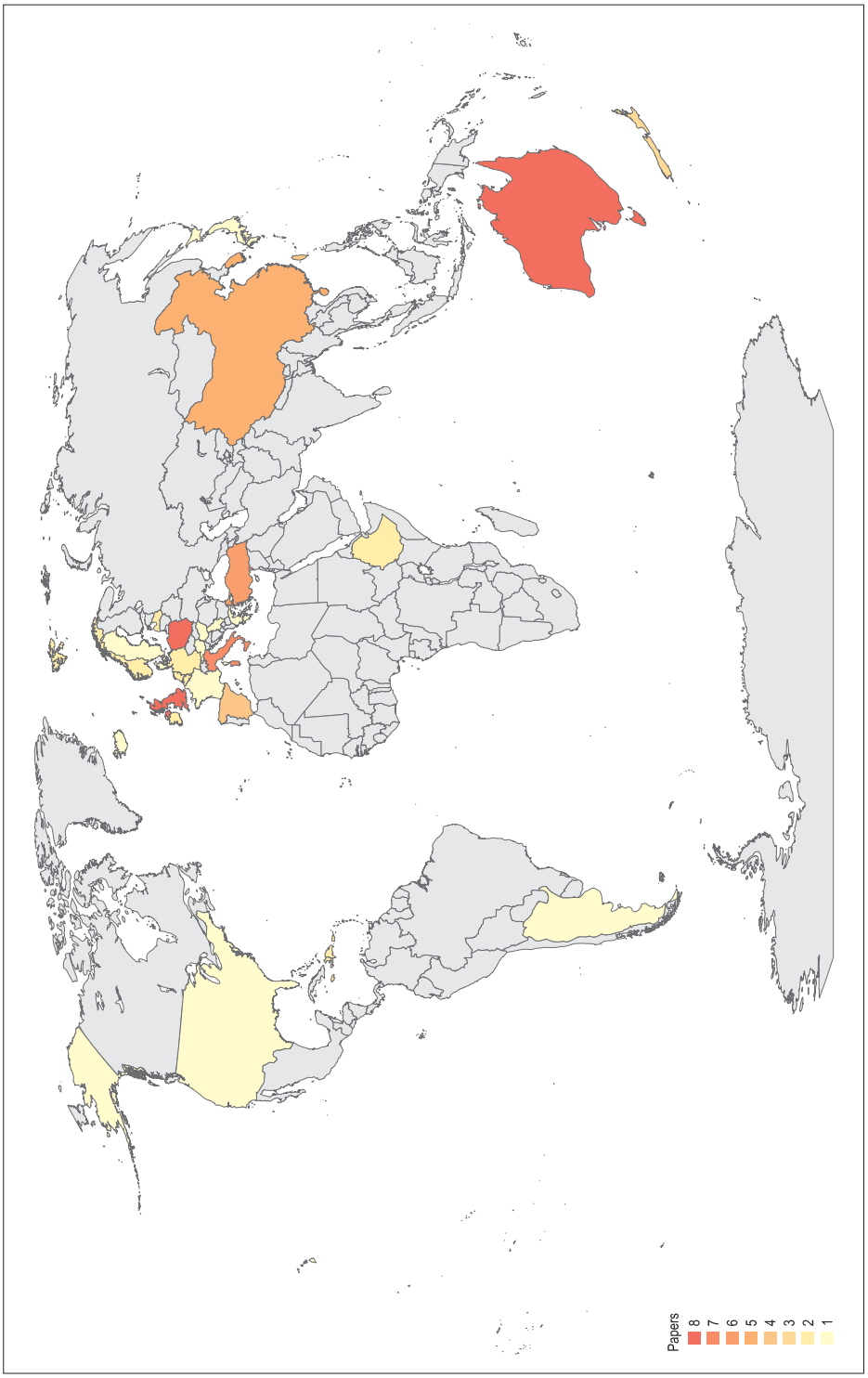


Fig. 4. Geographical scope of the slow tourism studies. *Source:* Authors' own elaboration.

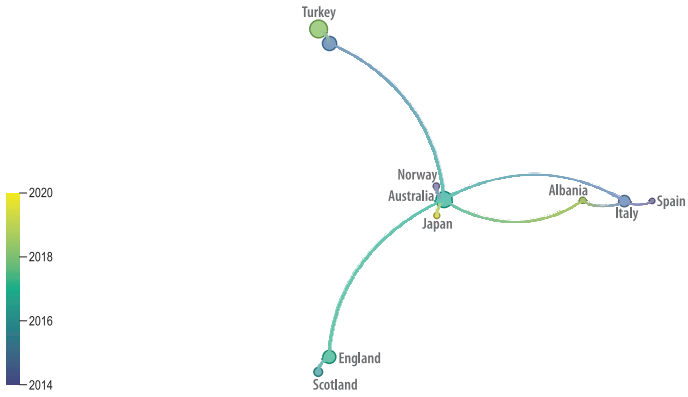


Fig. 5. VOSviewer geographical collaboration and citation of countries. *Source*: Authors' own elaboration.


Cittaslow
Slow Travel
Slow Tourism
Slow Food
Slow City
Place Attachment
COVID-19
Slow Adventure
Sustainable Development
Culinary Heritage
Theory of Planned Behaviour
Tourist Experience
Destination Management
Quality of Life
Caribbean
Latvia
Sustainable Tourism
Tourism
Sustainability
Climate Change
Sustainable Mobility
Place Identity
Slowness
Slow Movement
Social Change
Gastronomy
Urban Planning
Revitalization
Cycling
Slow Cities
Conviviality
Well-Being
Travel Experience
Tourism Marketing
Emerging Destination
Small Islands
Small Town Networks
Revisit Intention
Adventure Tourism
Sustainable Tourism Development
Behavioural Intention
Food Tourism
Sustainable Transportation
Destination Activities
Positive Psychology
Mobilities
Actor-Network Theory
Destination Competitiveness
Destination Management Organizations
Italian Inner Areas
Destination Image
Smart Dashboard
Social Economy
Environment Visitor Satisfaction
Authentic Perception
Regeneration
Tourism Development
Local Produce
Social Justice
Cittaslow Philosophy
Slow Food Festival
Storytelling
Techno-Culture
Small Cities
Nostalgia
Public Spaces
Time Sense
Clonakilty
Mixed-Method
Leisure Behaviour
Tourism Motivations
Alternative Tourism
Smart Governance
Cycling Infrastructure
Neoliberal Capitalism
Triple Bottom Line
Materialities
Sociability
Value Chain
Travel Lifestyle
Social Empowerment
Persuasive Messages
Value-Adding Analysis
Festival Attributes
Contextual Factors
Slow Leisure
Transit Routes
Small-Scale
Bahir Dar
Traffic Safety
Grounded Theory
Slow Philosophy
Residential Tourism
Stakeholder Partnerships
Slow-Food-Seeking Behaviour
Destination Experience
Stakeholder Cooperation
Holistic Sustainability
Travel Behaviour
Cosmopolitanism
Social Media Analysis
Slow Food Justice
Tourism Transformation
Existential Authenticity
Slow Food Tourism
Slow Living
Research Quality
Accessibility
Local Community
Tourism Mobility
Socio-Economic Development
Urban Social Movements
Industrial Tourism
Satisfaction
Neo-Colonial
Past Experience
Mass Tourism
Food Narratives
Design of Tourist Destination
Length of Trip
Active Mobility
Leisure and Work-Life Balance
Outdoor Recreation
China
Kumano
Pilgrimage
Fieldwork
Slow Mindset
Landscape
Cheongsando
Model of Goal-Directed Behaviour (MGB)
Tourism Impact
Stakeholders
Built-Up Index
Resilience
Comfort
Authenticity
Poland
Delphi
Bruges
Nature
Reset
SMEs
Festival
Cittaslow Association
Heritage
Event
Creative Tourism
Extended Theory of Planned Behaviour
Cheese Tourism
Krakow
Goal-Driven Consumption
HLM (Hierarchical Linear Modeling)
Multiplier Effect
Socio Economic Problems
Urban Allotment Gardens
Risk
Attachment
Campervans
Time
West Cork
Instagram
Micro and Small Producers
Discourse
Degrowth
Ethics
Lifestyle
Business Collaborations
Destination Marketing
Australia
Loyalty
Analytic Hierarchy Process
Smart Dashboard
Method
Sociality
Identity
Habitus
Friluftsliv
Amhara Cuisine
Douro Region
Ethiopia
Friction
Towns
Local
Global
Italy
Ageing
Japan
Dependence
Friendship
Historic City
Sustainable Cities
Challenges
Turkey
Holidays
Education
Legacy
Passage
DMO
Sardinia
Length of Stay
Focus Group
Leveraging
Cultural Tourism
Green Infrastructure
Urban
Brand Association
Destination Marketing Strategy
Decision-Making Process
Tourism Destination
Sensory Anthropology
Post-Pandemic Tourism
Classification Methods
Collectivist Orientation
Geographical Marginality
Territorial Certifications
Perception of Authenticity
Taste and Quality of Food
Environmental Concerns
Constructivism Authenticity
Antagonism
Spirituality
Psychometric Process
Eudaimonic Well-Being
FLAG (Fits-Like-A-Glove)
Wellness
Transformation
Walking
Wales
Grass Roots Festivals and Events
Temporal Change
Decolonial Tourism
Tourist Motivations
Tourism Destination Marketing
Psychological Empowerment
Sulcis-Iglesiente
Value Creation and Well-Being
Buen Vivir
Cycling Routes
Local Government Policy
Enlightenment
Authentic Experience
Identity Management
Inland Tourism
Festival Image
Prefigurative Politics
Restaurants
Promotional Videos
Slow Value
Mental Well-Being
Motivation to Travel
Leisure Scholarship and Practice
Objective Authenticity
Slow Design
Culinary Tourism
Rational Recreation
Regional Development
New Zealand
Transportation Modes
Cyclists' Behaviour
Proximity
Karakılcık Bread
Caminito del Rey
Structural Equation Model
Urban Tourism
Slow City Attributes
European Cohesion Policies
Wrocław Taxonomic Method
Urban Development
Post-Disaster
Visitor Experience
Walkability
Travel Modes
Place Dependence
Qualitative Analysis
Sensing of Belonging
Equestrian Tourism
Slow Events
Social Equity
Imaginary
Urban Design
Tourist Destination
Tourism Awakening
Tourism Experience
Slow-Life Festival
Virtual Reality
Negative Binomial Model
Local Development
Travel Blog
Community Involvement
Political Messages
Liveability
Santa Barbara Walk
Chinese Traditional Painting
Residents' Views
Environmental Consciousness
Rural Development
Innovation
Performance of Slow City Products
Tourist Perception
Tour Guiding
Inner Journeys
Decision-Making
Sustainable
Yoghurt
Sharing Economy
Sustainable Development Goals
Sustainable Development Goals (SDGs)
Sustainable Development Goals (SDGs)
Sustainable Development Goals (SDGs)

studies. However, it is important to distinguish between these two concepts to avoid potential confusion, as slow travel is mostly used to explain sustainable transport.

The concept of sustainability and its relationship with slow tourism is a well-researched topic. To contribute to the literature, it would be worth exploring the links between slow tourism and rural or nature-based tourism. Some elements such as slow food and slow adventure have been explored by researchers, but these concepts have not yet been linked.

According to the four pillars of the slow tourism model (Pécsek, B. 2018), the current focus can be seen on the locality pillar, specifically on the slow food concept (Frost, W. and Laing, J. 2013; Jung, T.H. *et al.* 2014, 2015; Lee, K.-H. *et al.* 2015a, b; Fusté-Forné, F. and Jamal, T. 2020; Gürsoy, İ.T. 2020; Dimitrovski, D. *et al.* 2021). Another important aspect that can help strengthen this pillar is a focus on local businesses, local culture, and local workforce, which is currently lacking in the literature (Pécsek, B. 2018). As slow tourism defends the preservation of local culture while encouraging the participation of local people in the process of improving the quality of life, it is important to explore and analyse local businesses that highlight aspects of the culture rather than food, such as handcrafts, local products, and artisans. By doing so, the focus will shift a little bit from the local food and slow food concepts to other aspects that will help to preserve the local culture.

Considering the other pillars of slow tourism, well-being and experiences are missing from the current literature. The well-being pillar could be addressed by concentrating on residents of slow cities and how their quality of life has changed. The current study identified three papers focusing on residents of slow cities (Park, E. and Kim, S. 2016; Kucukergin, F.N. and Ozturk, Y. 2020; Bichler, B.F. 2021), but only one paper explored the role of residents in the development of slow tourism (Bichler, B.F. 2021).

The experiences pillar needs to be further developed in terms of unique and authentic offers and programmes in a slow city. According to our analysis, this theme is used secondarily to explain the concept of slow tourism, which needs further attention. Indeed, through these authentic experiences slow cities can differentiate themselves and attract visitors. However, we found only two papers exploring visitor experiences (Hatipoglu, B. 2015; Jung, T.H. *et al.* 2015). Experiences were mainly studied to understand future revisit intentions or tourist behaviour. In the current study, only a few papers examined experiences at slow events or festivals (Duignan, M.B. *et al.* 2018; Werner, K. *et al.* 2021). To fully understand how experiences can contribute to slow tourism, future studies are needed.

The final recommendation relates to the methodology and data collection methods used in the literature *(Table 2).* The current literature tends to focus on qualitative research techniques, particularly in-depth interviews. To contribute to the literature, studies could be conducted using other qualitative methods, such as netnography, focus groups, and participant observation. Our analysis also indicated the need for studies using mixed methods. Again, the majority of studies using mixed methods used in-depth interviews as the main qualitative method. It would be

Table 2. Methodological classification

Methods		Number of papers used
Qualitative	In-depth interviews	34
	Content analysis	10
	Focus group	4
	Participant observation	3
	Discourse analysis	3
	Ethnography	2
	Netnography	2
Quantitative	Survey	15
	Another method rather than survey	5
Theoretical/ Explanatory	Literature review	13
	Conceptual paper	1
Mixed	Qualitative + Quantitative techniques	11

Source: Compiled by the authors.

worth exploring the use or inclusion of other qualitative methods as a contribution to mixed methods studies.

Conclusions

This systematic literature review examined the current state of the literature on slow tourism. We examined 85 papers on slow tourism, 60 of which were published in Q1 and 25 in Q2-level journals. This research covers 2010 to 2021 and shows that although there has been a growing interest in slow tourism since the 2000s, it became more popular during the pandemic. In fact, 2020 was the most productive year for slow tourism, with 21 papers published. This can be linked to the COVID-19 pandemic as people are expected to change their travel habits and focus more on nature and well-being (Benjamin, S. *et al*. 2020; Breunig, M. 2020; Wen, J. *et al*. 2021). This explains the growing popularity of the concepts of "slow adventure", "slow leisure", and "slow tourism" (Breunig, M. 2020). Studies conducted in the last three years represent 54 percent of the total. This statistically demonstrates the growing popularity of the subject. Most publications have used qualitative methods to analyse slow tourism. The publications concentrate mainly on slow travel, sustainability, Cittaslow, slow food and local development, which is reinforced by the word cloud, as the keyword analysis brought up the mentioned themes. Australia, the UK, Poland, Italy, and Turkey are among the countries where researchers have made the greatest contribution to the topic.

Born in Europe, the very nature of slow tourism encourages people to be more environmentally conscious when travelling, in particular, to use more sustainable modes of transport, to increase the length of their stay, and to explore more of the local culture of a destination they are travelling to. The proximity of the countries and the availability of natural and cultural resources facilitate the improvement of slow tourism in Europe. As mentioned earlier, slow philosophy (including the "slow movement" and "slow food") as well as slow tourism and Cittaslow concepts were founded in Italy. Italy is one of the countries that has contributed most to the current research, demonstrating the importance of these concepts as a pioneering country in the slow tourism literature. In the current research, the countries where researchers have made a significant contribution are mainly in Europe, which can be explained by the feasibility and improvement of slow tourism in Europe. Australia is the largest non-European contributor. The first Cittaslow in Australia was recognised in 2007, which is why slow tourism is a well-studied and developed topic in Australia.

Slow tourism and its proven link to sustainability (Pécsek, B. 2018) has been an important research topic in the literature. This link is further strengthened in this study as two journals stand out as the main contributors to this study, *Journal of Sustainable Tourism* and *Sustainability*, with a total of 20 papers, demonstrating the importance of sustainability concept in slow tourism.

A large number of studies on slow tourism can be found in the literature; interest is growing. Future research could consider our recommendations to further develop the slow tourism literature.

This research also provides lessons for tourism service providers, tourism policy/decision-makers and destination managers/planners in how destinations could benefit from slow tourism and related activities. For the visitor economy, lessons include how tourism could add value to the local economy of slow cities. And for sustainable development, it's how destinations could conserve their resources and environment for the benefit of future generations.

In terms of limitations, several can be identified for the current study. First, we examined only papers published in English as units of analysis. To extend the current scope, papers written in the local languages of the top contributor countries could be analysed in detail, which would add significant insights to the slow tourism literature. Second,

this study focused only on journals ranked Q1 and Q2 in the Scopus and ScienceDirect databases. Other databases, conference papers, and book chapters could be included to provide a more comprehensive analysis. Finally, the papers included in this study were published between 2010 and 2021. Future research could consider focusing on a longer period to provide more detailed information on slow tourism, possibly starting from 2000 and extending the period by a decade.

The authors report there are no competing interests to declare.

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Appendix 1. Journals contributing to the current study, 2010–2021

Journals	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Anatolia	–	–	–	–	–	–	–	–	1	–	–	–
Annals of Leisure Research	–	–	–	–	–	–	–	–	–	1	2	–
Annals of Tourism Research	–	–	–	–	–	–	1	1	–	–	1	–
Asia Pacific Journal of Tourism Research	–	–	–	–	–	–	–	–	–	–	1	–
Built Environment	–	–	–	–	1	–	–	–	–	–	–	–
City, Territory and Architecture	–	–	–	–	–	–	–	–	–	–	1	–
Cities	–	–	–	–	–	–	–	–	–	–	1	–
Cultural Geographies	–	–	–	–	1	–	–	–	–	–	–	–
Current Issues in Tourism	–	1	–	–	–	1	1	–	1	1	–	–
Environment and Planning	–	–	–	1	–	–	–	–	–	–	–	–
Geographical Review	–	–	–	–	–	1	–	–	–	–	–	–
GeoJournal of Tourism and Geosites	–	–	–	–	–	–	–	–	–	–	–	1
Hungarian Geographical Bulletin	–	–	–	–	–	1	–	–	–	–	–	–
International Journal of Culture, Tourism & Hospitality Research	–	–	–	–	1	–	–	–	–	–	–	–
International Journal of Tourism Cities	–	–	–	–	–	–	–	–	–	–	1	–
International Planning Studies	–	–	1	–	–	–	–	–	–	–	–	–
Journal of Destination Marketing & Management	–	–	–	–	–	–	–	–	1	2	–	2
Journal of Geography	–	–	–	–	–	–	–	–	–	–	–	1
Journal of Place Management & Development	–	–	–	–	–	–	–	–	1	–	–	–
Journal of Sustainable Tourism	–	2	–	–	–	–	–	1	1	1	3	4
Journal of Tourism and Cultural Change	–	–	–	–	–	–	–	–	1	–	–	–
Journal of Tourism Futures	–	–	–	–	–	–	–	–	–	–	1	1
Journal of Transport Geography	1	–	–	–	–	–	–	–	–	–	–	–
Journal of Travel & Tourism Marketing	–	–	–	–	–	–	–	–	–	–	1	1
Journal of Travel Research	–	–	–	–	–	–	1	–	–	–	–	–
Journal of Urban Affairs	–	–	–	–	–	1	–	–	–	–	–	–
Journal of Vacation Marketing	–	–	–	1	–	1	–	–	–	–	–	–
Land Use Policy	–	–	–	–	–	–	–	–	–	1	–	–
Leisure Sciences	–	–	–	–	–	–	–	–	–	–	–	1
Leisure Studies	–	–	–	–	–	–	1	–	–	–	–	–
Scandinavian Journal of Hospitality & Tourism	–	–	–	–	–	1	–	–	1	–	–	–
Sustainability	–	–	–	–	–	–	–	–	1	1	3	4
Tourism Geographies	–	–	1	–	–	–	–	–	–	–	2	1
Tourism Management	–	–	–	–	1	1	1	–	–	–	1	–
Tourism Management Perspectives	–	–	–	–	–	–	–	1	–	–	1	–
Tourism Planning & Development	–	–	–	–	–	2	1	–	–	1	–	–
Tourism Recreation Research	–	–	1	–	–	–	–	–	–	–	1	1
Tourism Review	–	–	–	–	–	–	–	–	–	–	1	–
Total	*1*	*3*	*3*	*2*	*4*	*9*	*6*	*3*	*8*	*8*	*21*	*17*

Appendix 2. Conceptual focus

Year	Concept	Geographical context	Pillars of slow tourism
2021	Sustainability and COVID-19	N/A	Sustainability
	Sustainable development	Small Island Developing States (SIDS)	Sustainability
	Food tourism	Ethiopia	Slow tourism and Locality
	Role of locals	N/A	Well-being
	Slow tourism development	N/A	Slow tourism
	Sustainability and COVID-19	N/A	Sustainability
	Behavioural intention	China	Slow tourism and Experience
	Social media analysis	N/A	Slow tourism
	Sustainable development	Caribbean islands	Sustainability
	Slow food	Serbia	Locality
	Slow events	Germany	Experience
	Changes in slow cities	Turkey	Slow tourism
	Cittaslow and local sustainable development	Poland	Slow tourism and Sustainability
	Cittaslow and local development	Poland	Slow tourism
	Length of stay and sustainability	Ethiopia	Slow tourism and Sustainability
	Cittaslow and urban development	Poland	Slow tourism
	Sustainable tourism development	N/A	Sustainability
2020	COVID-19 and slowing down	N/A	Slow tourism
	Slow tourism development	Latvia	Slow tourism
	Slow travel and destination image	Taiwan	Slow travel
	COVID-19	N/A	Slow tourism
	Spirituality and inner transformation	N/A	Slow tourism
	Social change of locals	Turkey	Well-being
	Behavioural intention	China	Slow tourism and Experience
	Slow food	New Zealand	Locality
	Degrowth and Buen Vivir	N/A	Slow tourism
	Tourists' well-being	Scotland	Slow tourism
	Slow food	Turkey	Locality
	Slow food tourism	N/A	Locality
	Slow living, leisure, and COVID-19	N/A	Slow tourism

Appendix 2. continued

Year	Concept	Geographical context	Pillars of slow tourism
2020	Cittaslow development	Poland	Slow tourism
	Slow adventures	Tibet	Experience
	Authenticity and place attachment	China	Slow tourism
	Slower mode of transportation	Netherlands and UK	Slow travel
	Management of slow tourism	Italy	Slow tourism
	Sustainable transportation	Poland	Slow tourism and Sustainability
	Slow tourism and place attachment	China	Slow tourism
	Slow travel	Italy	Slow tourism
2019	Slow tourism attributes	Portugal	Slow tourism
	Behavioural intention	South Korea	Slow tourism and Experience
	Slow tourists' behavioural intention	South Korea	Slow tourism
	Slow tourism development	Latvia	Slow tourism
	Slow living	Australia	Slow tourism
	Sustainability	Australia	Sustainability
	Cittaslow competitiveness	15 European countries (Austria, Belgium, Denmark, France, Germany, Ireland, Italy, Norway, Netherlands, Poland, Portugal, United Kingdom, Spain, Sweden, and Hungary)	Slow tourism
	Slow city and sustainability	Poland	Slow tourism and Sustainability
2018	Creative tourism	Poland	Slow tourism
	Slow food festivals	UK	Locality and Experience
	Behavioural intention	Taiwan	Slow tourism and Experience
	Length of stay	Spain	Slow tourism
	Slow food	South Korea	Locality
	Wellness and equestrian tourism	Iceland	Slow tourism
	Slow travel, cycling	Greece	Slow tourism
	Motivations of slow tourists	Turkey	Slow tourism
2017	Behavioural intention	Taiwan	Slow tourism and Experience
	Spirituality and inner transformation	Japan	Slow tourism
	Means of travel	UK and Scotland	Slow travel
2016	Behavioural intention	South Korea	Slow tourism and Experience
	Slow food tourism	Wales	Locality

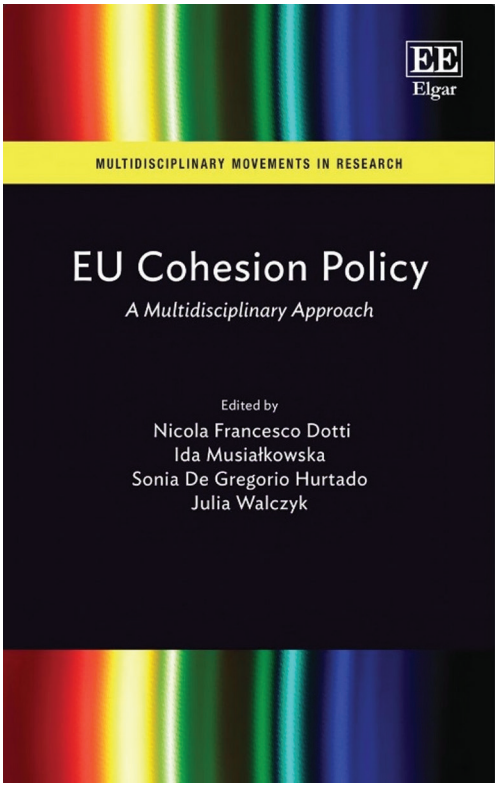
Appendix 2. continued

Year	Concept	Geographical context	Pillars of slow tourism
2016	Slow travel, motivations and goals	USA	Slow travel
	Repeat visitors and behavioural intention	Australia	Slow tourism and Experience
	Local community	Australia	Well-being
	Slow tourists' behaviour	South Korea	Slow tourism
2015	Quality of life of residents and visitor experiences	Turkey	Well-being
	Visitors' experience, satisfaction, and revisit intention	Wales	Slow tourism and Experience
	Slow adventures	Norway	Experience
	Sustainable development, social well-being of residents	N/A	Sustainability
	Destination food activity	Australia, Argentina, Taiwan, Italy	Slow tourism
	Slow food members' travel lifestyle preferences	Australia	Locality
	Cittaslow development	Spain	Slow tourism
	Local food and sense of place	Ireland	Locality
	Slow design elements in tourism	Belgium	Slow tourism and Experience
2014	Slow tourism development	Turkey	Slow tourism
	Sustainable tourism development, stakeholders	Wales	Sustainability
	Small city development	Italy	Slow tourism
	Cittaslow and resilience	Australia	Slow tourism
2013	Persuasive messages of slow food	Italy, Australia, and New Zealand	Locality
	Cittaslow	Spain	Slow tourism
2012	Slow tourism, elements, visitors	N/A	Slow tourism
	Slow tourism development	Caribbean islands	Slow tourism
	Cittaslow and sustainable development	New Zealand	Sustainability
2011	Slow travel	UK	Slow travel
	Slow food	Italy	Locality
2010	Slow travel	UK	Slow tourism

BOOK REVIEW SECTION

Dotti, N.F., Musiałkowska, I., De Gregorio Hurtado, S. and Walczyk, J. (eds.): EU Cohesion Policy: A Multidisciplinary Approach. Cheltenham–Northampton, Edward Elgar, 2024. 380 p.

For almost 50 years, European regional policy, then Cohesion Policy (CP), has shaped the nature of the European Communities/European Union (EU), promoting the catching-up process between less and more developed countries and regions in order to reduce territorial disparities between Member States and their regions. Since 1988, the amount of money allocated to the EU's cohesion policy has increased to such an extent that it has become one of the Union's most important policies, along with the Common Agricultural Policy (CAP), while at the same time being the European Union's most important investment policy. Over the decades, the CP has evolved from a framework aimed at compensating for regional deficiencies to a policy aimed at unlocking local development potential, embedded in an integrated place-based approach. As economic, social, and territorial cohesion remains an attractive and compelling objective, the CP is often recognised as "the most explicit and most visible expression of solidarity within the EU" (Ahner, D. 2009, 1).



At the same time, it is perhaps the best known and most expensive of the EU's policies, and yet one of "the most complex policies in the world" (Dotti, N.F. *et al.* 2024, 1), as well as one of the most controversial and frequently criticised (Bachtler, J. and Gorzelak, G. 2007; Baun, M. and Marek, D. 2013). Although CP is a mature policy, it is characterised by constant evolution and the need to respond to the dynamically changing challenges of today and the anticipations of the future. This makes CP an extremely interesting, albeit very challenging subject of research. Indeed, any scientific attempt to understand, characterise, and evaluate CP requires a comprehensive and multidimensional approach open to multiple research and geographical perspectives.

Such an approach is proposed by Nicola Francesco Dotti, Ida Musiałkowska, Sonia De Gregorio Hurtado, and Julia Walczyk, the editors of this volume, which examines the origins and development, current status and performance, and future challenges of EU Cohesion Policy. The book is a result of the collective effort of the members of the Regional Studies Association's (RSA) Research Network on EU Cohesion Policy (#CPnet), which was established in 2011 as a forum for debating CP, with the aim of bridging the gap between academia and policy-making. The authors aim for this publication to contribute to the contemporary academic and policy debates on CP, territorial cohesion and European integration, to serve as a 'compass' and to enable a better understanding of its complexity.

The book brings together academics from across Europe to discuss the roots, performance, and prospects of CP. Bringing together such a broad team of people with a wealth of knowledge on the subject of the book is a guarantee of proper insight and reflection on the CP. At the same time, the fact that the European Union, and with it its most important and best-known policy, is facing more challenges than ever before, makes the book extremely timely and relevant. Finally, its relatively simple language, synthetic coverage, and inviting format make it a publication that can reach a wide audience – academics, policy-makers, practitioners, students, but also anyone else interested in CP.

The volume consists of an introduction, twenty chapters grouped into four thematic parts, and a summary highlighting the main lessons learned and key messages.

Part I (*Disciplinary Genealogies*) includes Chapters 2–6, which present the roots of the CP from the perspective of political science and European integration, regional economics, legal studies, and urban studies. Chapter 2, authored by Ida Musiałkowska, Piotr Idczak, and Dagmara Kociuba, sheds light on the genesis and development of the CP through a three-stage periodisation, presenting the main turning points and directions of change that determined its current form as a territorially-oriented development policy for the European Union, characterised by a place-based approach (Barca, F. 2009) and shaped according to a new paradigm of regional policy. The chapter provides a concise and clear presentation of an extremely complex issue, allowing a better understanding of the processes and arguments underlying its current state. In Chapter 3, Nicola Francesco Dotti, Ugo Fratesi, and Christian Oberst introduce the reader to the broad context of the regional economic theories, schools of thought and policy narratives that underpin solutions and directions for change in CP and provide a rationale for policy interventions. The chapter links specific theoretical approaches to key policy challenges and their context. In the following Chapter 4, Serafin Pazos-Vidal discusses the origins and evolution of the CP from a legal perspective, highlighting the legal provisions in the EU Treaties and key legal principles of CP as well as crucial legal changes in the context of the 2021–2027 Financial Perspective. Recognising cities as key actors for territorial, economic, and social cohesion, Chapter 5, written by Sonia De Gregorio Hurtado, provides an insight into the evolution of the urban dimension of CP from its origins to the present day. The chapter also examines the main urban challenges that need to be addressed and discusses the way forward towards more sustainable and resilient urban areas in the EU. Chapter 6, which concludes Part I of the book, is devoted to the quality of life as an objective and inherent ambition of the CP. In this paper, Bryonny Goodwin-Hawkins identifies and develops three dominant frameworks: 'standard of living', 'social model', and 'territorial well-being', which offer a different way of defining and measuring quality of life.

Part II (*Assessing What Works*) aims to critically discuss the effects and performance of CP. It starts with Chapter 7 by Oto Potluka, who reviews the different evaluation methods used to measure the contribution of the CP to policy objectives and tries to answer the question of why we do not have clear and unambiguous information on the (positive) impact of the CP on cohesion between EU regions and states. The authors of Chapter 8, Riccardo Crescenzi and Mara Giua, look at the economic impact of the CP, outlining its effects on growth, employment, and economic development more broadly. In Chapter 9, Claudia Gloazzo examines the problems of a relatively new form of CP support, Financial Engineering Instruments (FEIs), which include such repayable funds such as equity, loans, and guarantees. The author discusses their growing importance, the arguments for their use, and the relevant governance arrangements. Chapter 10 by Piotr Idczak combines the themes of financial engineering instruments described in the previous chapter and the urban dimension of the CP taken up in Chapter 5. The author discusses in detail the assumptions, institutional system, and impact of the JESSICA initiative as a more sustainable and efficient response to the needs of urban areas. Chapter 11, written by Alberto Bramanti and Paolo Rosso, discusses the sub-regional dimension of European territorial development policies. Going beyond the 'administrative region', the chapter focuses on functional and place-based approaches, characterising three main features of local development from the strategic-territorial perspective: the goals, the actors, and the instruments, and linking them to the CP.

Part III (*The 'When' and 'Where' of Cohesion Policy Implementation*) introduces issues of CP implementation, such as governance and stakeholder engagement. In Chapter 12 Sébastien Bourdin looks at the Strategy of Smart Specialisation, an approach to regional development in the EU based on a new paradigm of research and innovation. From the perspective of territorial governance, this contribution highlights the challenges of coordinating the activities of different stakeholders. In Chapter 13, Silvia Grandi and Federico Martellozzo link EU cohesion policy with environment and sustainable development policy, highlighting the convergence between the thematic objectives of CP and the UN Sustainable Development Goals. Chapter 14 by Alberto Bramanti and Paula Tulppo, offers a cross-border perspective on European local and regional development policies, discussing cross-border cooperation under INTERREG programmes. The authors analyse the role of multilevel governance structures and examine three constituent elements of cross-border policies: (i) the objectives of cross-border cooperation, (ii) the actors of cross-border interaction, and (iii) the specific new instruments developed to implement the policies. In Chapter 15, Oto Potluka examines the relationship between civil society organisations and Cohesion Policy by presenting the participation of these organisations in the policy-making process and assessing the impact of the CP on civil society organisations. Part III concludes with Chapter 16, written by Paula Tulppo and Silvia Grandi, which discusses the administrative dimension of the governance and management of the operational programmes of the CP and examines the relationships between power, politics, place, space, territory, and institutions. For this purpose, the authors adapt the Geofinance Diamond Model which allows them to highlight the interlinkages of the EU Structural Funds with the pillars of the new political geography and geo-finance.

The last series of chapters is grouped in Part IV (*Looking Forward: The Future Challenges*). It is opened by Chapter 17 by Serafin Pazos-Vidal, which discusses the future perspectives of CP with emphasis on the Next Generation EU as a new challenge for CP. Chapter 18, authored by Mattia Casula, Robert Leonardi, and Raffaella Y. Nanetti, provides insights into the operational framework for effective multilevel policy implementation, taking up the discussion on the role of the partnerships and the partnership principle in CP. Chapter 19 by John Bachtler, Sébastien Bourdin, and Martin Ferry looks at the impact of the COVID-19 crisis on the evolution of CP for the 2014–2020 period, and for the 2021–2027 financial perspective, analysing its main implications and the challenges it poses. In Chapter 20, Ekaterina Domorenok provides an overview of how the CP has integrated climate priorities into specific objectives and instruments in the 2014–2020 and 2021–2027 programming periods. Finally, the stimulating Chapter 21 by Kai Böhme and Maria Toptsidou reflects on how the idea of cohesion could evolve and what consequences this might have for the future of CP. The authors argue that it is time to rethink and broaden the understanding of cohesion. They propose some key points for discussion and call for more ambitious objectives and better adaptation to the challenges of today's and tomorrow's Europe. The book concludes with a summary by Nicola Francesco Dotti, Ida Musiałkowska, Sonia De Gregorio Hurtado, and Julia Walczyk, which provides a synthesis of the debates developed throughout the book and draws out lessons and key messages for policy-making and research.

The multidimensional and multidisciplinary approach, already mentioned here and thus appropriate to the aim of the volume, should be considered the main merit of the edited volume under review. However, the editors and authors of the chapters effectively hide the fact that different disciplines and research approaches are represented, so that the book appears to be coherent and without dissonance (in terms of language, terminology, and methodological basis) between the different parts. All chapters are written in a similar way, following a single pattern, despite significant thematic variations. Good navigation is facilitated by cross-references and links between chapters. The relatively simple language, which is largely (as far as possible) free of EU jargon, is also a great asset that significantly widens the potential audience. Thanks to this, the book can successfully serve as a textbook in academic courses as a useful introduction to the complex issues of the CP.

The book under review is characterised by a clear territorial context, which has not been so evident in previous works on the subject. At the thematic level, the volume is well balanced between the political, institutional, economic, social and, above all, environmental strands. Finally, the diversity of authors, including researchers from old and new Member States, as well as from the core and periphery of the EU, allows for the presentation of different perspectives, so that the narrative and argumentation are not biased. All this has made it possible to address a relatively broad catalogue of problems and issues related to CP.

However, its strength in this context is also its weakness. The more informed reader, with some knowledge of CP and looking for more in-depth analysis or sharper assessments, may sometimes be disappointed by the rather superficial treatment of some important issues, the lack of broader reflection or the lack of presentation of the intricacies and nuances of the policy in some of its aspects. For example, the book lacks a more systematic approach to evaluating the effectiveness of CP, a review of past evaluations and assessments, existing evidence and contradictions in this area. Some crucial aspects of CP, such as the institutional framework, management and implementation, territorial instruments of CP, the functional approach and reference to the Territorial Agenda 2030, the European Green Deal, a just transition or, more generally, the links between mission-oriented policies and CP (Cappellano, F. *et al.* 2023), are only marginally highlighted in chapters dedicated to other topics. It is also somewhat surprising that there is no broader reflection on the role and importance of European Territorial Cooperation (beyond INTERREG), one of the objectives of the CP. The way the CP is linked to the challenges of the future is also not entirely satisfactory considering that challenges of the future (perhaps because of the long publication cycle) have often already become the challenges of the present. The conclusions drawn and the solutions and recommendations proposed mainly relate to the 2021–2027 financial perspective without making a significant contribution to the ongoing debate on the Cohesion Policy 2028+ (with the exception of Chapter 21).

Despite these minor shortcomings, which are a natural consequence of the very broad thematic scope of the publication, the edited volume represents an important and necessary contribution to the debate on CP. By providing structured, cross-cutting, and accessible knowledge, the edited volume enables a better understanding of CP. I am convinced that this timely, valuable, and necessary work is a must for all researchers concerned with EU cohesion policy in particular and regional development policy in general.

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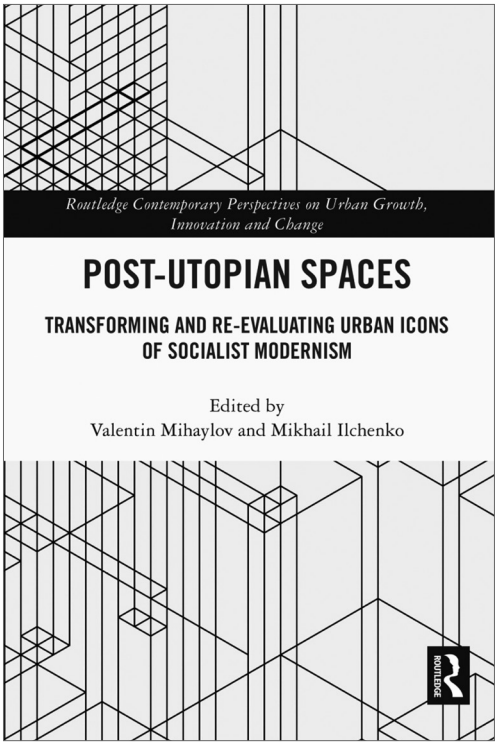
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Mihaylov, V. and Ilchenko, M. (eds.): Post-Utopian Spaces: Transforming and Re-Evaluating Urban Icons of Socialist Modernism. Abingdon–New York, Routledge, 2023. 234 p.

With the victory of the socialist revolution in 1917 and the establishment of the Soviet Union, a new chapter in the global urbanisation began, unusual in many respects. The political, social and economic framework conditions of the emerging Soviet system differed significantly from those of capitalist countries, and this difference also left its mark on urban development. After World War II, as a result of the expansion of the Soviet sphere of interest, the communist regimes that came to power in the countries of Central Europe and the Balkans also adapted this Soviet, socialist urbanisation model, with more or less differences. Perhaps the most characteristic products of this particular urbanisation path are the newly founded, planned, socialist (industrial) cities, the construction of which began in the Soviet Union during the first five-year plan (1928–1932), and then continued at an almost unbroken pace until the mid-1980s. Although new cities were founded not only in the so-called Second World, but also in the First and the Third World, however, there is a difference of magnitude in the number of newly founded cities: during the existence of the Eastern Bloc, around 1,200 new cities were built, the vast majority of them in the Soviet Union, and a few dozen in European countries that fell into the Soviet sphere of interest.



Socialist and post-socialist urbanisation, the socialist and post-socialist city are intensively researched issues in international literature. Regarding the concept of the socialist/post-socialist city, however, it is worth noting that in the international literature these terms are not typically used for new cities founded in the Eastern Bloc, but for cities in (former) socialist countries in general, and the majority of the studies adapts to this approach. This point of view also characterised perhaps the most cited work on the topic (French, R.A. and Hamilton, F.E.I. 1979), and it can be said to be general today: the capitals and big cities of the region are primarily the focus of interest. In some cases, the author notes that the examination of medium-sized industrial cities can lead to slightly different results – such as Hirt, S. (2013), who calls these settlements "the landscape heritage of socialism". Although there have been articles focusing on one planned city or comparing some such settlements, as well as a larger volume of studies (Szirmai, V. 2016), the examination of planned socialist cities falls outside the main focus of the socialist/post-socialist urban research.

The volume edited by Valentin Mihaylov and Mikhail Ilchenko, published in the "Routledge Contemporary Perspectives on Urban Growth, Innovation and Change" series, is connected to this somewhat peripheral research area. In the series, which currently has nine published volumes, the study of post-socialist urban development is prominently present. In addition to the volume reviewed here, the focus of another three volumes is also on different dimensions of post-socialist urban transformation, however, this volume is the only one that specifically focuses on planned socialist cities.

The book contains 12 chapters (9 of which are case studies of a city or district), and a total of 10 authors (including the two editors) collaborated in writing the chapters. The geographical focus of the volume is the post-Soviet region, post-socialist Central Europe and the Balkans. Among the authors are human geographers, sociologists, architects and historians, all of whom are active in the academic sphere of Central and Eastern Europe and the Balkans.

In Chapter 1 (*Introduction: Socialist Urban Utopias and Their Continuing Transformations*), the editors state that although there is a significant literature on socialist and post-socialist cities and urbanisation, in comparison, few works specifically deal with the model cities of socialism born on the drawing board, which

were the most complete embodiment of socialist urban planning. According to them, the term "socialist city" belongs primarily and most to these utopian cities – their appearance, development and still ongoing transformation are examined in the volume.

According to the editors, the research of these settlements is particularly timely and relevant now due to two main factors. First, the symbolic revival of socialist urban spaces experienced in the last decade, the start of the social discourse related to this, the importance of which may seem secondary compared to the socio-economic challenges, but it plays an important role in the rediscovery of the urban heritage of the socialist era. (This is linked to the generally growing interest in modernist architecture, in a broader sense, and the increase in financial expenditures for the revitalisation and promotion of this heritage.) Second, the long-term changes of the urban fabric can be investigated and evaluated in the post-socialist era, for which socialist cities provide a particularly good opportunity. Since these settlements – in contrast to many capitals and large cities of the region – were largely avoided by large-scale changes and business investments that transformed the urban fabric, therefore, as the remaining "clean pieces" of socialist urbanisation, traces of their socialist urban past and their effects on their current dynamics can be examined. Furthermore, the key question of post-socialist urban research can also be investigated: how the socialist urban model can adapt and function in the absence of the ideology that created it. While the socialist urbanisation experiment can generally be considered unfinished and unrealised, in the case of the planned socialist cities, this project was almost completely realised. To examine the post-socialist transformation of these urban spaces, it is necessary to take into account the social, economic, cultural and spatial dimensions.

According to the editors, the book generally answers the following three key questions:

"1. What remains of the concept of planned, utopian socialist cities and how has their space and social organisation been adapted to the conditions of democracy, capitalism, and neo-liberal management of urban space?

2. Are these cities still convenient for life, work, and leisure, and to what extent do their urban fabric meet current needs of today's city development?

3. What are the paths of adapting the heritage of socialist modernism to contemporary values, symbolic meanings, and the visions of post-socialist societies in different geographic, social, and cultural contexts?" (pp. 5–6)

It is an important endeavour that the case studies in the book avoid the common weakness of similar works, namely that they only focus on a narrower characteristic of each city (e.g. population decline, environmental problems). Instead, it was formulated as an emphatic expectation of the editors for the authors of the volume that they strive for interdisciplinarity, and the formation and development of the settlements are examined from a comprehensive, as wide as possible point of view. In addition to this general expectation, the individual authors were given a fairly free hand in defining the internal structure of the chapters, selecting the emphases, and choosing the applied research methods, in accordance with their own field of expertise and research profile. Taking into account the spatial and temporal uniqueness of each settlement, a great role was devoted to embedding the research in the literature, as well as to the utilisation of archival sources and current empirical data.

The ambitious goal of Chapter 2 (*Rises and Falls of New Socialist Cities* by Valentin Mihaylov) is to provide a comprehensive, complex, comparative overview of the issue of socialist cities, from the beginning (the founding of the Soviet Union) to the present day. The 21-page chapter (including the bibliography) is an extremely informative, interesting and compact summary of the topic written in a readable style, which can be heartily recommended to anyone interested in the issue of socialist cities.

In the first sub-chapter (*Which cities are new and socialist?*), Mihaylov synthesises the results of various literature categorisations and sets up his own framework for defining socialist cities, which he also summarises in Figure 2.1. In the next sub-chapter (*New socialist cities during the interwar period*), the author reviews the construction of new cities in the Soviet Union from the founding of the country to World War II. He presents the antecedents of socialist cities, called "Soviet working settlement-garden", inspired by Howard's ideas, which were the first Soviet ideal cities, and then the concept of "agrotown", another type of settlement, which was given a greater role than the previous one in terms of the number of established settlements. Around 1930, however, the debate of Soviet architects, planners, social utopians and politicians for more than a decade about the nature of the ideal socialist city came to an end: "The rivalry between different types of ideal cities for a classless society was won by a socialist city raised around a city-forming industrial plant" (p. 17). The author reviews the changes in ideas related to apartments and living conditions over time, presents the two main groups of socialist cities according to their geographical location, and discusses the dizzying pace of the construction of socialist cities and the prominent role these settlements played in World War II.

The next sub-chapter (*Construction of socialist cities in the Eastern Bloc after 1945*) presents the upsurge in the construction of socialist cities after World War II, when "conditions were right for the implementation of the idea of a socialist city in a wider geographical area, in countries and cultures with different cultural traditions" (p. 19). Mihaylov, V. presents the change

of architectural and urban planning paradigms, as well as the appearance of new panel technology and the huge housing estates consisting of high-rise buildings. He refers to the urban construction boom that also took place in the Western world in the decades following World War II, and to the similarities between these new Western cities and socialist cities.

In the last unit of the chapter (*Transformation*), the author reviews the development and transformation of socialist cities after the regime changes that took place around 1990 in the countries of the region, from three main points of view: economic decline and restructuring; social and demographic problems; and the re-evaluation of the built heritage and the creation of a new identity.

The following chapters of the volume (Chapters 3–11) are the case studies presenting the selected socialist cities (or city districts). The authors of the book present the formation and development of cities and districts in nine different countries, their role in the socialist era and their post-socialist transformation, also focusing on local characteristics. The selection covers settlements of different sizes, functions and local features, of which six are administratively independent cities, while three are urban districts – the latter were originally planned as a quarter of a larger city. Through the selected settlements, most of the former European socialist countries are represented (Soviet Union, Poland, GDR, Czechoslovakia, Hungary, Yugoslavia, Bulgaria). The cities/districts presented in the book, in the order of the chapters, are: Uralmash in Russia (district of Yekaterinburg, written by Mikhail Ilchenko); Zaporizhzhia in Ukraine (by Pavlo Kravchuk); Tychy in Poland (by Jerzy Runge); Eisenhüttenstadt in Germany (by Carola Neugebauer); Ostrava-Poruba in Czechia (district of Ostrava, by Daniel Topinka); Dunaújváros in Hungary (by Kornélia Kissfazekas and Melinda Benkő); New Belgrade in Serbia (district of Belgrade, by Zlata Vuksanović-Macura); Dimitrovgrad in Bulgaria (by Valentin Mihaylov); and Velenje in Slovenia (by Ana Kladnik).

The length of each chapter is 18–25 pages, and each has its own bibliography. The chapters are richly illustrated with black-and-white illustrations. Each chapter contains several photos (sometimes archival footage), most of them contain some kind of map, plan or scheme, and a figure showing the mental maps of local residents also appears (in the Ostrava-Poruba chapter). Tables are contained only in the Zaporizhzhia chapter (three tables). These figures and tables are useful supplements to the text.

From all the case studies, we can learn about the background and motivations of the formation of individual cities/districts, the nature of their development in the socialist era, and the developments and challenges in the post-socialist era. The authors strive for a complex approach everywhere, we can read excellent urban geography studies in the book, which – not always with the same emphasis in each chapter, but – deal with the characteristics of urban fabric, architecture, society and the economy. One of the defining features of the book is that in all nine case studies the question of heritage and the cultural-symbolic dimension of the cities is emphasised. The authors deal in detail with the extent to which the visible and invisible heritage of the socialist era – including the built environment, works of art in public spaces, street names and also the mentality and local identity of the inhabitants – has remained, and how and in what direction it has changed during more than three decades of the post-socialist era. Examining individual cities/districts also creates an opportunity to present the appearance of some heavily researched, more general processes at the local level. Such is the destructive effect of the extreme profit-oriented real estate development with a "wild capitalist" approach (combined with weak state and local government regulations) on the urban fabric and cultural heritage (primarily in Uralmash and in New Belgrade); the peculiar controlled democracy that continued to exist in Ukraine from the collapse of the Soviet Union until the 2014 revolution, whose prominent power figures were "Red Directors" at the head of large factories (Zaporizhzhia); urban shrinkage (Eisenhüttenstadt); path dependence (Tychy); or the appreciation of environmental protection (Velenje).

The cities examined in the volume differ greatly in terms of how successfully they took on the challenges of the post-socialist era, and somewhat related to this, in how they are perceived in the eyes of the outside world. Sometimes, very strong local patriotism meets the incomprehension and dislike of others – in the case of Dimitrovgrad, this is manifested in persistent local resistance to attempts to change the city's name, and in the subsequent debate that made county-wide waves after the city won the title "Bulgarian construction of the 20th century" in a television voting. Elsewhere, the socialist cities retained their generally favourable perception even in the post-socialist era (e.g. Ostrava-Poruba). The examined cities also differ in how much they try to "touristificate" the built heritage of the socialist era – the "Architectural Promenade" in Dunaújváros is a good example of such efforts.

In the last chapter of the volume (*Conclusion: Post-Utopian Spaces in Search of Alternative Urban Policies*) the two editors summarise the main research results of the previous chapters, focusing on the transformation of socialist cities in the post-socialist era, in terms of their physical space, socio-economic life and symbolic heritage. The editors identify the following three points as the main contribution of the volume to the discourse on new cities and (post-)utopian urbanisation:

1. By presenting the different paths of the post-socialist transformation, the authors move beyond

the "failure-centrism", which is a dominant approach in the research of socialist architecture and planning.

2. By examining settlements with different geographical locations and functions, they demonstrate that socialist cities do not have a single, determined, one-dimensional development model. Instead, the nature and success of their post-socialist transformation is the result of a combination of many factors.

3. By broadening the research focus and using an interdisciplinary approach, they avoid the one-sided viewpoints that are often characteristic of studies on (post-)socialist towns.

Finally, Mihaylov and Ilchenko propose possible future research directions based on the results of this volume. One such example is conducting comparative studies between socialist cities and new cities founded in other regions of the world characterised by different political, ideological, economic and ecological conditions. But the examination of socialist cities cannot be considered finished either, since their transformation is not yet complete – the dynamics of the social, economic, urban fabric and symbolic processes taking place in these cities require further monitoring.

All in all, the book is a high-quality, fresh and important contribution to the research of socialist cities. Chapter 2, which provides a complex overview of the issue, and the following nine chapters, which present case studies, stand on their own; however, by reading the book, we can get a really comprehensive and complex picture of the issue of socialist cities. A great strength of the volume is the selection of the cities of the case studies, including settlements that had almost never appeared in the international literature before. A small feeling of absence can only be related to the fact that a case study on a Romanian and an Albanian socialist city could have been included in the volume – it would also be interesting to read about whether these two countries, which until the 1980s had an extremely autarkic system, have the resulting specific features of the development and post-socialist transformation of socialist cities. Furthermore, in this way, all former European socialist countries would have been represented in the book.

Another important strength of the volume is that the issues of the symbolic dimension, heritage and identity appear much more prominently compared to most urban geography studies – while their "classical" dimensions of investigation, such as society, economy, settlement structure and architecture, are also present. The authors with a varied research profile and professional background managed to provide a complex picture of the development, transformation and future challenges of all nine investigated settlements.

The relevance of the research of socialist cities is well expressed by the words of the editors in the last chapter: "The planned socialist cities are just one of many attempts in history to create urban utopias but, undoubtedly, this experiment surpasses all previous ones in terms of scale, geographic scope, and its profound social consequences" (p. 218). This book can be heartily recommended to all who want to get to know these special cities or expand their existing knowledge about them.

Dániel Zách[1]

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