Chapter 12
Are Small Towns Smart Destinations?

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Abstract Like any other destination, small towns engage in strong competition with one another and with other destinations to attract investments, maintain and attract highly skilled employees, and become appealing and well-liked tourist destinations. Creativity and the adoption of innovations are crucial in such cases, as technology has directly influenced destination development. In their smart transformation journey, local economies need to expand their business environment, focus on sustainable development, and take advantage of the available new technologies, which, together, enhance local economic growth and job creation. The authors focus on assessing the smart development of 16 Romanian small towns, once the concepts "smart destinations" and "smart tourism" are defined.

Several approaches were used to acquire data and verify the existence of a link between the destinations' smart transformation and their tourism activity and performance. The main findings lead to the conclusion that in the case of small towns, their recognition as successful tourism destinations enhances their smart transformation. However, in these cases, the process is even more delayed than in the case of the Romanian county residencies and counties, which also lag behind other European destinations.

The research findings lead to the following conclusions. The development of tourism and hospitality services generates more financial resources, which can support destinations to improve their quality of life and turn toward smart and sustain-

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able development. Furthermore, tourism has the potential to enhance destination orientation in this respect exactly due to the smart and sustainable orientation of the tourists. Small-performing tourist destinations feature professionalized strategic thinking and planning.

Keywords Small town · Smart city · Smart tourism · Arrivals and overnights · Romanian destinations

12.1 Introduction

Urbanization continues to drive economic growth around the world. At the same time, cities must focus on confronting and combating inequality, poverty, and climate change, among other issues (United Nations (UN), 2022). Small- and medium-sized cities represent an important part of the urban system, and their functional positioning includes four important aspects: industrial development, public services, job absorption, and population grouping (World Economic Forum (WEF), 2022). Most small- and medium-sized cities face the challenge of a slow pace of development, while digitalization provides them opportunities to increase their competitiveness at various levels. The 2030 UN Sustainable Development Goals (SDGs) include several targets (SDG 9, SDG 11, and SDG 13) that address cities and human settlements, aiming at building resilient and sustainable infrastructures or acting against climate change (United Nations Development Programme (UNDP), 2015).

In Romania, there are 319 cities, of which 276 fall into the category of small cities (National Institute of Statistics (NIS), 2022). The classification of cities by size varies greatly from country to country. In Romania, cities with less than 50,000 inhabitants are considered small cities; among them, a group of very small cities with less than 20,000 inhabitants can also be identified (Erdeli et al., 1999). The following cities were classified as *smart cities* in leading positions according to Vegacomp Consulting (2022); they also fall into the category of very small cities: Hârșova, Avrig, Aleșd, Abrud, Cernavodă, and Ghimbav, and the category of cities with a population between 20,000 and 50,000 inhabitants includes the following cities: Făgăraș, Aiud, Moinești, Odorheiu Secuiesc, Mediaș, Slobozia, Turda, Dej, Năvodari, and Sighișoara (National Institute of Statistics (NIS), 2022). Vegacomp Consulting (2018, 2019, 2020, Radiografia Smart City în România, fifth edition. Digitalizarea comunităților se extinde în România, 2021) publishes an annual report on smart city projects in Romania, *The Smart City Radiography in Romania* (Vegacomp Consulting, 2022). The first ISO standard for Smart Cities was published in 2020, namely, *ASRO: SR ISO 37120, Sustainable Cities and Territorial Communities. Indicators for Urban Services and Quality of Life* (Vegacomp Consulting, 2021). These reports show that interest in projects in all six smart city areas is increasing both in terms of the number of projects and the number of cities involved. Among small cities, the *Smart Living* vertical is dominant, followed by the

Smart Governance vertical (Vegacomp Consulting, 2020). Four priority development directions were highlighted in 2020: *Digitization of Public Institutions* (*Smart Governance*), *Health* (*Smart Living*), *Security* (*Smart Living*), and *Education* (*Smart People*). The 2021 report (Vegacomp Consulting, 2021) noted the expansion of smart-type development at both county and municipal levels. A higher concentration of cities in similar positions is observed in the 2022 report, with the leading positions being taken by the major cities of Romania, followed by the towns included in this study (Vegacomp Consulting, 2022). Thus, three cities are in the fifth position, followed by the five placed in the sixth position, and by the four in the seventh position. The most popular (widespread) smart city solutions identified in Romania include traffic management systems, modern and smart railroad stations, smart street lighting solutions, smart parking, video surveillance, and the provision of public Wi-Fi services.

Building on the framework and research methodology developed in their previous research (Coroș et al., 2023), the authors aim at understanding whether the smart transformation of these small towns also enhances their development into smart tourism destinations. The paper continues with a section dedicated to the literature review, followed by methodology, results and discussions, and conclusions.

12.2 Literature Review

The first decades of the twenty-first century promoted smart development in an increasing number of fields and areas of activity, including tourism. More and more academic studies (Bălășescu et al., 2022; Ye et al., 2021; Gelbman, 2020; Dabeedooal et al., 2019; Jasrotia & Gangotia, 2018; Romão & Neuts, 2017) consider tourism from this perspective. Dabeedooal et al. (2019) analyze smart tourism as a pillar of sustainable development in cities. Tourism is an activity that creates jobs and generates significant income. Poslad (2009) notes that since the beginning of the twenty-first century, the descriptive adjective "smart" has been used increasingly to refer to new technologies designed to facilitate the interaction between human and nonhuman actors in immediate, automatic, and intuitive ways. Research on smart cities focuses mainly on aspects related to sustainability and governance, new technologies, smart energy, transportation, and interactive applications (Rejeb, et al., 2022). Smart tourism is frequently used as a strategic tool not only to improve the competitiveness of global destinations (Qi, 2021) but also to promote sustainable destination development. During the COVID-19 pandemic, smart tourism provided an alternative to support local tourism activities (Ye et al., 2021). Thus, the benefits of smart tourism are mainly associated with three areas economy, environment, and socio-culture. Investments in a destination's infrastructure also enhance the development of smart tourism.

Along with the development and spread of novel tourism trends, such as popularized and customized tourism forms, the old growth model can no longer meet the development requirements of contemporary times. Consequently, it is crucial to

build a tourism information system (Guo & Gu, 2022). An important benefit provided by smart tourism is the fact that it facilitates the development of new approaches for the management of tourist flows and the provision of innovative tourism and hospitality services, of developing creative tourism products (Gelbman, 2020). Furthermore, as Gelbman (2020) emphasizes, sustainability is the key component that links together the concepts of smart city and smart tourism.

In the view of Buhalis et al. (2023), the four concepts "smart cities," "smart tourism," "smart destinations," and "smart hospitality" highlight technology-based management methods that improve destination efficiency while enhancing the travel experience. In fact, the authors manage to prove how disruptive technologies are introduced into the hospitality industry as a whole via smart hospitality. Furthermore, the contribution of smart hospitality is that it capitalizes on the smart amenities and resources of cities, and it enables the development of flexible business ecosystems throughout networks of destinations that involve smart cities and smart tourism. As described in the framework created by Buhalis et al. (2023), the framework of smart hospitality encompasses principles that underpin customer centricity, personalization, individualization, and contextualization; marketing-driven hospitality excellence; the metaverse; and operational agility, asset strategy, personnel management, and supplier collaboration. The co-creation of value for all participants in the hospitality ecosystem, such as ambient intelligence, big data, workflows, and sustainability, is hereby included, forming together the smart hospitality infrastructure. The idea of a smart tourism city is discussed and highlighted by Gretzel and Koo (2021) as an approach to the management of various activities that overlap in urban settings, such as work, arrangement, and mobility.

Various academic papers discuss *smart cities* (Caragliu et al., 2011; Allam & Newman, 2018; Tan & Taeihagh, 2020; Butnariu & Gusul, 2021; Bălășescu et al., 2022; Ibănescu et al., 2022) and *smart destinations*, which aim at increasing administrative efficiency and the overall quality of life (Gretzel, 2015a, b, 2016; Vargas-Sánchez, 2016; Errichiello & Micera, 2017; Jovicic, 2019; Ivan et al., 2020; Baggio et al., 2020; Chung et al., 2021), both residents and tourists being beneficiaries.

Ivars-Baidal et al. (2023) investigate how Spanish cities and destinations integrate the *smart approach* their planning processes and assess its impact upon public administration, governance, and sustainability; this process is described by Gretzel and Koo (2021) as a novel governance model in which *smart cities* and *smart destinations* converge. As described by Lopes and Oliveira (2017), Portuguese smart cities mainly aim at effectively managing their resources and assets and at investing in innovation and creativity to achieve sustainable and inclusive urban development; this is the context of the authors' analysis regarding the possibilities of small- or medium-sized cities to be considered smart, provided that cities and their priorities all differ from one another. However, these cities share some needs and challenges, such as identifying and diminishing water waste, saving on energy consumption-related bills, mobility issues, implementing better waste management strategies, etc. Placing the dimension of human values at the core of smart urban policies, Allam and Newman (2018) propose, as an alternative perspective on the smart city

paradigm, smart cities to depend on the dimensions of culture, metabolism, and governance and to concentrate on urban outcomes rather than technology.

While examining the scenario surrounding the creation/transformation of smart cities in developing nations, Tan and Taeihagh (2020) concluded that the cities of such nations can only create technologically advanced smart cities if they carry out the appropriate and necessary socioeconomic, human, and legal changes. In the same line, Romão and Neuts (2017) point out that different models of tourism dynamics coexist in European regions. In particular, they highlight those European destinations that lag back, where tourism is an important contributor to the economy but does not manage to achieve the realization of the "Millennium Development Goals."

Given that smart destinations develop and implement technologies for supporting and promoting sustainable transportation, providing better water and air quality, etc., it becomes obvious that when it comes to smart cities, environmental issues and sustainability are strongly tied to one another. As pointed out by Ibănescu et al. (2022), integrated and connected smart initiatives still lack in many Central and Eastern European (CEE) states, while cities from these countries tend to be more concerned with short-term solutions for urban problems, rather than with long-term smart development strategies (Ibănescu et al., 2022; Borsekova & Nijkamp, 2018). The lag behind of many CEE cities compared to those from Western European countries is due to the relative novelty of the concept and its adoption and implementation. Furthermore, in the case of cities from post-communist countries, Ibănescu et al. (2022) pointed out the existence of barriers related to financing, understanding, and involvement of interested parties, which contribute to the delayed transition of such cities to smart ones. The same authors also assess the implementation of the smart city concept in Romania, noting an openness of the authorities, especially in the field of smart mobility, materialized particularly through smart applications and online platforms. The study by Ban et al. (2022) analyzes how the city administration started to consider citizens' perceptions as an essential factor to develop and promote the smart and sustainable development of the municipality of Oradea.

Benefiting from European and national support grants, numerous CEE cities have begun over the past decade to develop significant efforts and projects to close the loop. Romania is one such example, with many municipalities that have taken this path, resulting in a full rethinking of their urban strategies. Consequently, especially some of the largest and most developed cities (Bucharest, the capital city, and some regional leaders such as Cluj-Napoca, Alba Iulia, Iași, Brașov, Oradea) have undertaken significant efforts to develop and implement smart urban solutions. Quickly, smaller towns and even rural communities (among which, Ciugud, in Alba County and Luncăvița, from Tulcea County are the most notorious ones) have registered significant and visible smart initiatives. Likewise, smart developments are also adopted at the regional (county) level, with Cluj County being the first smart Romanian territory, and Ilfov County also seems to follow. However, the smart development of Romanian settlements is still difficult to assess, as there is no integrated and unitary database of the already implemented, ongoing, and planned smart initiatives (Ibănescu, et al., 2022).

As of 2022 (Coroș et al., 2023), those public administrations that have invested in attractive and functional websites also focus on smart development. However, the smart orientation is taken seriously by a limited number of local public authorities, while others only superficially tick some related initiatives and activities:

- Brașov and Sibiu County Councils have elaborated county-level mobility, connectivity, pollution, and sustainable development studies and strategies, while 9 counties and 20 municipalities are in their early stages regarding the initiation of mobility and connectivity studies.
- Cluj County Council and three municipalities, Cluj-Napoca, Târgu Mureș, and Timișoara, highlight their IT-based economy on their webpages dedicated to economic activities, business environment, and attracting investors.
- Alba Iula municipality, the only Romanian city to have been awarded for its smart orientation, also had until 2022 the largest number of smart development projects and programs.
- Thirty-one of the 41 Romanian counties and 26 cities of the 41 county-residencies (Bucharest here included) present on their websites strategic plans (some obsolete ones, as they were elaborated in 2014–2015); these strategic plans focus mainly on sustainable development and waste management.
- In terms of e-governance, collected data reveal a relatively better situation, with 26 county councils and 38 city halls that provide at least one type of online service; however, e-clerks are not implemented by any of the county councils, while only five county residencies use virtual assistants (Alba Iulia, Brașov, Bucharest, Cluj-Napoca, and Sibiu).
- When it comes to the development and implementation of applications, 24 (IoS and Android) apps were identified as related to activities and services of county councils, and 59 apps were associated with public services provided by cities; however, no apps were identified in the cases of 20 counties and 16 cities; most of the identified apps (21) are tourism-related ones in the case of counties, and nearly half (25) are related to the cities' tourism activities; these are followed by e-governance-related apps for registering complaints from the citizens or for paying local taxes and by smart mobility and connectivity apps for parking and parking payment and transportation services; in most cases, these apps can be associated with smarter and more advanced destinations.

In spite of the fact that the majority of the urban populations lives in medium-sized cities (Giffinger, et al., 2007), urban research has mainly focused on the world's large metropolitan cities. The European Union (EU), in particular, has made a constant effort to develop smart urban growth strategies for its metropolitan areas (Caragliu et al., 2011). When it comes to small- and medium-sized cities, the main concern is related to the fact that these cities seem to be less prepared in terms of organizational capacity, resources, and critical mass (Giffinger, et al., 2007). Small- and medium-sized cities are dominant in the Mediterranean area. However, when compared to (very) large cities/metropolis, they have proven to lag behind in adopting smart city strategies and in developing smart applications; therefore,

Panagiotopoulou et al. (2019) address exactly these cities. If compared to large cities, small and medium ones prove to have significantly lower capacities as opposed to large cities but are also expected to face far higher risks and challenges in this respect might affect but also do affect the prosperity of European countries (Parkinson et al., 2015). The same researchers identify the decentralization of tasks, skills, and resources together with the distribution of investments and the promotion of high performance as the main triggers of positive effects and societal benefits compared to their concentration of capital.

Bălăşescu et al. (2022) analyze the implementation phase of smart cities in Romania and try to identify both the benefits and the risks and challenges that cities face on their way to becoming smart cities. Boes et al. (2015) point out that in order to solve their complex problems, on their smart path, urban communities turn toward the extensive adoption and use of the Internet and social media (SM), along with the implementation of new technologies such as near-field communication (NFC), augmented reality (AR), virtual reality (VR), cloud computing, or the Internet of Things (IoT). Bearing in mind that smart solutions can contribute to the improvement of the seniors' quality of life by supporting the development of senior-friendly environments in smart cities, Ivan et al. (2020) depicted Baia Sprie, a Romanian former mono-industrial town, as a case study illustration. The study focuses on Romania as it is expected to become one of the European countries facing a significant aging process at the level of its population, due to the intensive brain drain and young labor force migration. The development of smart cities in Romania is very much related to solving mobility and infrastructure problems, to optimizing (electric) energy consumption, to diminishing pollution, and, particularly, CO_2 emissions. In their paper, Butnariu and Gusul (2021) focus on identifying challenges and best practice examples of Romania's public administration institutions linked to the development and implementation of innovative projects.

Bearing in mind the discussions regarding the potential of small- and medium-sized towns of becoming smart cities, the paper further investigates whether such Romanian towns can or not be considered smart destinations and if this statute makes turns them into smart tourism destinations.

12.3 Research Methodology

The current research paper aims at investigating the level of smart transformation of some of Romania's small- and medium-sized urban destinations. Namely, the study covers the following 16 towns: Abrud (Alba County), Aiud (Alba County), Avrig (Sibiu County), Aleșd (Bihor County), Cernavodă (Constanța County), Dej (Cluj County), Făgăraș (Brașov County), Ghimbav (Brașov County), Hârșova (Constanța County), Mediaș (Sibiu County), Moinești (Bacău County), Năvodari (Constanța County), Odorheiu Secuiesc (Harghita County), Sighișoara (Mureș County), Slobozia (Ialomița County), and Turda (Cluj County), which have a population between 20,000 and 50,000 inhabitants (National Institute of Statistics (NIS), 2022),

which are listed by the reports of Vegacomp Consulting (2018–2022), and which are also members of the Romanian Smart City Association (2016–2023).

For the selected towns, three research questions (RQ) were formulated based on some of the hypotheses employed in the previous related study (Coroș et al., 2023); some more research questions were added:

RQ_1 Well established small tourism destinations have a higher interest towards smart transformation.
RQ_3 Strategic thinking and planning at destination level are professionalized in the case of small performing tourism destinations.
RQ_3 Small towns' smart transformation is enhanced by smart county councils.
RQ_4 Small towns' smart transformation is enhanced by smart county residencies.

The authors employ the previously elaborated analysis matrix for data collection and analysis from the official websites of the 16 selected towns, aiming at gathering varied, relevant, and useful information relative to the online presence of the selected public authorities and to assess their orientation toward smart development and their tourism-related strategies. The analysis considers small and medium towns, in the context of their counties they belong to and of the county residencies that may be considered trend-setters.

To assess the destinations' tourism-related performance, statistical data for the 2001–2022 timeframe were gathered and analyzed from the *Tempo Online* database of the National Institute of Statistics (2023). The choice of analyzing the entire timeframe is supported by several reasons. First, data at locality level are only available since 2001. Second, the end of the economic transition years must be discussed, followed by the integration of Romania into the EU. Third, the positive impact of the EU adhesion and the contribution of the European grants is another significant influence factor both in terms of economic development, tourism activity, and smart transformation. Another reason to zoom only into the last few years is related to the fact that most of Romania's destinations are still in incipient stages of (urban) smart orientation and transformation.

The matrix-based online data collection process was realized throughout March 2023 based on the administrative-territorial units' (ATU) websites focused on identifying items such as:

- Assessing the overall online presence and smart orientation of the ATU.
- The implementation and use of SM.
- The existence and extent of development of a dedicated investors' webpage, respectively, of a page dedicated to each destination's economic and business environment.
- The existence, formulation, and implementation of various strategies at destination level, respectively, of strategies dedicated to sustainable development; waste management; commuting, mobility, and connectivity; destination identity and branding; and destination management.

- The development of e-governance: the development and use of apps and/or QR codes; the number and nature of online provided public services (e-citizens, online services, e-clerk, e-destination, etc.)
- The assessment of tourism development-related policies and strategies, the existence and use of tourism information centers, the promotion of tourism resources; (via the ATUs' websites or on independent tourism dedicated websites develop at destination level).
- The assessment of the destinations' international orientation (measured through the number of implemented foreign languages on the ATUs' websites).

12.4 Results and Discussions

From an administrative point of view, the selected 16 towns are included in ten counties. Thus, Constanța is the leading county, with three towns (Cernavodă, Hârșova, and Năvodari); followed by four counties that each feature two towns, Alba (Abrud and Aiud), Brașov (Făgăraș and Ghimbav), Cluj (Dej and Turda), and Sibiu (Avrig and Mediaș); and by five counties that each feature one town: Bacău (Moinești), Bihor (Aleșd), Harghita (Odorheiu Secuiesc), Ialomița (Slobozia—also the county residency city), and Mureș (Sighișoara—Romania's single urban UNESCO World Heritage Site). Appendix, Table 12.1 presents a synthesis of the 16 town's tourism resources. The ten counties concentrate 81 (40.3.1%) of the 201 Romanian tourism resorts. More exactly, they host:

- 23 (42.6%) out of the 54 tourism resorts of national interest/importance (Bacău: Slănic-Moldova and Târgu Ocna; Bihor: Băile Felix and Oradea municipality; Brașov: Poiana Brașov, Predeal, and Râșnov; Constanța: Cap Aurora, Costinești, Eforie Nord, Eforie Sud, Jupiter, Mamaia, Mangalia, Neptun-Olimp, Saturn, Techirghiol, Venus, and the Mamaia Nord area—Năvodari town; Harghita: Băile Tușnad and Borsec; Ialomița: Amara; and Mureș: Sovata).
- 42 (34.4%) out of 122 tourism resorts of local interest/importance (Alba: Albac, Arieșeni, Șugag, and Vidra; Bacău: Dărmănești; Bihor: 1 Mai, Beiuș, Mădăraș, Salonta, Săcueni, Stâna de Vale, Ștei, Tinca, and Vadu Crișului; Brașov: Bran, Moieciu, Pârâul Rece, Săcele, Timișu de Sus, and Vama Buzăului; Cluj: Băile Turda, Băile Băița, Beliș, Jucu, Măguri-Răcătău, Mărgău, and Săcuieu; Harghita: Băile Homorod, Ciumani, Corund, Harghita-Băi, Izvoru Mureșului, Lacu Roșu, Praid, and Zetea; Mureș: Deda and Sângeorgiu de Mureș; and Sibiu: Bazna, Cârțișoara, Cisnădie, Ocna Sibiului, and Păltiniș), respectively.
- 16 (64%) out of the 25 most recently designated tourism areas (Alba: Cugir-Șureanu tourism area of Cugir town; Bacău: Moinești Băi tourism area of Moinești municipality; Bihor: tourism area of Borș commune, tourism area of Marghita town, tourism area of Brațca commune, Budureasa-Padiș tourism area of Budureasa commune, tourism area of Pietroasa commune, and the tourism area of Șuncuiuș commune; Brașov: tourism area of Făgăraș municipality; Cluj:

Băile Ocna tourism area of Dej municipality, Fântânele tourism area, Muntele Băișorii tourism area, and Valea Drăganului tourism area of Poieni commune; and Harghita: Băile Banffy tourism area of Toplița municipality and the tourism area of Lupeni commune (Minsterul Economiei, Antreprenoriatului și Turismului (MEAT), 2023). These destinations also benefit from the presence of highly valuable cultural and natural tourism resources, including UNESCO WHSs. Six of the selected towns and county residencies are also listed as tourism resorts of national or local interest/importance.

12.4.1 Selected Destinations' Tourism Activity

The following three charts (Figs. 12.1, 12.2, and 12.3) synthesize the selected destinations' tourism activity. Thus, while in the destinations that are well-established tourism destinations (Constanța County, with its sea resorts, Brașov County), the most important mountain destination of Romania, Sibiu County, another key mountain destination and also a highly attractive rural destination, Bihor and Mureș Counties, two spa destinations, both the counties and the county residencies perform well, being trend-setters (Fig. 12.1). Like Constanța, Brașov is on an ascending trend. Furthermore, the already recognized smart county-residencies (Brașov, Cluj-Napoca, Oradea, Târgu Mureș, and Alba Iulia) are all on a growth trend in terms of tourist arrivals. Most of the small towns only register very low tourist arrivals. However, from among the small towns, Năvodari (growing seaside destinations) and Sighișoara (UNESCO WHS) perform best in terms of tourist arrivals; these towns are followed by Mediaș, Turda, and Avrig (Fig. 12.1).

Regarding the average length of stay, an indicator that is directly linked to the destination's capacity to retain its visitors, most destinations face decreases. The seaside and spa destinations have registered significant diminishments, meaning that their supply is not diversified enough and that the tourists prefer short breaks. The average length of stay is low in most cases, and both counties and county residencies seem not to reverse the decreasing trend. Still, some of the small towns register slightly increasing trends (Avrig, Mediaș, Ghimbav, Turda, Odorheiu Secuiesc, and Sighișoara), which might be associated with some initiatives of the local authorities to promote tourism and to develop their destination (Fig. 12.2).

Obviously, due to the decrease in the tourists' sojourns, the net usage index of the available capacity is also affected. In the case of this indicator, due to the low number of arrivals as well, small towns perform worse than their counties the county residencies. Furthermore, these low values are also due to the development of small (authorized or not) private lodging spaces. From among small towns, Turda appears to be a destinations that begins to capitalize on its available resources (the salt mine,

Turzii Gorges, and the access point to Valea Arieșului). Hargita County and its destinations reveal an overall steady development of tourism.

12.4.2 Online Presence, Communication, and Promotion of Tourism

At county level, public administration institutions prove to be low adopters of international communication, as only half of them use foreign languages (Bihor, Cluj, Harghita, and Mureș); English and Hungarian are the two languages that are used. Foreign languages are used for tourism promotion by Bihor (only Hungarian), Brașov (only English), Cluj (all available languages via Google Translate), Harghita (Hungarian and English), and Sibiu (English and German).

The analysis of the destinations' online presence revealed that none of the 16 small towns has a tourism destination brand strategy, while two counties have one (Brașov and Harghita), and four county residencies also have a clear view regarding the identity they desire to promote (Alba Iulia, Brașov, Cluj-Napoca, and Oradea). As previously found, these are also the cities that are, in fact, recognized as smart cities.

Bearing in mind that a relatively small number of counties, the researched cities and small towns hereby included, are endowed with numerous, diverse, and valuable resources, one of the aspects investigated by the researchers addressed the quality of tourism promotion. Thus, overall, 40 tourism information centers (TIC) have been identified in the area. Most of them are operated by county-level ATUs, such as County Councils. However, only very few of the towns have a TIC (Dej, Făgăraș, Sighișoara, and Slobozia). To these, three local TICs can be added (Avrig, old/not updated; Tour Info Odorheiu Secuiesc; and TurdaTurism.ro, Descoperă Valea Arieșului!), meaning that more than half of the towns have not developed any structures for the promotion of their tourism resources. To a limited extent, town halls manage to cover this gap, with 12 of the 16 towns featuring a tourism dedicated page on the websites of the town halls. None of the following small towns present their resources and promote tourism in the area: Abrud, Ghimbav, Mediaș, and Slobozia. At the same time, only seven county residencies have developed tourism pages on their websites, with Brașov having two pages, while Bacău, Slobozia, and Târgu Mureș do not present their destination's tourism resources on their websites. Except for Ialomița county, all other counties present their tourism resources on dedicated pages on their own websites. It is difficult to understand why two counties that enjoy the presence of tourism attractions of great importance (Mureș county and Ialomița county) do not make any efforts to promote their heritage. If in the case of Mureș county, things might be compensated by the organized tours in the three Hungarian counties (Covasna, Harghita, and Mureș) and by the arrivals in Sighișoara (see data in Figs. 12.1, 12.2, and 12.3, above), and in resorts like Sovata

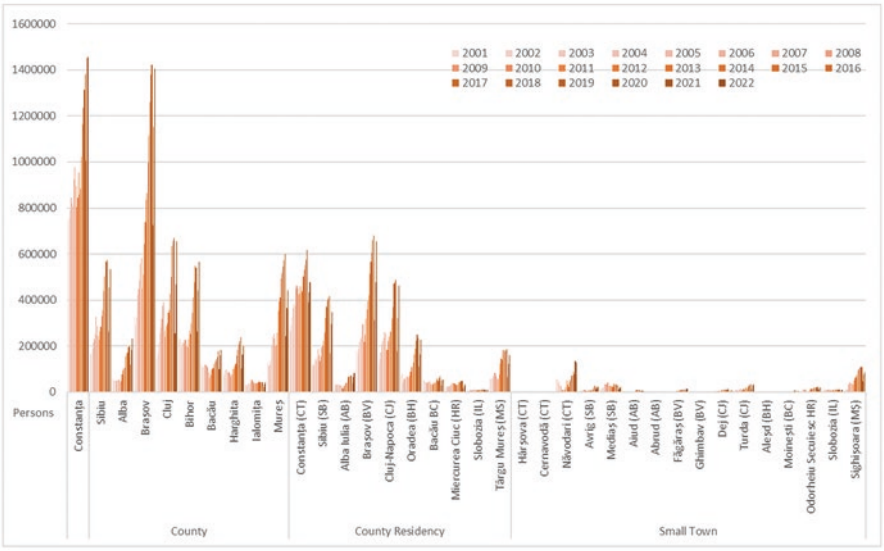

Fig. 12.1 Tourist arrivals (persons) in the 10 counties, 10 county residencies, and 16 small towns. (Source: Authors' processing based on NIS Data (2023))

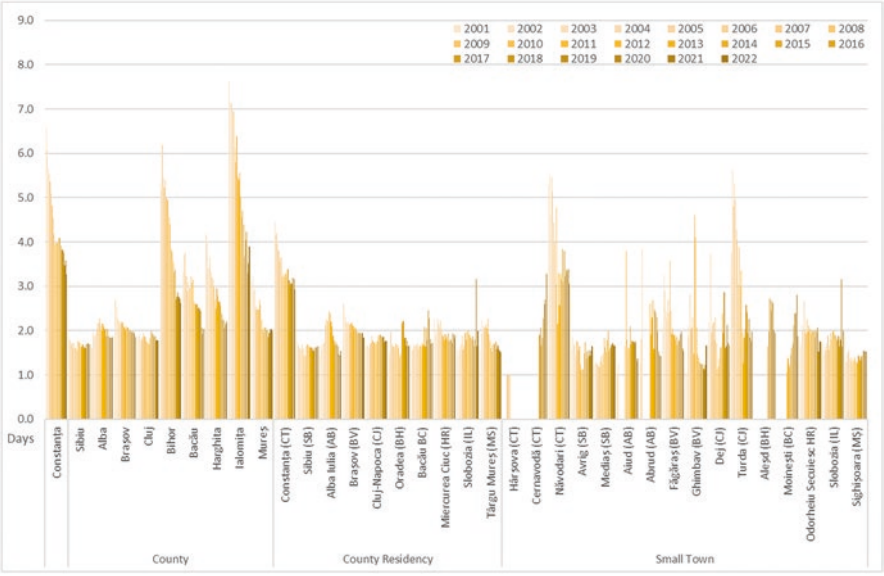

Fig. 12.2 Average length of stay (days) at county-level, county residency-level, and in small towns. (Source: Authors' processing based on NIS Data (2023))

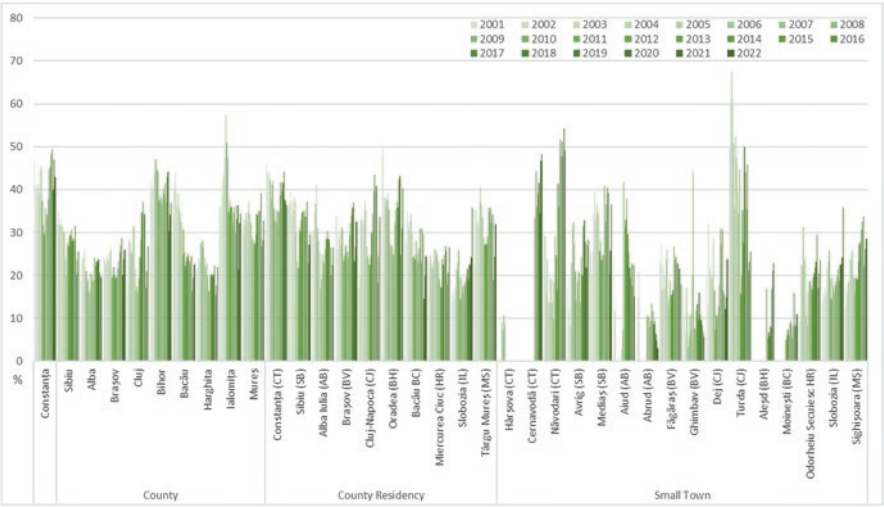

Fig. 12.3 The net usage index of the available lodging capacity (percentage). (Source: Authors' processing based on NIS Data (2023))

in the case of Ialomița county, tourism indicators reveal an overall poor performance of the destination.

For most small towns, the use of social media for tourism promotion mainly relies on Facebook pages, which are not updated in some cases. However, Abrud, Aleșd, Dej, Moinești, and Slobozia do not even have such pages for the townhalls. Furthermore, Facebook is not used for tourism promotion either in the case of two small towns (Abrud and Slobozia). Surprisingly, the only one urban UNESCO WHS, Sighișoara, has a very poor digital presence for the advertising of its heritage (a Facebook page and a YouTube channel). Instagram is used only by Aiud and Moinești, while other destinations opt to have accounts on Twitter, Google+, and Pinterest. Quite peculiar is the decision of the authorities in Abrud not to capitalize on the great potential of the most recent UNESCO rural WHS, Roșia Montană, which is only 14 km away from the town.

12.4.3 Selected Destinations' Assessment of Smart Features

Although two counties (Brașov and Sibiu) and half of the analyzed county residencies (Alba Iulia, Brașov, Cluj-Napoca, Sibiu, and Târgu Mureș) seem to be trendsetters, featuring a smart orientation, except for Aiud, none of the other small towns present such features.

Except for six authorities' websites (Abrud, Aiud, Aleșd, Dej, Moinești, and Slobozia), most of the small destinations' digitization efforts of are oriented toward facilitating the online access of persons with disabilities. While the overall

evaluation of the county councils' websites revealed a relatively good functionality in terms of easiness to use and organization of information (with an average of 1.5 points on a scale from 0 to 2) and a somewhat lower attractiveness for the end user (1.3 points, on the same scale), the small destinations town halls' websites prove to be less functional (1.2 points), and less attractive (1.1 points). Furthermore, none of these destinations have an IT-based economy.

12.4.4 Smart Transformation: Smart Local Public Administrations and Smart Destinations

Odorheiu Secuiesc from Harghita county is an outstanding example, as it presents three different websites to promote its tourism resources (Tour Info Odorheiu Secuiesc, TourInfo.ro, and Centrul de Informare Turistică Odorheiu Secuiesc–Valea Nirajului). Furthermore, Odorheiu Secuiesc also provides an application that enables tourists to use an audio guide; it has also developed a virtual tour of the city, while Harghita County Council provides a similar one for the county. Alba Iulia is the only county residency that also provides a virtual tour. At the other end, only eight small towns present their resources online, and most of them opt for a simple listing of natural and cultural resources, which are not necessarily on their premises (Avrig, Cernavodă, Făgăraș, Hârșova, Moinești, Năvodari, Odorheiu Secuiesc, and Sighișoara); Turda features a very nice and attractive presentation of the city's and Arieș Valley attractions, suggesting many circuit options for the latter. The QR codes and audio guides developed and implemented for tourism-related activities in Odorheiu Secuiesc are consistent with the orientation toward smart transformation of this destination's public authorities and also with a clear market segmentation and orientation. Only for a number of seven out of the 16 destinations apps were identified; not all are designed for the use of tourists, too (Aiud: Aiud City App and Aiud City Alert; Avrig: Avrig City App; Făgăraș: Primăria Municipiului Făgăraș and Brașov Tourism App; Dej: Dej Transport; Odorheiu Secuiesc: Travel2U—audio guide exclusively developed for tourism activities; Sighișoara: Sighișoara City App; MobilePay Sighișoara; and Turda: Visit Turda and Salina Turda App).

In terms of smart orientation, the research findings indicate only few examples of small towns that address the key elements of smart cities. Thus, only Aiud and Ghimbav feature an investors' page on their websites. Moreover, Aiud, Dej, Mediaș, Năvodari, Sighișoara, and Turda are the only small towns that address mobility problems; of course, these all of these towns are important transit areas, so they truly need to identify solutions to keep heavy traffic outside their areas. Turda is the first Romanian city that has managed to implement 100% electric public transportation services.

None of these towns have a digital clerk, but except for Avrig (which has none) and Abrud (which has implemented Ghiseul.ro), all the other small towns provide a certain number of digitalized public services (tax payments, requests, reservations

and schedules, forms, documentation issuing, complaints, etc.). Strategic planning is a key and compulsory activity for all public authorities. Despite this, some town halls do not seem to have yet understood this. Thus, Abrud and Făgăraș only feature old development strategies for 2014–2020, while Moinești and Slobozia do not provide any information regarding their destination strategies. Ghimbav has an anticorruption and a sustainable development strategy, but Cernavodă only has an anticorruption strategy. Avrig has developed only an urban development strategy 2021–2030, building up on the previous one, for 2015–2020. Năvodari also addresses urban sustainable development. Hârșova has developed some strategies as well (public health and social services strategy 2023–2033; local development strategy; anticorruption strategy; strategy for the development of social services 2018–2023). Invisible from a tourism point of view of Hârșova has formulated a trans-border *Hârșova-Dobrichka Strategy for Tourism Heritage Valorization* plan.

Aiud proves a high preoccupation in this respect, having developed many strategy-related documents (anticorruption strategy; long-lasting development and environmental strategy 2022, following the development strategy for 2014–2020; urban mobility strategy 2017; an urban planning and development strategy is in progress; smart city strategy 2021–2027; sustainable health and social services' strategy 2021–2025; a functional urban zone strategy 2021–2027, which also discusses tourism in Aiud). In the case of Aiud, a closer look at its strategies highlights the destination's smart economy (seen as enhancing entrepreneurial initiatives, increasing productivity and complementarity, developing attractive and interconnected tourism; flexible and employed labor force).

Likewise, Dej shares more information (a sustainable urban mobility plan 2021–2027, an integrated urban development strategy 2021–2027, an institutional strategic plan 2022–2025, an old development strategy 2014–2020, and an old sustainable urban mobility plan 2014–2020). Moreover, Dej has accessed EU Funds for a project entitled *Steps Towards Dej Smart City* aiming at public administration development (digitization, mobility, infrastructure, social services, energy saving, etc.). Sighișoara features an urban development plan and a mobility strategy but does not approach tourism at all. Mediaș has also developed various strategic plans (a strategy for urban development 2021–2027, following older versions of 2014–2020, and 2008–2015; a local development strategy for marginalized communities; a transit traffic study; an urban sustainable mobility plan; an energetic efficiency plan).

To increase the relevance of the research and to compensate its limitations, further analyses are going to be undertaken based on the same research framework, including on one hand the developing smart villages and on the other hand extending the research to all towns and cities included in the Romanian Association for Smart Cities. The analysis is going to be undertaken again, by collecting data from the official ATUs' websites. For higher relevance, the study will be carried out again over the next 4–5 years in order to better observe the smart developments at county, city/town, and village levels.

12.5 Conclusions

In Romania, the urban network relies on a large number of small- and medium-sized cities; therefore, it is very important to pay due attention to those elements that define a smart city. At the same time, in the case of small cities, the housing and governance components hold the main directions for the implementation of smart components. When it comes to small towns, the smart orientation contributes to their revitalization, to reducing the gaps in the quality of life of the inhabitants of these towns, but also to the sustainable exploitation of the existing tourism potential. Consequently, the tourist component benefits from an integration in the national communication system through different platforms, which will make them as visible as possible on the tourist map. As small towns are in a continuous process of depopulation in general, the implementation of smart solutions has the potential of motivating the population to carry out economic activities that lead to the well-being of the community and to the better valorization of the existing tourism potential. Capitalizing on the tourist potential held by these cities can be an important resource for the local and national economy while preserving it for the future.

This article aims to fill a gap in the research related to smart cities, because large cities are mainly addressed while the small ones are less discussed, on the grounds that their activity is less representative for the economy, but their number being large, they are eventually important. Also, the tourist potential does not consider the size of the settlement, if nature or history contributed to its existence; thus, even small towns deserve to properly capitalize on their resources.

As anticipated, well-established, and popular tourism destinations (counties and county residencies, respectively, small towns, too) perform better in terms of tourism and seem to have undertaken more steps on the smart development road.

Thus, the first research question can be confirmed: *RQ_1 Well-established small tourism destinations have a higher interest toward smart transformation*. This is valid also due to the fact that the development of tourism and hospitality services generates more financial resources, which can support destinations to improve their quality of life and to turn toward smart and sustainable development. On the long run, tourism has the potential to enhance destination orientation in this respect exactly due to the smart and sustainable orientation of the tourists.

The second research question also seems to be valid: *RQ_2 Strategic thinking and planning at destination level are professionalized in the case of small performing tourism destinations*. This is particularly the case of Aiud and Turda.

At this stage, based on the collected data, the third research question (*RQ_3 Small towns' smart transformation is enhanced by smart county councils.*) and the fourth one (*RQ_4 Small towns' smart transformation is enhanced by smart county residencies.*) cannot be confirmed, as the number of observations is too low in order to be able to process valid statistical correlations.

Appendix

Table 12.1 Tourism resources of the selected destinations

County	Town	Natural resources and natural reservations	Historic heritage (Neolithic, Roman, Feudal)	Fortresses, fortifications, castles, and palaces	Churches, mosques, and synagogues	Museums, memorial houses, and monuments, culture	Resorts and leisure facilities, other
Alba	Abrud	Roman mines	Roman heritage	Roman fortifications	Monastery, church	Museum, funeral monument, narrow gauge train	
	Aiud		Feudal	Fortress	Monastery, cathedral, church	Museum; monuments	Wineries
Bacău	Moinești	Mineral water springs; Tarnița lake (Berzunț Mountains)	Dacian, Cucuteni culture	Dacian fortresses	Churches, Jewish cemetery	Museum, monuments	Resort of local interest/health center and treatment base
Bihor	Aleșd	Mesosoic fossils, caves	Feudal	Fortress, castrum	Church, monastery		Thermal water baths
Brașov	Făgăraș		Feudal	Fortress-castle	Church	Museum, memorial house, monuments	
	Ghimbav		Feudal	Peasant fortress	Church	Eighteenth century houses	
Cluj	Turda	Salt mine, Turzii, Tureni, & Borzești gorges	Dacian and Roman heritage	Castrum, medieval fortification, palace	Church	Museum, monuments	Salty baths
	Dej	Salt mine Ocna Dej	The bronze age		Church, Franciscan monastery, synagogue	Museum, monuments	Seasonal resort of local interest/salty baths

(continued)

Table 12.1 (continued)

County	Town	Natural resources and natural reservations	Historic heritage (Neolithic, Roman, Feudal)	Fortresses, fortifications, castles, and palaces	Churches, mosques, and synagogues	Museums, memorial houses, and monuments, culture	Resorts and leisure facilities, other
Constanța	Hârșova	Thermal water springs; the canaries from Hârșova	Neolithic; Hamangia, Boian, and Gumelnița cultures; tell antique settlement	Castrum, limes, fortresses	Church, mosque	Museum, monuments	Thermal baths
	Cernavodă	Roman mines	Eneolithic, Hamangia culture	Fortress	Fourth century basilica, mosque	Museum, the thinker, Angehl Sagliny bridge	Wineries, leisure sailing trips on the Danube - Black Sea channel
	Năvodari		Eneolithic				Summer seasonal spa resort
Harghita	Odorheiu Secuiesc	Mineral water springs, pits	Roman	Castrum, fortress, feudal castle	Church	Museum, memorial house	Seasonal resort of local interest
Ialomița	Slobozia		Neolithic, Boian culture		Monastery, church, and cathedral	Museum, monuments, cultural center	Tourism halting place
Mureș	Sighișoara	Breite reservation	The bronze age	Medieval fortress	Church	Museums, memorial houses, and medieval festival	
Sibiu	Avrig		Neolithic, Roman	Fortress, palace	Church	Museum, monuments	Health resort, lodge/chalet
	Mediaș		Neolithic	Roman castrum, defence wall	Church	Museum, memorial house	

Source: Authors' own processing based on the National Institute of Statistics (NIS) (2022), Vegacomp Consulting reports (2018–2022), Romanian Smart City Association (2016–2023), Bonifaciu (coord.) (1983), and Cucu and Ștefan (1979)

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