

USING GIS TECHNIQUES AND GEOTAGGING TO ASSESS TOURISM DENSITY AND ATTRACTIVENESS IN THE CITY OF IASI, ROMANIA

Alexandra Cehan¹, Mihai Bulai^{2*}, Lucian Roşu³

¹ MSc, Department of Geography, Faculty of Geography and Geology, Alexandru Ioan Cuza University of Iaşi, ROMANIA, alexandracehan@gmail.com

² PhD. Lecturer, Department of Geography, Faculty of Geography and Geology, Alexandru Ioan Cuza University of Iaşi, ROMANIA, mihaiibulai@yahoo.com

³ PhD., Department of Geography, Faculty of Geography and Geology, Alexandru Ioan Cuza University of Iaşi, ROMANIA, luci_r2003@yahoo.com

*Corresponding author

Abstract

This paper uses GIS techniques to spatially define tourism areas in a post-socialist city and consequently identify the different levels of tourism density. Starting from the idea that the main factors defining tourism phenomena are attractions, accommodation and catering services, this paper analyses the way in which these components interact spatially. Accessibility, which plays a significant role in determining spatial attractiveness has been added and calculated as the distance to points of interests and service locations from the road junctions. The analysis of aspects of density and proximity related to the points of interest provides a cartographic image of tourism areas. The use of ascendant hierarchical classification method has revealed a typology of tourism space, being seen as the interaction between attractions and services. The application of the method on the case study – the city of Iaşi, Romania, has provided the distribution of different levels of tourism attractiveness in the analysed territory from multiple points of view and as well an image of the spatial distribution and particular characteristics of each area within the city. The tourism pattern of eastern European city is strongly related to the core-periphery model, as almost the entire tourism industry is clustered in the city centre. The typology of the analysed space within the city centre of the case study reveals high concentration of attractiveness along main pedestrian streets (a linear spatial distribution) with a middle core highly dense in attractions, but deprived of tourism services. This deprivation, together with a long-term restoration of many central attractions indicates a low consumption of the core areas, indicating certain transit behaviour of the tourists flows. The results emphasize a certain diversification of the tourism space, this kind of results, obtained for different territorial units, being useful as a tool for local stakeholders and decision makers in urban tourism planning, but also for tourists that strive to maximize their experience.

Keywords: Urban Tourism, GIS tools, tourism density, tourism attractiveness, tourism areas, geo-tags

1 INTRODUCTION

The research upon urban tourism has emerged since the late 90s (Pearce, 2001), constantly developing new methods and innovative tools which take into consideration tourism phenomenon and characteristics of urban space. This increase of specific literature reflects both the growth of urban tourism demand (Xu & Tian, 2006) and the need of a better understanding of the relation between tourism urban space and the needs of tourists (Mason, 2015). The relation between the needs of the tourists and the supply of the city determines the urban attractiveness (Girardin, Vaccari, Gerber, Biderman, & Ratti, 2009). A definition of urban attractiveness, according to Karski (1990) is the "rich variety of things to see and do in a reasonable compact, interesting, and attractive environment, rather than in any other component."

Measuring the attractiveness of an urban space, from a tourism point of view, is a multifaceted concept, being tackled by objective (Cehan & Tudora, 2015; Li, Fang, Huang, & Goh, 2015), subjective (Philipp, 1993) or integrative approaches (Bridaa, Meleddub, & Pulinac, 2012), showing its importance for both scholars and policy makers dealing with urban tourism planning. The use of GIS for determining spatial tourism patterns in order to understand tourists' behaviour, is nowadays, a usual approach for researchers dealing with urban attractiveness, empowering all actors to explore the geographical dimension of data (Bahaire & Elliott-White, 1999). The use of social media is an emerging part of this type of research, more and more article basing their theories on data obtained from social media platforms (Sigala, Christou, & Gretzel, 2012), instead of large and expensive surveys (Wood, Guerry, Silver, & Lacayo, 2013).

Moreover, most of the papers concerning urban tourism and its associated outcomes are focusing on most important destinations (Russo & van der Borg, 2002), some of the top destination cities being extensively researched (Claveria & Poluzzi, 2016). These reflections on urban tourism attractiveness mainly originate from western societies where the tourism phenomena is highly researched due to availability of data and the demands of urban planners dealing with tourism (Miralles & García-Ayllón, 2015). It is not the case of the post-communist cities which are facing a shorter experience in this field study, as the centralized economy put some barriers between tourists and the urban space to be explored (Coles, 2003; Light, 2001; Rosu, 2015; Tsenkova, 2006). The recent economic and political shifts changed the direction of the tourist flows, more international tourists showing a high interest in exploring the cities from the post-socialist countries (Hall, 1999). The constant growth of the tourist flows in these cities demands a special attention for analysing the spatial patterns of the intersection between their needs and the offer of the urban space. In this manner, the paper concentrates on the foundation of the urban tourism existence, basing its methodological framework on the associated activities and places that occur in the urban tourist places and the physical setting (G. J. Ashworth, 1992).

Therefore, this paper aims to explore the spatial distribution of tourism attractiveness in a post-socialist city (Iași Municipality, Romania) through a GIS-based approach, taking into consideration the main components of the tourism supply: tourist attractions, accommodation units and catering services.

The study bases its framework on three main objectives which follow the structure of this paper: (1) collecting the relevant spatial data according to social media qualitative ratings in terms of points of interest (tourism heritage), accommodation and catering services; (2) computing the spatial analysis inside the urban area for the relevant spatial data; (3) highlighting the patterns of urban space dictated by the tourism supply, represented both by points of interest and infrastructure.

2 THEORETICAL BACKGROUND

No matter how current the use of "urban tourism" concept is nowadays, a clear and unanimously accepted definition of it does not yet exist. There are, of course, definitions and approaches which try to give a general idea of the subject and two main meanings of the concept are generally accepted. First, one can speak of urban tourism as referring to the activity of tourists within a city, implying their movements, actions and experiences there. On the other hand, there is the perception on urban tourism as representing the totality of tourism resources that a city provides for its visitors, including attractions, services or events connected directly to the urban environment (Gârbea, 2013).

The difficulty in studying the concept of "urban tourism" comes especially from the characteristics of the territory where it develops. The urban space is defined by complexity and multi-functionality and, therefore, it is impossible to "admit of a readily identifiable, spatially clustered tourism industry" in a city. (G. Ashworth & Page, 2011). The researchers go even further in stating that there is hardly possible of talking of "tourist urban area" and, even less of "tourist city" since "nowhere is tourism an exclusive use and nowhere is it actually or potentially excluded" (Ashworth, 2012). It is through these facts that a conclusion is reached, also

by Ashworth (2011), acknowledging that although cities can be of a great importance for tourism, the tourism is not essential for the development of cities, because no matter how significant the share of tourism in the economy of the city is, there will always be other important functionalities that will define the city first.

The fact that more and more tourists are attracted to cities cannot be denied anyway and although there cannot be identified a space that is entirely destined to tourists, areas that are more prone to tourism activities can be easily delimited due to certain buildings, services and activities that are by definition tourist oriented or at least, that are in the area of interest of both tourists and locals. Not few have been the studies that, with the purpose of providing results useful for the urban planning have been centred on “classifications of the variety of tourism products of cities into core elements, supporting elements, etc.” or on identifying “patterns of spatial clustering of urban tourism activities” (Gospodini, 2001).

It is essential in evaluating and analysing the urban space from the perspective of tourism phenomenon to precisely identify the elements that constitute the urban attractiveness. This precision is anyway questionable, because when it comes to the urban facilities and services, “almost none of these have been created or are managed specifically or exclusively for tourists” (Ashworth, 2012). It can be admitted anyway that the core of the tourism activity are the tourist attractions, but even these, in their majority, have not been meant from the start for tourism purposes, the influence of history upon them being the factor which transformed them into tourist attractions.

The elements that are considered the base of the tourism phenomenon have been over time reunited under various names and concepts, in many cases with only slight differences between their meanings. Therefore, although “tourism resources”, “tourism potential”, “tourism attractiveness” or “tourism supply” differ both in name and in their meaning, they have in common the fact that they are used for designating, in various contexts, what a place has to offer to its potential tourists (Iatu & Bulai, 2011).

The constituent elements of tourism potential are in most of the cases grouped in three main categories: tourism resources (natural, anthropogenic), material base of tourism (services, infrastructures) and social-economical context (general infrastructures and services) (Bulai & Iatu, 2013). Based on the context and on the area of study, these elements within the categories vary.

The methods through which these components of tourism have been studied during time are highly diverse. The Geographic Information Systems are nowadays among the essential tools in the present studies of many varied fields, the researchers becoming more and more aware of their applicability in tourism planning and development (Bahaire & Elliott-White, 1999). The simple action of geo-locating an element of interest through the information systems enriched immensely the possibilities of study and of analysis nowadays, the processing of the geo-locations through appropriate data being a central element in studies that imply space and spatial distribution analysis. Tourism takes advantage of these technological progress, during time matters concerning travel costs, tourists' perception and tourist flows or territory management being tackled with the help of GIS (Bahaire & Elliott-White, 1999).

Moreover, the modern times offer other methods and data through which the tourism phenomenon can be analysed. The increasing use of Social Media nowadays transforms them into valuable sources of information about tourists' preferences when it comes both to location and to services. Although seen as subjective data, the impact Social Media have on tourists' choices when planning their holidays, based on the reviews and ratings, indicate these data as having a considerable potential of being used in tourism planning activities (Floris & Campagna, 2014). The concept of “geo-tagging” is connected to Social Media, and refers to the process of assigning a picture or varied information to a location or simply acknowledging the rest of the users upon the place where you are at a certain moment. This proves to be an efficient method of creating a consistent database that seems to grow by itself, due to users of Social Media from all over the world.

3 MATERIALS AND METHODS

3.1 Study Area

The current paper focuses its methodology on the interaction between different components of tourism supply on the extent of Iași city. The fourth biggest city of Romania is located in the Eastern region of European Union and is to be considered a typical post-socialist city, being constantly shaped by hallmarks induced by the policy makers of the last fifty years (Roșu & Blăgeanu, 2015). The city of Iași, due to its long history, benefits from a diverse tourism potential, under the form of a variety of tourist attractions, but also under the form of tourism infrastructure (Gârbea, 2013). Although, as stated before, there is hardly possible of speaking of exclusive tourist space in a city, and Iași makes no exception from the rule (Roșu, 2015),

there are areas in Iasi where the tourism activity is more significant than in others. As in most of the cities, the tourism activity is mainly concentrated in the centre, recognized as the oldest area of the city (Stoleriu, 2008) and, implicitly, the one with the largest and most varied profile when it comes to buildings and also functionalities (Roşu, 2015). The city of Iasi, as most of Eastern European second tier cities (Parkinson et al., 2012), faces a transition period converging towards the western model and from this point of view, analysing the tourism phenomena is challenging.

3.2 Data collection

In order to evaluate the spatial distribution of the three main components of the tourism phenomenon, we used a series of variables referring to attractions, accommodation and catering services.

The necessary data for the creation of these variables were collected from various sources, depending on their characteristics. All the points of interest from Iasi, perceived as capable of attracting tourists through their history, function or aspect, were taken into consideration as tourist attractions. These are first of all represented by a large number of historical monuments of national interest from the official List of Historical Monuments, elaborated and permanently updated by the Ministry of Culture and National Patrimony. Moreover, all the museums, public gardens, archaeological sites and some of the historical monuments of local interest have been added to the preliminary list (a total of 107 tourist attractions). In order to create the final list, the use of well-known social media sources (tripadvisor.com and travel.michelin.com) helped in giving an image of the best known and most promoted attractions when it comes to the city of Iasi.

The main source of information for the data concerning the accommodation was *booking.com*, which provided details for a number of 81 accommodation units in Iasi. Besides the exact location, an image of the customers' preferences and therefore, a subjective perception upon the quality of these units was obtained through the ratings for the hotels and any other unit with a bed & breakfast profile.

Furthermore, Social Media was also the instrument through which data about the catering services were obtained. The selection of the 212 units meant for catering services in Iasi depended on their presence on TripAdvisor.com, presence that implied the exclusion of units that are only of local interest and attended only by the inhabitants of the neighbourhood where they are located.

In order to proceed to the data analysis in GIS Software, all the data above mentioned needed to be localized, with the exception of the points of interest taken directly from Open Street Map database.

3.3 Spatial analysis

The purpose of spatially analysing the above mentioned data was fulfilled through ArcMap 10.2. Two actions were developed in relation with all the points of road intersection in Iasi, depending on the data analysed. We calculated either the average distance from every point of intersection towards certain points of interest - to emphasize matters of proximity or the number of the points of interest - to appreciate the different values of density. In order to do this, Network Analysis, through Closest Facility, was used in every case.

The points of road intersection were seen as a reference location due to the flexibility that an intersection gives to a potential tourist. We considered, therefore, that calculating the values of all the variables for these points will efficiently give an idea of the tourist attractiveness degree along the main axes of circulation within the city.

A hexagonal grid was used, created through Create Hexagonal Tessellation tool ("Internet 1", 2016), in order to better cover the urban space in the attempt of illustrating its tourism attractiveness and the way in which it varies from one area to another. To every 500 square metres cell of the grid was assigned the average value for all the points of road intersection that fall within the cell.

ArcMap 10.2 also provided the method of hierarchical classification through which all the variables were correlated. Therefore, we used Grouping Analysis through which we aimed at identifying the different categories of tourism space within the city by taking into consideration seven variables related to the tourism activity. According to this method, all the features analysed are grouped into classes, each class containing features whose values are as different as possible from the values of the features in the other classes and which, at the same time, are similar to the values of the other features in the same class.

4 RESULTS

4.1 Iași as a “tourist city”

It has already been clarified that talking about a “tourist city” is impossible starting, first of all, from the definition of the word “city”. Iași is far from being a city with an activity predominately oriented towards tourism because of the characteristics of its tourism supply, which does not position it on top of tourist destinations list. This fact is also illustrated through the values of tourism demand registered in Iași every year. Therefore, a number of 176.924 tourists (arrivals) that visited Iași in 2014, according to the National Institute of Statistics, is not significant enough for nominating Iași as being even close of the “tourist city” concept and all that it implies when confronting it the size of the city (352.000 inhabitants in 2015 as of NIS).

As it follows, we will refer anyway to the tourist city of Iași and to tourism areas within it as to emphasize the space within this city that is used and organized for tourism purposes in contrast with areas with no tourism potential.

The tendency towards a centralized tourism activity is obvious in Fig. 1, as the highest density of both attractions and services is in the central area of the city. A high tourism activities density can be noticed along the road axis that crosses the city from north to south. Therefore, Copou District, in the northern area of the city, stands out due to some of the significant tourist attractions of the city, while the southeast area is well known as a peripheral alternative to the centre of the city when it comes to accommodation services. The main road axes are emphasized also when it comes to the catering services distribution. In this case, besides the centre, with the highest concentration, a high density of the catering services is noticeable along the streets that connect the centre to the most important peripheral areas of the city.

4.2 Elements of tourism attractiveness

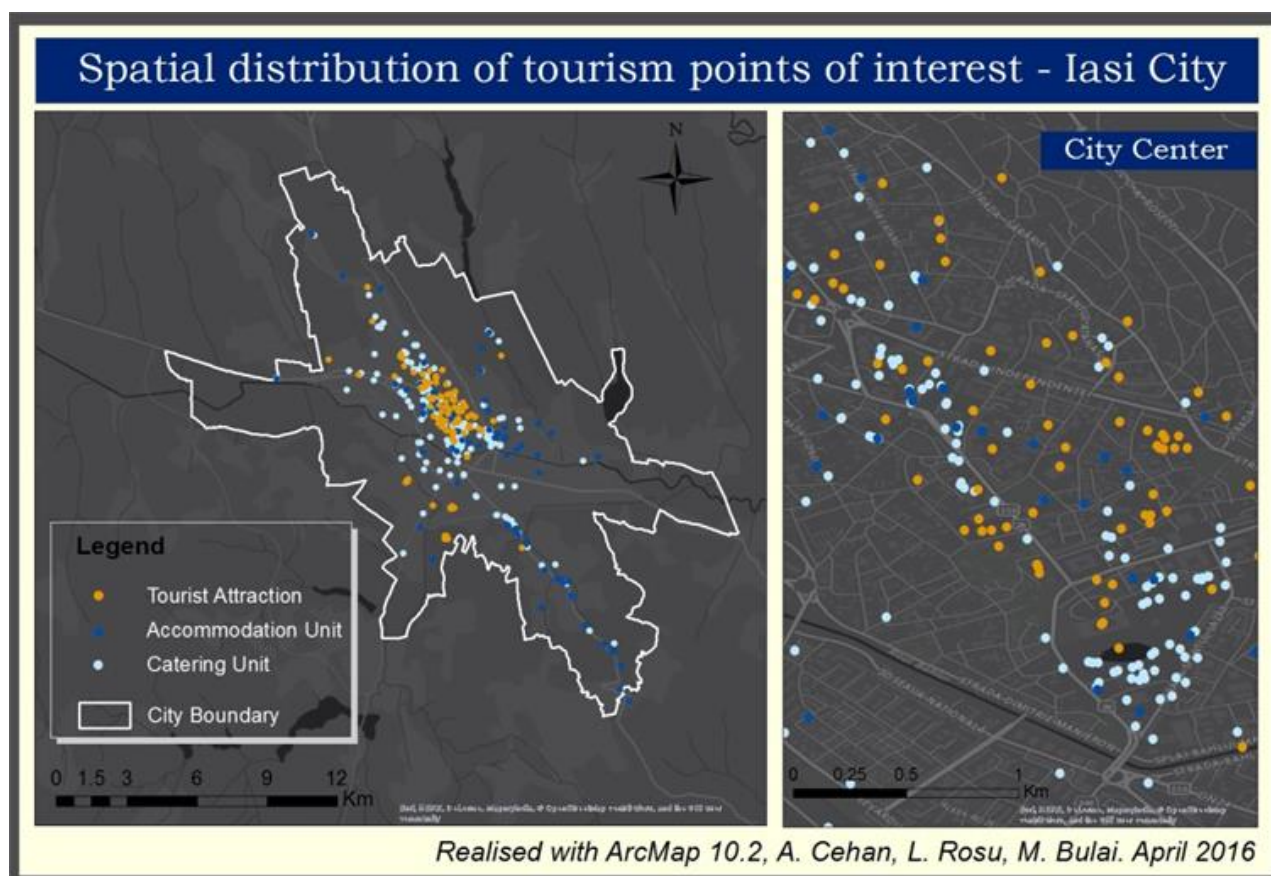


Fig. 1. General overview upon points of interests in Iași Municipality

As mentioned above, a number of 3 main categories of elements of interest for the tourism activity were considered as being essential for the present study: tourist attractions, accommodation units and catering services. A next step was determining how this data will be manipulated in order to identify the characteristics of every area in the centre of Iasi in relation to the tourism density and attractiveness.

Table 1 shows all the variables that were used in this study. The decision upon the exact parameters to be taken into consideration had an influence upon the final image of the tourism density and attractiveness.

Table 1. The variables used in the methodological framework

Variable	Formula/Expression
Tourist Attractions Density	Number of Tourist Attractions within a 500 meters distance
Proximity to the emblematic Tourist Attractions	Average distance towards the 10 highest rated Tourist Attractions on TripAdvisor
Tourist Attractions Diversity	Number of tourist attraction categories within a 500 meters distance (<i>Categories: religious, cultural, historic, natural, archaeological</i>)
Proximity to Accommodation Units	Average distance towards the 5 closest accommodation units
Proximity to the Highest Rated Accommodation Units	Average distance towards the accommodation units with a rating higher than 8.5 on Booking.com
Catering Services Density	Number of catering units within a distance of 500 meters
Proximity to the Most Visited Catering Units	Average distance towards the 15 catering units with the highest number of check-ins on Facebook

4.3 Tourism typology in Iasi

Tourist attractions are the main component in the tourism activities, being the reason why the majority of the tourists will choose to visit a place. Therefore, it is normal that the nominalization of an area as being attractive for tourists will depend first of all on the density of the tourist attractions. Since we can talk of tourist attractions density in Iasi only in the central part of the city, the focus has been placed on the analysis of this space for which we tried to determine the exact characteristics that define the tourism activity in every particular area. Fig. 2 emphasises the spatial distribution of these areas, while in Fig. 3 can be noticed the features of each category of tourism space when it comes to every of the 7 variables taken into consideration.

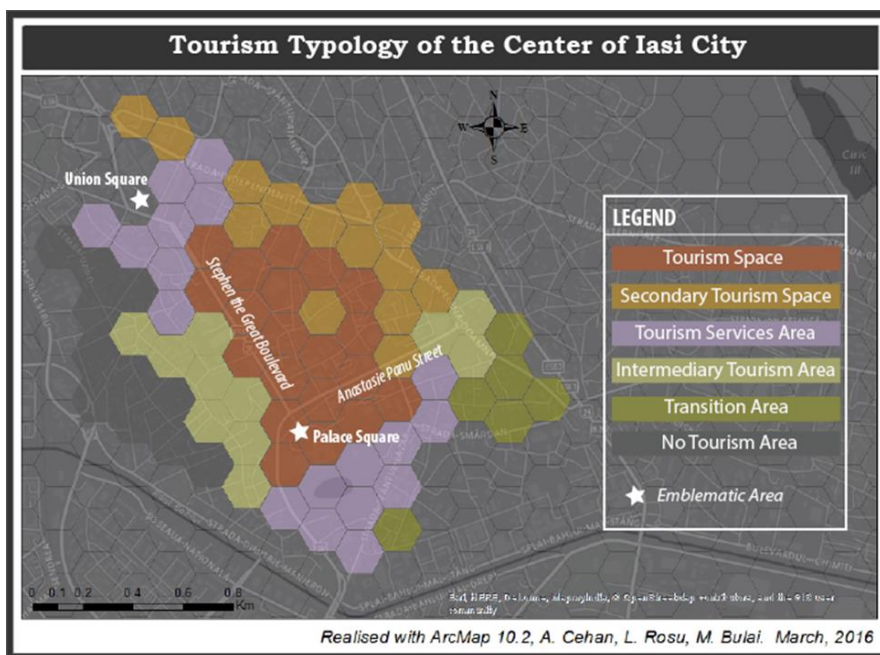


Fig. 1 Tourism typology of the centre of Iasi Municipality

Although at a first look the central area seems attractive as a whole, we aimed at discovering the differences inside this area and what elements individualize every part of it. Being given the fact that distance played an important role in the analysis, the cells representing each category of attractiveness are generally clustered.

This typology is meant to work as an index of attractiveness. The better represented a cell is from the perspective of all the variables taken into consideration, the higher is the degree of tourism attractiveness in that particular space. In the Parallel Box Plot from Fig. 3 each class, respectively each type of tourism space, is characterized by a certain deviation from the average value of each variable. The positive deviation from the mean is beneficial for the tourism attractiveness when it comes to aspects of tourism density, while for matters of proximity, a negative deviation is desirable.

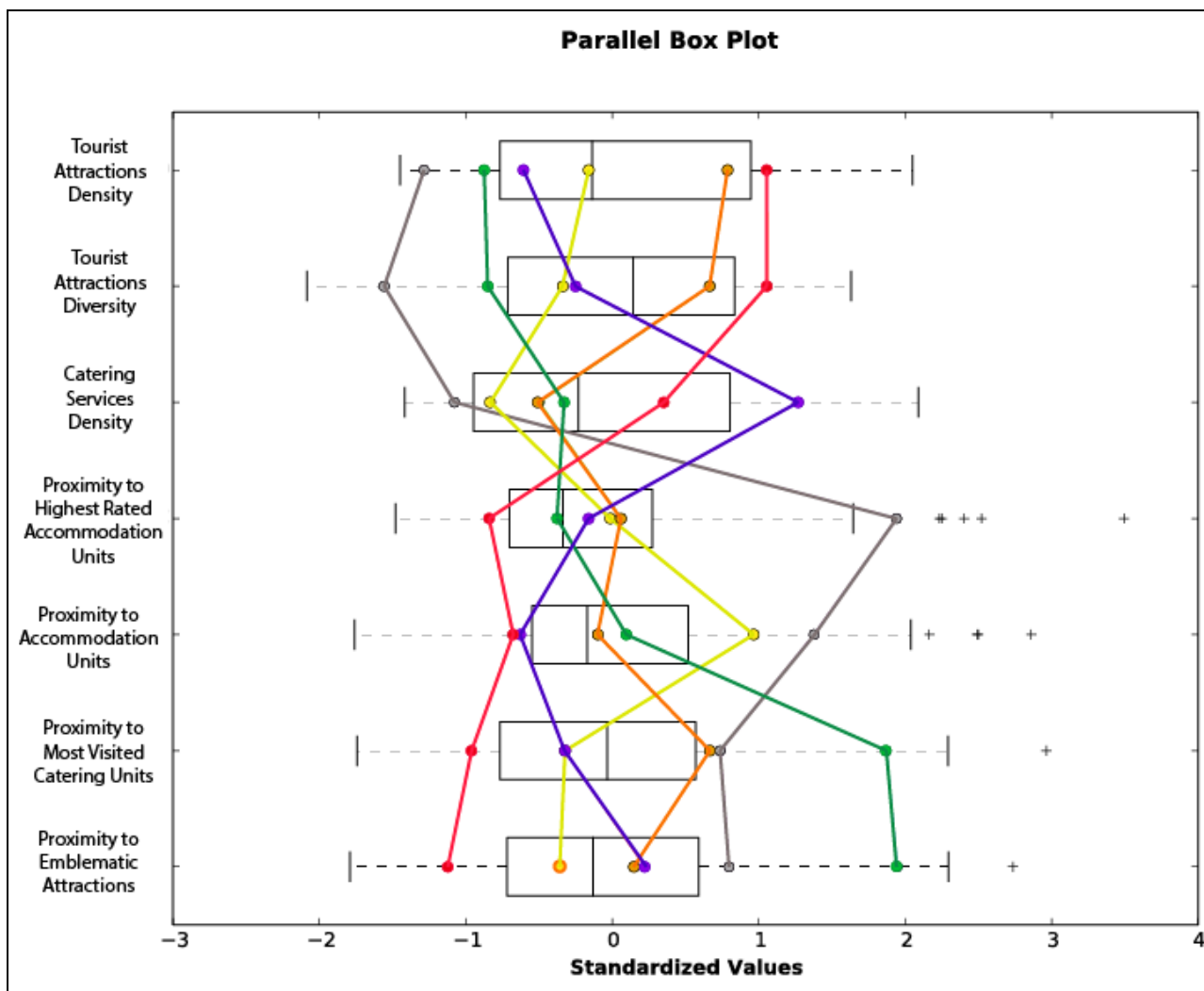


Fig. 2. Multi-criteria analysis results for grouping into classes

Going into detail, we discover an even deeper tendency of centralization of the tourism activities, than it was mentioned before. The space along Stephen the Great Boulevard, extended towards Anastasie Panu Street appears as the main "Tourist Area" of the city. All the aspects of tourism in an urban environment are present here: a considerable number of tourist attractions, as well as the proximity of tourism services, including both accommodation and catering. Anyway, an issue can be identified in this case as the proximity does not correspond to the idea of density, meaning that this space is not well represented when it comes to tourism services, having only the advantage of a short distance towards them. This space is prone to the risk of being perceived only as a transit area for tourists, who will cross the Boulevard with the purpose of visiting the tourism heritage, but will effectively "consume" the tourism supply in other areas, due to the lack of these services in the central one. The restoration process of many of the buildings in this area and the lack of the access for visiting of many of them, highlights even a deeper problem for what is to be considered the main

"tourist area" of the city, since it lowers the possibility of tourists actually spending time here and, therefore, "consuming" the space.

The "Secondary Tourism Space" is characterized by a good representation of the tourist attractions, both from a quantitative and qualitative point of view, some of the most appreciated tourist attractions on Social Media being located in this area. Unlike the first type of space, this one does not have such a complex profile, the services being poorly represented. The end of Cuza Vodă Street and the northeast part of the centre are representative for this kind of tourism space, its contribution in the tourism activities being found mainly through the possibilities of walks and exploration it gives to tourists.

The "Intermediary Area" is similar to the previous one, showing an even lower concentration of tourist attractions, its main advantage being the proximity to the main tourist area of the City.

The Transition Area corresponds to a space which benefits from the proximity to the highest concentration of the accommodation units and, especially, the proximity to those that are the highest rated on Booking.com, which indicates that some of the most appreciated accommodation units have a peripheral location.

A particular kind of space and clearly the one with the most considerable contribution to the economy of the city is the "Tourism Services Area". The two ends of the Stephen the Great Boulevard are defining for this category, being individualized by a high density of both accommodation and catering services. These spaces offer a great variety of restaurants, cafes, bars and, of course, hotels, for the tourists to choose from and the ratings provided by the visitor of these units place these areas as favourite among the customers. Although not the distinctive feature of the space, the proximity of the emblematic tourist attractions and a low density of the points of interest, but which is not to be ignored, adds value and diversity to these areas.

5 DISCUSSIONS AND CONCLUSIONS

Tourism is a field that gets more and more attention these days, not only due to its economic implications, but also due to the fingerprint the tourism activity leave on the space where it develops. GIS and Social Media can work together in a really efficient way in the field of tourism, the analysis of tourism supply within the territory of Iasi City finding multiple benefits in using these methods. These two instruments bring together the objective nature of GIS and the subjective character of Social Media data, both useful in analysing a field that relies on precise technical information, as well as on the more diverse and unpredictable data given by the perceptions of the tourists. The use of data obtained from social media platforms, together with spatial incidents can reveal useful information about the tourism phenomenon, in this case large surveys being substituted with alternative data, which can be more reliable than primary ones. This study helps, as a first step in any potential tourism planning activity, to emphasize the ways in which the space is defined by the varied ways of interaction between the defining elements of tourism phenomenon.

With most of its tourism activity concentrated in the centre of the city, Iasi appears as a city that, although not predominantly tourist-oriented, has areas with high values of both tourism attractiveness and tourism density. The question is what can be done in order to highlight and capitalize these values to their maximum potential. The specifics of each category identified require different actions and interventions, the method developed in this study being able to provide the framework for the future decisions in this direction. The internal diversification of tourism attractiveness is well delineated by the historical monuments that can be found on a cultural axis, which replace the traditional old centre.

Iași Municipality, in this form of shifting from a mono-centric urban system towards a poly-nucleated city (Roșu, 2015) due to a transition period is trying to adapt to a new tourism consumption model. Still, the main problem is the concentration of iconic buildings in the city centre and the lack of the activities in the inner peripheries. Therefore, it is recommended to search for urban tourism space beyond the traditional borders of the city.

Not least important, the results of this study, under the form of a new method for assessing tourism attractiveness and density, can be applied in the case of any city and can prove useful not only for local stakeholders in their attempts of tourism planning, but also for tourists who can be informed, through appropriate representations of these results – under the form of tourist maps or online applications, about the places where their experiences as tourists in a city can be maximized.

REFERENCE LIST

- Ashworth, G. J. (1992). Is there an urban tourism? *Tourism Recreation Research*, 17(2), 3–8.
- Ashworth, G. J. (2012). Do we Understand Urban Tourism. *J Tourism Hospit*, 1(4), e117.
- Ashworth, G., & Page, S. J. (2011). Urban tourism research: Recent progress and current paradoxes. *Tourism Management*, 32(1), 1–15.
- Bahaire, T., & Elliott-White, M. (1999). The application of geographical information systems (GIS) in sustainable tourism planning: A review. *Journal of Sustainable Tourism*, 7(2), 159–174.
- Bridaa, J. G., Meleddub, M., & Pulinac, M. (2012). Understanding urban tourism attractiveness: The case of the Archaeological Ötzi Museum in Bolzano. *Journal of Travel Research*, 0047287512437858.
- Bulai, M., & Iașu, C. (2013). *Accesibilitate și turism: studiu de caz-regiunea Moldovei*. Editura Universității“ Alexandru Ioan Cuza.”
- Cehan, A., & Tudora, D. (2015). Methods and models of hierarchization of the tourist attractions. Study case: Neamț County. *Analele Universității Din Oradea, Seria Geografie, XXV(1)*, 14–24.
- Claveria, O., & Poluzzi, A. (2016). Positioning and clustering of the world's top tourist destinations by means of dimensionality reduction techniques for categorical data. *Journal of Destination Marketing & Management*. <http://doi.org/10.1016/j.jdmm.2016.01.008>
- Coles, T. (2003). Urban tourism, place promotion and economic restructuring: The case of post-socialist Leipzig. *Tourism Geographies*, 5(2), 190–219. <http://doi.org/10.1080/1461668032000068306>
- Floris, R., & Campagna, M. (2014). Social Media Data in Tourism Planning: Analysing Tourists' Satisfaction in Space and Time. Retrieved from http://www.realcorp.at/archive/CORP2014_118.pdf
- Gârbea, R. V. (2013). Current state and prospects of development of Iași in the context of practicing urban tourism. *Lucrările Seminarului Geografic“ Dimitrie Cantemir,”* 35(1), 107–116.
- Girardin, F., Vaccari, A., Gerber, A., Biderman, A., & Ratti, C. (2009). Quantifying urban attractiveness from the distribution and density of digital footprints. Retrieved from <https://repositori.upf.edu/handle/10230/16199>
- Gospodini, A. (2001). Urban design, urban space morphology, urban tourism: an emerging new paradigm concerning their relationship. *European Planning Studies*, 9(7), 925–934.
- Hall, D. (1999). Destination branding, niche marketing and national image projection in Central and Eastern Europe. *Journal of Vacation Marketing*, 5(3), 227–237. <http://doi.org/10.1177/135676679900500303>
- Iașu, C., & Bulai, M. (2011). New approach in evaluating tourism attractiveness in the region of Moldavia (Romania). *International Journal of Energy and Environment*, 5(2), 165–174.
- Internet 1, 2016 - Retrieved April 24, 2016, from <http://tools.crrw.utexas.edu/>
- Karski, A. (1990). Urban tourism: A key to urban regeneration. *The Planner*, 76(13), 15–17.
- Light, D. (2001). “Facing the future”: tourism and identity-building in post-socialist Romania. *Political Geography*, 20(8), 1053–1074. [http://doi.org/10.1016/S0962-6298\(01\)00044-0](http://doi.org/10.1016/S0962-6298(01)00044-0)
- Li, M., Fang, L., Huang, X., & Goh, C. (2015). A spatial–temporal analysis of hotels in urban tourism destination. *International Journal of Hospitality Management*, 45, 34–43. <http://doi.org/10.1016/j.ijhm.2014.11.005>
- Mason, P. (2015). *Tourism Impacts, Planning and Management*. Routledge.
- Miralles, J. L., & García-Ayllón, S. (2015). GIS analysis of the consequences of short-term urban planning in a mass tourism destination in Spain. *International Journal of Sustainable Development and Planning*, 10(4), 499–519. <http://doi.org/10.2495/SDP-V10-N4-499-519>
- Parkinson, M., Meegan, R., Karecha, J., Evans, R., Jones, G., Sotarauta, M., ... others. (2012). Second-tier Cities and Territorial Development in Europe: Performance, Policies and Prospects. *Luxembourg: ESPON*.

- Pearce, D. G. (2001). An integrative framework for urban tourism research. *Annals of Tourism Research*, 28(4), 926–946. [http://doi.org/10.1016/S0160-7383\(00\)00082-7](http://doi.org/10.1016/S0160-7383(00)00082-7)
- Philipp, S. F. (1993). Racial differences in the perceived attractiveness of tourism destinations, interests, and cultural resources. *Journal of Leisure Research*, 25(3), 290.
- Rosu, L. (2015). Exploring the walkability concept in a post-socialist city through GIS analysis. The case study of Iasi, Romania. *Analele Stiintifice Ale Universitatii“ Al. I. Cuza” Din Iasi. Serie Noua. Geografie*, 60(2).
- Roşu, L. (2015). The urban transformations of a post-socialist city centre. The socialist relicts and current identity of Iaşi historical city centre. *Lucrările Seminarului Geografic“ Dimitrie Cantemir,”* 40(1), 159–170.
- Roşu, L. I. (2015). Rezilienţa urbană şi transformările oraşului post-socialist. Exemplul municipiului Iaşi. In *Rezilienţă şi teritoriu. Operaţionalizare conceptuală şi perspective metodologice* (pp. 171–186). Iaşi: Terra Nostra.
- Roşu, L. I., & Blăgeanu, A. (2015). Evaluating performances of a public transport network in a post-socialist city using quantitative spatial approach. *Urbani Izziv*, 26(2).
- Russo, A. P., & van der Borg, J. (2002). Planning considerations for cultural tourism: a case study of four European cities. *Tourism Management*, 23(6), 631–637. [http://doi.org/10.1016/S0261-5177\(02\)00027-4](http://doi.org/10.1016/S0261-5177(02)00027-4)
- Sigala, M., Christou, E., & Gretzel, U. (2012). *Social Media in Travel, Tourism and Hospitality: Theory, Practice and Cases*. Ashgate Publishing, Ltd.
- Stoleriu, O. M. (2008). Localisation des services et mixite fonctionnelle dans la ville de Iasi. *Analele Stiintifice Ale Universitatii“ Alexandru Ioan Cuza” Din Iasi-Seria Geografie*, 54, 131–144.
- Tsenkova, S. (2006). Beyond transitions: Understanding urban change in post-socialist cities. In P. D. S. Tsenkova & A. P. D. Z. Nedović-Budić (Eds.), *The Urban Mosaic of Post-Socialist Europe* (pp. 21–50). Physica-Verlag HD. Retrieved from http://link.springer.com/chapter/10.1007/3-7908-1727-9_2
- Wood, S. A., Guerry, A. D., Silver, J. M., & Lacayo, M. (2013). Using social media to quantify nature-based tourism and recreation. *Scientific Reports*, 3. <http://doi.org/10.1038/srep02976>
- Xu, H. G., & Tian, M. R. (2006). A study on the growth of urban tourism. *Acta Scientiarum Naturalium Universitatis Sunyatseni*, 45(3), 95–99.