

The area of Győr in the light of economic and social aspects –spatial relationship analysis



Abstract

The roles of cities are steadily growing in value. Additionally, over the past decade some changes can be detected in urban governance. In the early 1990s in Western Europe the macro-regional governance – as a new way of governance – already came into focus and the cooperation among the city and its suburban settlements, regional coordination, spatial planning at a regional level and macro-regional institutional organisations support the city regions. Thus, as the subject of this study, city regions or metropolitan areas are presented, the definition of which includes their agglomeration and the adjacent settlements. What methods are suitable to research the division of functions among settlements? What benefits are to be gained from facilitating their harmonisation? What role does a central settlement play in its agglomeration and what is its responsibility in the full provision of the missing functions in the case of small settlements and villages with deficiencies? In this study some additional scientific information will be provided to enable these questions to be answered. Taking Győr and its agglomeration as the object of the study and processing data collected from an empirical research allocated by the VIDGY (Vehicle Industrial District in Győr) research, the method of spatial relationship analysis is used.

Keywords: city region, agglomeration, spatial relationship analysis, Győr, trajectories

INTRODUCTION

The roles of cities are becoming more and more valued. Additionally, over the past decade some changes can be detected in urban governance. Although polycentric urban development and regional development models based on urban networks were not unknown previously, in recent years increasingly detailed versions recognize the beneficial effects of cities and their agglomeration on the development of the regions (Pálné Kovács, 2008). In the early 1990s in Western Europe the macro-regional governance – as a new way of governance – already emerged and cooperation between the city and its suburban settlements, regional coordination, spatial planning at regional level and macro-regional institutional organisations supporting the city regions. After the Keynesian-Fordian period the macro-regional governance reform considers, along with attracting external capital

investment into the region, increasing territorial competitiveness and development as a fundamental goal (Brenner, 2003). Nowadays the most striking forms of agglomerations are the super-agglomerations or urban regions which have appeared worldwide over the past couple of decades featured by characteristics such as a complex inner structure including several urban centres, extensive suburban areas, hinterland areas of wide scope providing space for scattered settlements (Hall, 2001).

These urban regions are the “locomotives” of the national economies – in which they are situated – and these are the venues of the dense mass of interconnected economic activities, typically characterised by high-level productivity due to their jointly generated agglomeration economy and their innovative potentials. In various developed countries the main metropolitan areas grow faster than other areas, even in the countries which seemed to return to the non-metropolitan growth patterns and systems (Forstall, 1993).

Despite the fact that cities are the privileged platforms of economic growth – by means of capital intensive infrastructure and benefits of economies of scale – regional agglomerations have also contributed to the process of enhancing growth: the growth and expansion of industrial clusters, the reduction in shipping, transport and communication costs and a number of other factors influence the economic recovery of the metropolitan area (Scott-Storper, 2003).

Therefore, as the subject of this study, city regions or metropolitan areas are presented, the definition of which includes their agglomeration and the adjacent settlements, since none of the cities can be found in space structure in isolation, completely cut off from the neighbourhood without any connection to it. Instead they constitute an integral part of them with their sphere of action expanded over the “City Gates” and their involvement in settlement network and its central location. However, it is not only the central location which deserves special attention, but managing it together with the adjacent settlements favourable synergies – originated from their interconnection – can be experienced. Such synergies may be the division of functions within the urban region, resource flows in the agglomeration or efficiency mechanisms.

What methods are suitable to research the division of functions among settlements? What benefits are to be gained from facilitating their harmonisation? What role does a central settlement play in its agglomeration and what is its responsibility in the full provision of the missing functions in the case of small settlements and villages with deficiencies? In this study some additional scientific information will be provided to enable these questions to be answered. Taking Győr and its agglomeration as the object of this study and processing data collected from an empirical research allocated by the VIDGY (Vehicle Industrial District in Győr) research, the method of spatial relationship analysis is used. However, due to the large number of settlements, analysing the entire agglomeration would impose a huge task, so the data of the 11 settlements located in the immediate “settlement-ring” round Győr

was calculated with, since the common features of their closeness and their direct linkages to the central area allow them to be handled together and to be separated from the more remote settlements in the agglomeration. In the VIDGY research the mayors of these settlements answered trajectory related questions affecting their inhabitants, the mayor of a small settlement being the person who has the appropriate knowledge of its residents' habits, family relationships and activity in economy and business. Therefore, the data will most likely provide a precise picture about the usual trajectories, albeit with possible individual derogations.

The structure of study is built as follows: I show the functional urban region in general, its role and its features in the spatial structure, the next chapter deals with the method of the spatial relations analysis. The empirical chapters contain the introduction of methodology, the examined settlements and finally the functions, which generate the spatial trajectories, and itself the concrete spatial trajectories. The conclusion chapter draws the final consequences.

1. DEVELOPMENT AND ROLE OF URBAN REGION IN SPATIAL STRUCTURE

City region, urban region, functional urban region, metropolitan area and agglomeration. The above listed definitions mark spatial categories and in several documents they are applied as interchangeable synonyms. In documents dealing with territorial development and in literature they are well-defined and approved, but slight differences can occur regarding the criteria and the indicators which help identify the borders of the given agglomeration. Specifying the most important elements among the supposingly well-known definitions we can state that a city region is a combination of settlements where you can find a central - more developed - city and the surrounding settlements which are linked to that central part based on certain functions (Tóth-Schuchmann, 2010).

In the 1990s it was a common phenomenon that the population grew not in the central, but the adjacent settlements. From the central area the inhabitants migrated to the settlements in the agglomeration area, in the same way as those coming from other areas. The aforementioned functional linkage articulates in "leaving" the jobs in the centre, since most workplaces of the active population in the agglomeration can be found in the central settlement. In addition, numerous functions and needs, such as education, healthcare, commerce, financial services or cultural activities, link the inhabitants of the adjacent settlements to the city. Creating the necessary links among the settlements is ensured by various network infrastructure systems like transport, power supply and public water supply (Kovács-Tóth, 2003).

The city and its environment as a spatial structural unit have not been used for the first time for settlement demarcation. The concept of city region

has been dealt with for two generations. Further key factors from the attributes of city region need to be added to the previously mentioned definition elements. The central city creates a network relationship with the adjacent settlements, in which rivalry does not occur; moreover, any further development of the developed city will be beneficial to the rest of the settlements. It should be mentioned that resource flow (e.g. labour force) does not only happen towards the central city. Examples include that the missing functions in the “outer area” can be found in the centre and this can guarantee their supply for the inhabitants of the adjacent settlements. Furthermore, spatial specialisation is feasible when a settlement provides a certain service by itself throughout the whole urban region (Farágó, 2006).

Nowadays metropolitan areas are the territorial engines of the economic growth in Europe (Fekete, 2017a). The internal elements of the operation of a city region such as the cooperative systems of cities and their agglomerations and the allocation of tasks and functions among the settlements in a metropolitan area and economic governance must be highlighted.

Along with the strengthening of central functions, these days urban governance also means economic governance, the creation of cooperation that occurs among economic, scientific and civil societies and this governance-type cooperation can be observed especially in automotive regions, such as Győr. Cooperation exists in various forms and it affects the development of economy through numerous means. Among others, the local governments may give help to the companies, forming the conditions of settling down, developing them or supporting the research and development activities of the companies. However, the companies also make commitments by taking over some public service tasks from the local government. It can also occur – as in Ingolstadt, the twin city of Győr – that the local government sets up a company for economic development to enhance economic attractiveness with services like providing information, being involved in the marketing of economic areas and facilitating interaction between companies. Universities and other higher education institutions have also managed to find interfaces with both the companies and the government, and even civil organizations are given room in the processes of economic development (Fekete, 2017b; 2014a).

Urban cohesion – as the well-established function-supplying mechanism of the city and the adjacent settlements – is the responsibility of urban policy. This means, on the one hand, the harmonisation of urban and rural services, prioritising strategic planning over traditional urban planning, ensuring their participation in the planning and taking the goals concerning sustainability and environment into account. From this point of view, we can talk about integrative urban policy, which can be found quite frequently in the centre of discussions among experts on urban development (Pieterse, 2004).

On the other hand, urban development policy unfolds with great difficulty in Hungary, although the demand for managing the urban network as a unit

or the importance of the effects that economic development competitiveness has on its wider environment has already been articulated. In the European Union the importance of the relations among cities/towns, the creation of their cooperative networks and developing common regional spatial strategies are better represented. The EU offers all of these factors by applying an integrated approach, i.e. the problems of urban areas should be managed by a coherent approach. This requires local partnerships, applying governance and creating networks (Somlyódyné Pfeil, 2006).

Thus it can be stated that it is worth governing centre cities together with their agglomeration area and not on their own, since the active residential trajectories between the centre and its agglomeration can be continuously observed as well as their spillover effects. A possible way of urban governance may be the horizontal cooperation of the administrative units, their partnership or the creation of any type of contractual relationship. In Europe some local governments have already united in several places. The new urban policy attempts to improve not only the modernisation and the efficiency of the administrative structure, but it can contribute to the increase of the competitiveness of the cities (Somlyódyné Pfeil, 2008).

Consequently, from functional and regional development aspects the management of the central city and its adjacent settlements as a whole can be articulated as an urban policy goal by the policymakers and operators forming the actual urban policy. Two factors can be primarily highlighted as the constituents of unity: one is the redundancy of functions in the centre, which makes the adjacent settlements link to the central area, the other is the municipal specialisation within the urban region, from which division of functions may result.

The cities are obliged to work out their concepts for the future and their urban strategies, an obligation which is a legislative and administrative task; moreover, it is a fundamental step of the process of conscious development in cities. The strategic documents of Győr - Integrated Urban Development Strategy, The Sustainability Program of Győr, Integrated Settlement Development Strategy, Settlement Development Concept - include the importance of the relationship between the city and its environment, urban region cohesion, the central role of the City of Győr and its attraction to the adjacent settlements, its intention to strengthen, its ambitions and actions. The Integrated Urban Development Strategy (IUDS) formulates that beside the inhabitants of the City of Győr, it also indicates it ensures a high level of living conditions for the residents of its agglomeration area. It takes a central role in several functions like quality higher education, vocational training, adult education, the creation of the research & development infrastructure, being a cultural centre and urban technological base, public transport and renewable energy sources. The Sustainability Program intends to position Győr in the region as its centre, the Integrated Spatial Development Strategy (ISDS) and the Settlement Development Concept (SDC) endeavour to create a diverse urban economy and they

consider Győr as a regional centre. These strategic goals have remained basically unchanged over the past years (Fekete, 2014b), and the increase of economic competitiveness, the exploitation of the human capital potential, strengthening tourism, sports and culture or urban strategy planning all prove the act of thinking in an urban region and the strengthening of the central functions in Győr.

The function surplus of the centre can have a dual meaning. On the one hand, it may involve function deficiencies in the adjacent settlements, which can represent both real and simple efficiency problems, since the economical operation of certain public services requires a minimum threshold. On the other hand, the central area is to be prepared to satisfy the needs of not just its own residents, but of those from the adjacent – even as many as 40–50 – settlements as well. To discuss this type questions, it is strictly necessary to carry out a function analysis.

In the meantime, it is not mandatory for the central area to take responsibility for all the functions because the previously mentioned division of functions in the urban region can lead to greater efficiency and generate synergy effects, and last but not least, aspects of competitiveness can be interpreted for the whole urban region, not just the city centre itself. It is conceivable that besides the central area there is a smaller settlement within the urban region which bears the comparative advantage (well-known concept in economy) of an activity, function or even sector (e.g. tourism) over the other settlements of the urban region, and taking advantage of it can generate beneficial effects on the whole urban region. However, even in this case it is necessary to assess the potentials of the urban region, the existence of the conditions of performing functions, uncovering the comparative advantages, learning about inter-settlement linkages and all of these examined per settlement.

Spatial relationship analysis, as it is well-known in professional circles, is a perfectly suitable method to carry out the outlined analysis.

2. SPATIAL RELATIONSHIP ANALYSIS

It was already mentioned that movements among settlements by their inhabitants can be detected in the urban region due to usage of certain functions, not their own settlement, but in other settlements, mainly in the central area of the urban region. Thus trajectories are formed in the settlement network, which develops a well-defined spatial usages and network of linkages. Spatial relations analysis studies exactly these, i.e. the system of relations among the settlements, the key linkage points and the hierarchic system of the settlement network and the directions of attraction (Szörényiné Kukorelli, 2011).

So the study observes the spatial trajectory of the population among the settlements and reveals the incidental surplus or lack of functions in a settlement. It is essential to note during the spatial relations analysis how closed a settlement is, how large the attraction force of the centre is and how the

centralisation of the settlement or the cohesion of the settlement and its agglomeration is evolving. In the case of having the same settlement as the starting and ending point of the trajectory, spatial relations analysis calls it an internal spatial trajectory. In other cases, when the trajectory ends in another settlement but is still within its area, it is called an intraregional spatial trajectory; however, when the trajectory is targeted outside the research area it is named an outbound spatial trajectory. Inbound trajectories are the ones departing from a settlement outside the research area but ending at a settlement within the research area. Trajectories are created and generated by functions and needs including even trajectories linked to public administration, consumer shopping patterns, availing of traditional and financial services, early-years childcare, public education, healthcare, cultural and recreational activities or visiting friends and family. These are all functions that create a trajectory due to the fact that at the residential settlement you cannot always find a solution to satisfy your needs, e.g. not every settlement provides financial services or is abundant in cultural programmes (Szörényiné Kukorelli, 2007).

In the meantime, spatial relations analysis is suitable for examining economic relations, their research and preparing economic analyses, in which case shipping, transport, communication and several other economic aspects are the functions through which the development of trajectories can be observed (Gerle, 1974).

These types of analyses are necessary since regarding trajectories we can never assume that the current state entirely corresponds to the situation ten or so years ago. Furthermore, building time as a fundamental factor into the spatial relations analyses may be put into consideration. Although spatial relations analyses refer to a given time or period of time, we need to know that changes occur in the long run so the researchers must continue taking consecutive examinations after the research. The differences between the pre- and post-transitional eras are good examples. Until the early 90s Hungary was run by a public administration system which strengthened the hierarchical relations; school districts, agricultural cooperative centres and medical centres in the districts were clearly defined and they affected the paths of residents. Meanwhile, after the democratic transition, the stringent regulations became less strict and the previous “seat of joint councils” and the scope of other functions ceased to exist making spatial activities freer and more available for the population. New functions appeared, affected by the inflow of foreign capital, retail shops sprang up like mushrooms in larger and smaller settlements, self-employed workers appeared in business, trajectories commenced among settlements and international relationships emerged. Settlements gained autonomy, consumer behaviour changed and mobility was helped by the increased amount of car usage (Szörényiné Kukorelli, 2011).

So, spatial relations analysis - by unfolding spatial nodes, mapping settlements in some way related to each other, taking stock of functions, describing residential trajectories in the closure process of the urban region as a unit area and in having a better understanding of the strengths and weaknesses of the urban region - is a

fundamental method for analysis. In addition, it may contribute to the improvement of the competitiveness of the urban region, efficient public administration, function organisation and division.

3. SPATIAL RELATIONS ANALYSIS OF THE CITY OF GYŐR AND ITS REGION

3.1. METHODOLOGY

Having outlined the theoretical framework of the urban region and the method of a possible analysis, henceforward I endeavour to present a piece of particular research carried out in real life. Research titled Vehicle Industrial District in Győr, VIDGY in short, was recently carried out. Yet the expression 'region' refers to the fact that not only the central city receives attention, but both the local governor and the research team think in terms of city regions and urban regions. A subtopic of the study intended to define the spatial force of Győr, or in other words the closure of the urban region. Additionally, the spatial relations analysis of Győr and its region was also carried out in this research project. Principally, the data and information were collected by means of a questionnaire within a radius of 50 km inquiring about the primary, secondary and tertiary trajectories of the population of Győr and its region. The important question of the research was that if the residents of the examined settlements cannot use a service in their own residential settlement - because there is none there -, which other areas they travel to satisfy their needs. In the 190 completed questionnaires (190 settlements) the questions were put on trajectories generated by the following functions (Szörényiné Kukorelli, 2014):

- spatial trajectories of shopping regarding various goods,
- spatial trajectories of retail financial services,
- the name of the settlement providing banking and insurance services for the local government,
- markets visited for sales and purchase of goods by the public,
- spatial trajectories of nursery, primary, secondary and higher education,
- spatial trajectories of healthcare and social services,
- spatial trajectories of culture and leisure activities,
- spatial trajectories of moving in and out, commuting,
- spatial trajectories of cross-border relations.

The following table (Table 1) contains a list of the settlements of local labour system of Győr.

3.2. RESULTS

Based on the compiled database, the researchers analysed the region by the functions, i.e. how the spatial relations of all the functions are outlined, their distribution and dispersion, which settlement is the most important centre concerning the given function and which settlements are subcentres.

The analysis could also be started from the point of view of the settlements, namely to analyse the settlements one by one based on their functions, summarizing their deficits or their specialities, identifying their main functions, and to what extent they are linked to the central settlement, Győr – in our case. Since 190 settlements should be analysed, it would mean an extremely detailed study, plus their one-by-one description would exceed the length of a monograph. On the other hand, the method deserves a try to formulate a pattern based on which even a smaller closure regarding an administrative question could assist the decision-makers with relevant information or the settlement itself can be provided with a pattern to help its own analysis.

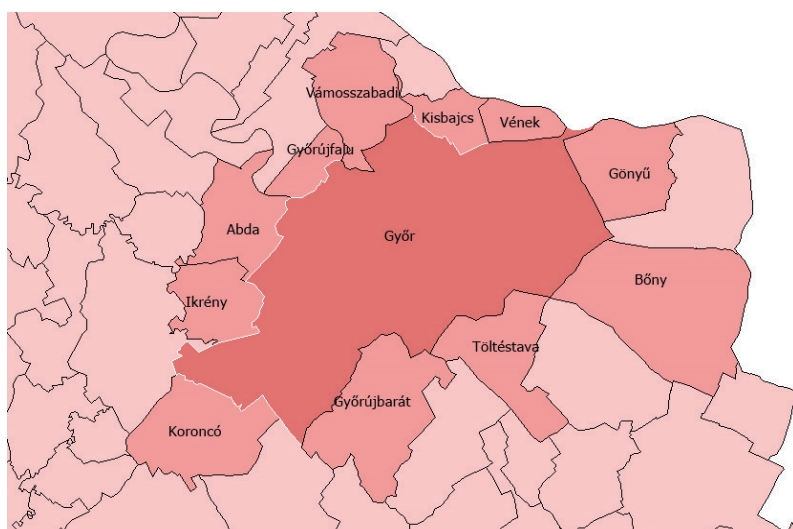
Function distribution and dispersion in the territorial hierarchy are influenced by the distance from the central area, including that based on the distance from the central city measured in kms, the impacts of functions, their intensity and necessity in the given settlement can be drawn like a scale. For instance, if a settlement is situated 30 km away from Győr, the less important functions (groceries) are not so influential for that particular settlement (just like a wifi signal weakens when as you move further away). But then the existence of this particular function at the given settlement or in its neighbourhood is necessary.

Consequently, the distance from the central area function is an organizing force. It is advisable to prepare a scale which marks the distances from the central area on the basis of the intensity of the functions. For example, the settlements belonging to a distance range of 0-15 km greatly benefit from all the services of the central area; however, it may lead to addiction and complacency, consequently causing the residents to be constantly on the move. The next range of the scale may be the distance between 15 and 30 km. How are the used functions and trajectories re-organised in this case? The ranges of the scale can be continued up to the boundaries of the agglomeration although this task is not the subject of this analysis.

The empirical element of this study is the first range of the above described distance scale, i.e. the analysis of the settlements within 15 km. Using the database provided by the previously mentioned VIDGY research, the focus is on the inner circle of the agglomeration of Győr – the settlements within 15 km and the study of their spatial relations, functions and roles in the urban region. The 11 examined settlements – as immediate neighbours of Győr – are all not situated at a distance of 15 km, some of them are located closer and two of them – Bőny and Gönyű – slightly farther (17 km) from Győr, but this fact will not influence the interpretability of the first range concerning distance – as a criterion – in the agglomeration. Since further examinations of the other ranges would exceed the

limits of a study and this inner ring due to its special position –its closeness to the central area –deserves a separate examination. It attempts to answer questions like: To what extent do the inhabitants of the researched settlements rely on Győr concerning functions and services? How influential is Győr on the neighbouring settlements? How strong is its hierarchy? Are there functions in the inner circle of Győr’s agglomeration which are performed unaided?

Figure 1 The inner circle of Győr’s agglomeration



Source: Edited by the Author

As Figure 1 shows, the inner circle of the agglomeration of Győr as a central area can be marked and the examined settlements are the following: Győrújbarát, Töltéstava, Bőny, Gönyű, Vének, Kisbajcs, Vámoszabadi, Győrújfalu, Abda, Ikrény, Koroncó.

In Table 2 general data can be seen like legal status, settlement size, number of population and the distance from the central area – Győr. Regarding their legal status, all the settlements are villages, but a further distinction can be made based on the number of residents. Based on the legal definition valid in Hungary you can deduct from the table that villages can be further divided into the category of small villages (population of 500–999) and micro villages (population under 200). Vének is to be considered a micro village with its population of 166 people and Kisbajcs a small village with 886 residents. On the basis of the population data, Győrújbarát emerges from the rest of the villages, with its 6401 inhabitants as the most densely populated village. Gönyű and Abda have over 3000 residents. Bőny and Koroncó can be considered as another group slightly exceeding the number of 2000 inhabitants. Meanwhile, Vámoszabadi, Ikrény, Töltéstava and Győrújfalu

are villages of about 1500 people. Due to the fact that the number of the population highly influences the inventory of functions per settlement, it is an essential factor of the analysis. Their distance from Győr are in the range of 6 and 17 km.

Table 2 General data of the examined settlements

Settlement	Territory (hectar)	Population	Legal Status	Distance from Győr (km)
Abda	1903	3117	village	9124
Bóny	5042	2151	village	17465
Gönyű	2172	3049	village	16469
Győrújbarát	3361	6401	village	9631
Győrújfalú	737	1758	village	6292
Ikrény	1558	1826	village	10541
Kisbajcs	875	886	village	9517
Koroncó	2691	2074	village	14676
Töltéstava	820	1465	village	10874
Vámosszabadi	2237	1659	village	10638
Vének	715	166	village	15999

Source: Edited by the Author based on the data by HCSO^[1]

From now on the focus is on groups of functions and various scope of functions in the settlements will be discussed. Trajectories caused by the demands for the functions are included in the tables; namely, which settlements are chosen to consume certain services by the residents of the settlements and whether the particular function can be found locally, and where exactly the given service is searched secondarily. The first of these types of function groups is trade provision presented in Table 3.

Table 3 Trade provision in the inner circle of Győr's agglomeration

Functions	Food		Clothing		Durables	Supermarket
	1.site	2.site	1.site	2.site	1.site	1.site
Abda	locally		locally		Győr	Győr
Bóny	locally		Győr		locally	Győr
Gönyű	locally	Győr	locally	Győr	Győr	Győr

[1] Registry of Hungarian Toponyms, 1st Jan, 2015 Hungarian Central Statistical Office, www.tavolsag.hu

Győrújbarát	locally	Győr	Győr		Győr	Győr
Győrújfalú	locally	Győr	Győr		Győr	Győr
Ikrény	locally		Győr		Győr	Győr
Kisbajcs	locally		Győr		Győr	Győr
Koroncó	locally		Győr		Győr	Győr
Töltéstava	locally		Győr		Győr	locally
Vámoszabadi	locally		Nagy- bajcs		Győr	Győr
Vének	locally		Győr		Győr	Győr

Source: Edited by the author based on the VIDGY questionnaire for the public

The table lists the trajectories generated by the demand for food, clothes and durables in a household and supermarkets. The table clearly shows that all the settlements can satisfy their needs for staple foods locally, but the people living in Győrújfalú, Gönyű and Győrújbarát count on Győr as well. Based on the data of the table, it can be seen that clothing, durables and supermarkets are situated only in the central area; consequently, to satisfy these demands the residents are constantly forced to travel to Győr. Some exemptions appear in the “inventory”: in Gönyű and Abda you can purchase clothing, and the residents of Vámoszabadi visit Nagybajcs to buy clothes – probably from the part of the village that is in the immediate neighbourhood with Nagybajcs and can be found a larger distance from Győr. In Bőny you can buy durables and there is a supermarket in Töltéstava – run by SPAR. It is noteworthy that the services which can be found in the abovementioned settlements are not consumed by the other neighbour settlements; their residents find Győr preferable, so the central area has a monopolistic impact.

The following group of functions includes a supply on hospitality showing the locations of confectioneries, restaurants, pubs and cafés in Table 4. Except Vének, you can find a confectionery in each settlement. Although the residents of Vének could visit Kisbajcs for this purpose, they have marked Győr as their

destination. In parallel, Koroncó, Győrújfalú and Győrújbarát also rely on Győr - but only as a secondary choice regarding confectioneries.

Table 4 Functions of hospitality services in the inner circle of Győr's agglomeration

Functions	Confectionery		Restaurant		Pub		Café	
	1.site	2.site	1.site	2.site	1.site	2.site	1.site	2.site
Abda	locally		locally		locally		Győr	
Bőny	locally		locally		Győr		Győr	
Gönyű	locally		locally	Győr	locally		Győr	
Győrújbarát	locally	Győr	locally	Győr	locally	Győr	Győr	
Győrújfalú	locally	Győr	locally	Győr	locally	Győr	Győr	
Ikrény	locally		Győr		locally		Győr	
Kisbajcs	locally		Győr		locally		Győr	
Koroncó	locally	Győr	locally	Győr	locally	Győr	locally	Győr
Töltéstava	locally		Győr		locally		Győr	
Vámosszabadi	locally		Győr		locally		locally	
Vének	Győr		Győr		Győr		Győr	

Source: Edited by the Author based on the VIDGY questionnaire for the public

Regarding restaurants, the question seems to be more complex. At several of the settlements – Kisbajcs, Vének, Töltéstava, Vámosszabadi, Ikrény – there is no restaurant to be found. But an intriguing fact should be highlighted here: namely, that all of the settlements indicated Győr as their destination, even though more of the settlements could be an alternative. Even the settlements with restaurants consider the ones in Győr as a secondary option. However, it is noteworthy that whilst the current study examines outbound trajectories, some inbound trajectories can be observed. The traditional restaurants of the rural area are perfect examples. For example, a restaurant called Fehér Akác in Pér (a settlement which does not belong to the inner circle of the agglomeration because it links to Győr only with a small territory, and it lies between Bőny and Töltéstava) that attracts customers from Győr due its high quality. In addition, the Pierre confectionery (the most outstanding French-style confectionery of the region) in Nagybajcs is a gravitational force and path for the residents of Győr. Quite surprisingly, it turned out that even small settlements are capable of offering exquisite and special products at such a high level that they attract consumers and guests from big cities to consume their services.

Returning to the backbone of the analysis, the functions of pubs and cafés are still to be discussed. It can be stated that pubs are better represented among the local people in the settlements and meanwhile, cafés in great numbers are to be found in Győr.

Table 5 presents the financial services for the public. As can be detected from the table, all the settlements – except Vének and Bőny – have a post office in the research area. Inhabitants of Vének travel to Kisbajcs, while those from Bőny go to Győr to use postal services. Since the before mentioned Vének is the only micro village and Kisbajcs is its neighbour settlement, Győr cannot have a gravitational force regarding this function. On the contrary, the inhabitants of Bőny prefer the post offices in Győr. Numerous settlements do not own ATM machines and their residents target Győr, but the local people in Kisbajcs and Vének mark Nagybaajcs as a secondary trajectory. Except Kisbajcs, Vének and Győrújfalú, bank account management is provided in all the settlements – the residents of the three villages and of Koroncó and Győrújbarát use these banking services in Győr.

Table 5 Public financial services in the inner circle of Győr's agglomeration

Functions	Post Office		ATM machine		Account Management		Borrowings, investment		Insurance	
	1.site	2.site	1.site	2.site	1.site	2.site	1.site	2.site	1.site	2.site
Abda	locally		locally		locally		locally		locally	
Bőny	Győr		locally		locally		locally		locally	
Gönyű	locally		locally		locally		locally	Győr	locally	
Győrújbarát	locally	Győr	locally	Győr	locally	Győr	Győr		Győr	
Győrújfalú	locally	Győr	Győr		Győr		Győr		Győr	
Ikrény	locally		locally		locally		locally		locally	
Kisbajcs	locally		Győr	Nagybajcs	Győr		Győr	Nagybajcs	locally	
Koroncó	locally		locally	Győr	locally	Győr	locally	Győr	locally	Győr
Töltéstava	locally		locally		locally		locally		locally	
Vámosszabadi	locally		Győr		locally		Győr		locally	
Vének	Kisbajcs		Győr	Nagybajcs	Győr		Győr	Nagybajcs	Győr	

Source: Edited by the Author based on the VIDGY questionnaire for the public

Borrowings, investments and insurance are more complex procedures, though quite many of the settlements provide an opportunity for that, and where these services are not available Győr is preferred. Regarding Kisbajcs and Vének, Nagybaajcs is a secondary trajectory.

From Table 6 it is evident that Győr has a huge role in all layers of education from infant nursery to higher education. However, the trajectories not targeting Győr deserve some extra attention. Parents in Kisbajcs take their young

ones primarily to Nagybjacs, the neighbouring settlement and Győr can only be a secondary trajectory. Surprisingly, the inhabitants of Abda choose Győr, while the local people of Ikrény the infant nursery of Abda.

Table 6 Educational functions in the inner circle of Győr's agglomeration

Functions	Infant Nursery		Nursery		Primary School		Lower Secondary School		Secondary School	Tertiary Education	
	1.site	2.site	1.site	2.site	1.site	2.site	1.site	2.site	1.site	1.site	2.site
Abda	Győr		Győr		Kun-sziget	Győr	Kun-sziget	Győr	Győr	Győr	Budapest
Bőny	Győr		Győr		Győr		Győr		Győr	Győr	Budapest
Gönyű	Győr		locally		Győr		Győr		Győr	Győr	Budapest
Győr-újbarát	Győr		Győr		Győr		Győr		Győr	Győr	Budapest
Győr-újfalu	Győr	Győr-zámoly	Győr		Győr		Győr	Győr-zámoly	Győr	Győr	Budapest
Ikrény	Abda	Győr	locally		Győr		Győr		Győr	Győr	Szombathely
Kisbajcs	Nagybajcs	Győr	Győr		Győr		Győr		Győr	Győr	Budapest
Koroncó	Győr		Győr		Győr		Győr		Győr	Győr	Budapest
Töltés-tava	Győr		Győr		Győr		Győr	locally	Győr	Győr	Budapest
Vámos-szabadi	Győr		locally		Kisbajcs		Kisbajcs		Győr	Győr	Budapest
Vének	Győr		Kisbajcs	Győr	Kisbajcs	Győr	Kisbajcs	Győr	Győr	Győr	Budapest

Source: Edited by the Author based on the VIDGY questionnaire for the public

Ikrény, Vámoszabadi, Gönyű and Kisbajcs also run a nursery school. The local people of Vének choose Kisbajcs, while the residents of Kisbajcs prefer Győr when they decide upon nursery schools. Only Kisbajcs can be an alternative to Győr's primary and lower secondary school education for the inhabitants of the research area. Additionally, some residents in Abda register their children primarily in Kunsziget. A significant number of dwellers in Vámoszabadi choose the primary school in Kisbajcs. Concerning secondary education Győr is targeted unambiguously, and young adults also choose Győr primarily for their tertiary education, but the universities of Budapest appear as secondary trajectories and Szombathely for the students coming from Ikrény.

Table 7 presents the field of healthcare functions, in which case the situation is slightly more complex. A General Practitioner and a District Nurse can be found in

all the settlements. However, there are no pharmacies in a number of settlements like Kisbajcs, Vének, Vámosszabadi and Győrújbarát. The residents of settlements without a pharmacy targeted Győr unanimously when they need the service. The same can be stated regarding paediatricians and dentists: if they provide services locally, the residents avail themselves of them; if there are no such services, people primarily target Győr primarily. The people of Győrújfalú would primarily go to Győrzámoly and secondarily target at Győr when they need dental care. Rábapatonna and Nagybajcs are alternatives for the residents of Vámosszabadi and Koroncó. Since higher-level healthcare services such as consultations with a specialist, ambulance and hospitals can be found only in Győr as the spatial trajectories of the residents in the research area target the central area.

Table 7 Healthcare functions in the inner circle of Győr's agglomeration

Functions	General Practitioner		Pharmacy	Paediatrician	District-Nurse	Dentist		Consultations with a specialist, Hospital, Ambulance
	1.site	2.site				1.site	2.site	
Settlement	1.site	2.site	1.site	1.site	1.site	1.site	2.site	1.site
Abda	locally		locally	Győr	locally	Győr		Győr
Bőny	locally		locally	Győr	locally	Győr		Győr
Gönyű	locally		locally	Győr	locally	locally		Győr
Győrújbarát	locally	Ménfőcsanak	Győr	locally	locally	locally	Győr	Győr
Győrújfalú	locally		locally	locally	locally	Győrzámoly	Győr	Győr
Ikrény	locally		locally	locally	locally	locally		Győr
Kisbajcs	locally		Győr	Győr	locally	Győr		Győr
Koroncó	locally		locally	locally	locally	Győr	Rábapatonna	Győr
Töltéstava	locally		locally	locally	locally	locally		Győr
Vámosszabadi	locally		Győr	Győr	locally	Győr	Nagybajcs	Győr
Vének	locally		Győr	Győr	locally	Győr		Győr

Source: Edited by the Author based on the VIDGY questionnaire for the public

As for cultural programmes – Table 8 –, the structure provides a clear picture considering entertainment facilities like the theatre, the cinema or concerts. A total hegemony of Győr can be tracked with two exceptions i.e. the people of Bőny and Győrújbarát also visit the theatres of Budapest. Except for Abda, all the settlements operate a library. A large number of the settlements organizes festivals, but naturally it is the festivals of Győr that are well represented,

although the residents of Győrújbarát also target the Sziget Festival and Volt Festival in Sopron in the summer. Even Rábaszentmihály and Dunaszeg were marked due to their festival programmes by Koroncó and Kisbajcs. Various cultural events occur in all settlements and Győr is not preferred by the residents of the research area.

Table 8 Cultural programmes in the inner circle of Győr's agglomeration

Functions	Theatre		Cinema	Concert	Library		Festival		Cultural Events	
	1.site	2.site	1.site	1.site	1.site	2.site	1.site	2.site	1.site	2.site
Settlement	Győr		Győr	Győr	Győr		Győr		locally	
Abda	Győr		Győr	Győr	Győr		Győr		locally	
Bóny	Győr	Buda- pest	Győr	Győr	locally		locally		locally	
Gönyű	Győr		Győr	Győr	locally		locally		locally	
Győrújbarát	Győr	Buda- pest	Győr	Győr	locally	Győr	locally	Győr Sziget Sopron	locally	Győr
Győrújfalú	Győr		Győr	Győr	locally	Győr	Győr	Buda- pest	Győr	
Ikrény	Győr		Győr	Győr	locally		Győr		locally	
Kisbajcs	Győr		Győr	Győr	locally		Győr	Duna- szeg	locally	
Koroncó	Győr		Győr	Győr	locally	Győr	locally	Rába- szent- mihály	locally	Győr
Töltéstava	Győr		Győr	Győr	locally		locally		locally	
Vámoszabadi	Győr		Győr	Győr	locally		locally		locally	
Vének	Győr		Győr	Győr	locally	Győr	Győr		locally	

Source: Edited by the Author based on the VIDGY questionnaire for the public

4. CONCLUSION

The goal of study was to explore the functions set of Győr and its surrounding settlements, including deficiency, specificities, and the spatial trajectories in the region, which are generated by several functions. Based on existing database (Vehicle Industrial District Research in Győr) I took “inventory” the spatial trajectories of residents of the examined settlements, so I created a structured framework and a “map” of functions and trajectories.

Knowing the scope of functions of all the settlements is a sine qua non of implementing both integrated and good governance. This is a huge task to deliver since a

city is always surrounded by numerous smaller settlements in the spatial structure in Hungary. The national demographic tendencies are well-known. We learn about ageing settlements, ineffectual local governments, lack of resources and function deficits. On the other hand, it seems fair to bind certain functions to the economies of scale. During the spatial relations analysis, it became evident that the population of the settlements of the agglomeration satisfied in all their needs, even if the relevant functions cannot be found in their own settlement. The functions are dispersed all over the urban region, not just the central area dominates them. Due to this fact, different paths and trajectories of the public can be observed, which is generated by the fact that the various functions appear in different settlements. There are small settlements which can provide particular services for other small settlements. However, there are many examples of the city demanding a certain function from a smaller settlement. As a matter of fact, we can state that the population realized long ago that they do not need to insist on their residence and to confine themselves to one place but necessity formed trajectories and paths perpetuate new linkages with other settlements and solve function-related problems.

It could be noted in the inner circle of Győr's agglomeration that the central area has an incredibly strong role concerning functions and the adjacent settlements satisfy most of their needs in Győr. In the meantime, less powerful functions can be found in the settlements of the research area, although we found that the bigger volume the functions have, the stronger the role of Győr is. The settlements target Győr as a primary trajectory even when the required service is available at the neighbour settlement; however, we have seen an example to the contrary as well. Education, healthcare or high culture give Győr a more prominent role among the settlements. In this case, it should be highlighted that it is a huge advantage of the inner circle of the research area to be located maximum 17 km away from the central area, since if we continued our study by examining the farther settlements, we would face a similar picture just with a greater use of means of transport. Thus it can be stated that the inhabitants of the inner circle are the biggest beneficiaries of the function supply of the central area and the advantage originated from the distance serves a type of relief. Although the movement of labour were not displayed separately in the table, it was evidently marked by the residents of the settlements in the research area as their workplace.

The further research of the unfolded ranges of the scale regarding the distance of the settlements from the central area is another exciting research topic. Nevertheless, it can be stated that governance shall harmonise, treat and organise the functions of settlements and the city and its region shall be treated as a unity, learning from the residents, whose evolved spatial trajectories and paths were highlighted by the spatial relations analysis in the current study.

REFERENCES

- Scott, A.-Storper, M. (2003) Regions, Globalization, Development. *Regional Studies*, 37, 6-7, pp. 579-593.
- Brenner, N. (2003) Metropolitan Institutional Reform and the Rescaling of State Space in Contemporary Western Europe. *European Urban and Regional Studies*, 10, 4, pp. 297-324.
- Faragó L. (2006) A városokra alapozott területpolitika koncepcionális megalapozása. *Tér és Társadalom*, 20, 2, 83-102.
- Fekete D. (2014a) Gazdaságfejlesztés az ingolstadtai járműipari központban. *Tér és Társadalom*, 28, 2, 176-187.
- Fekete D. (2014b) Győr aktuális jövőképe a város stratégiai dokumentumainak tükrében In: Dusek T. (szerk.): *A városi rendszer működése*. Universitas-Győr Nonprofit Kft., Győr. 180-188.
- Fekete D. (2017a) Európai járműipari térségek gazdasági kormányzási modelljei. *Tér és Társadalom*, 31, 3, 125-142.
- Fekete D. (2017b) A nagyvárosi régiók működésének fenntarthatósága az EU-ban. *Polgári Szemle*, 13, 4-6, 111-123.
- Forstall, R. (1993) *Metropolitan Growth and Expansion in the 1980s*. DC: US Bureau of the Census, Washington.
- Gerle Gy. (1974) *Környezet és településhálózat*. Akadémiai Kiadó, Budapest.
- Hall, P. (2001) Global city-regions in the twenty-first century. In: Scott, A. (ed.): *Global City-Regions: Trends, Theory, Policy*. Oxford University Press, Oxford. pp. 59-77.
- Kovács T.-Tóth G. (2003) Agglomerációk, település-együttesek a Magyar településrendszerben. (A területbeosztás 2003. évi felülvizsgálatának eredményei.). *Területi Statisztika*, 43, 4, 387-392.
- Pálné Kovács I. (2008) Az új várospolitika kormányzási filozófiája. *Tér és Társadalom*, 22, 1, 45-57.
- Pieterse, E. (2004) Untangling 'Integration' in Urban Development Policy Debates. *Urban Forum*, 15, 1, pp. 1-25.
- Somlyódyiné Pfeil E. (2006) Nemzetállami várospolitikák és az Európai Unió policentrizmus koncepciója. *Tér és Társadalom*, 20, 4, 31-47.
- Somlyódyiné Pfeil E. (2008) A városi térségek a közigazgatási struktúra és a „governance” keresztmetszetében. *Tér és Társadalom*, 22, 1, 27-43.
- Szörényiné Kukorelli I. (2007) *Relations in the space: methods for the research of rural area structure*. Centre for Regional Studies.
- Szörényiné Kukorelli I. (2011) Térkapcsolat-analízis, avagy módszer a rurális területek térstruktúrájának feltárására. In: Hardi T.-Nárai M. (szerk.): *Tudás-Tér-Társadalom, Antológia 25 - Területi kutatások az MTA RKK Nyugat-Magyarországi Tudományos Intézetében*. Magyar Tudományos Akadémia Regionális Kutatások Központja Pécs, Győr. 55-75.
- Szörényiné Kukorelli I. (2014) Város és vidéke - térkapcsolatok elemzése Győr térségében. In: Lados M. (szerk.): *A gazdaság szerkezet és vonzáskörzet alakulása*. Universitas-Győr Nonprofit Kft., Győr. 22-48.
- Tóth G.-Schuchmann P. (2010) A Budapesti agglomeráció területi kiterjedésének vizsgálata. *Területi Statisztika*, 50, 5, 510-529.