

## Spatial development of sports facilities in Hungarian cities of county rank

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**Abstract.** Nowadays more and more attention is devoted to the spatial development of the location of sports facilities within cities. The main aim of our paper is to observe the most important spatial characteristics of their development in Hungarian cities of county rank. In these cities three main periods of development of sports facilities can be observed. Larger sports facilities were constructed especially on the edge of cities or in the suburbs, while in the case of smaller facilities a bigger role was played by locations within the city boundaries. As regards the factors influencing the location of sports facilities, the most important role was played by the location of available land areas, besides accessibility and from the mid-1960s links to existing facilities can be mentioned as well.

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## 1. Introduction

As a result of the increasing significance of sports, which can be observed in the recent decades (e.g. European Commission, 2007; Li, Luk, 2011), researchers dealing with urban geography have also begun to pay more attention to the relationship between sports and urban structure. One aspect of these researches is the location of sports facilities within the cities, with special attention devoted to the spatial development of sports facilities and their most important location factors.

In the United States, Chapin (2000) observed three major stages in the 20th-century development of sports facilities. The first major wave of constructions took place between 1909 and 1925, when the majority of the new facilities were constructed on the outskirts of cities. The next stage started in the 1950s and lasted until the mid-1980s, and the most important characteristic feature of this period was the suburbanisation of the sports facilities (Bale, 2003; Barghchi et. al., 2009).

Beginning from the early 1990s, however, downtown locations have come to the foreground (Turner, Rosentraub 2002), which can be explained by several factors (Newsame, Comer 2000). Firstly, leaders of the settlements have increasingly realised since the 1990s the potential role that sports and sports facilities can play in the renewal of the often deteriorated inner city areas. Secondly, the changes in the economic background of professional sports (Chapin, 2000) can be mentioned. This means that in the past twenty-five years, a new and highly solvent base of corporate supporters can be observed, primarily including local financial institutions and law firms. It is first and foremost these corporate sponsors who purchase the VIP boxes of stadiums, which is an important source of revenue for the owners. People belonging to this employment group mainly work in the new office blocks erected at the time of the renewal in the inner city area and live not too far from them, and therefore the intention of maintaining a close distance with them justifies the central location of sports facilities.

In contrast with the United States, in Europe the analysis of the spatial development of sports facilities has so far received much less attention, and such analyses were only prepared with respect to a

few countries/cities. On the basis of the publications (e.g. Black, Lloyd, 1992; Bale, 1994; Horak, 1995; Bale, 2003), we can conclude that the majority of the major stadiums used in the early 1980s were originally constructed on the edge of cities, often in areas crowded with industrial facilities; however, these locations have become much more a part of the inner areas of cities in the meantime.

Due to the increasing popularity of football, however, the existing facilities proved to be small, and in order to increase their revenues, clubs set as an objective the construction of larger facilities. The demands that arose could not be satisfied in most cases in the existing location, and as a result the suburban location became very popular, which was further reinforced by lower land prices, the effects of favourable accessibility by cars, as well as the possibility of constructing facilities on the plot that include also elements other than stadiums (e.g. shopping and entertainment centres).

In the light of the above, the aim of this paper is to analyse the spatial location of sports facilities in Hungarian cities of county rank and to answer the following questions:

- What periods of the development of sports facilities can be identified in the cities examined?
- In which spatial category (city centre, within the city, on the edge of the city/suburbs) can the location of sports facilities be classified?
- What factors (economic, social, logistic, urban) have influenced the location of sports facilities within the cities?

## 2. Methodology

The Hungarian cities of county rank discussed in this study include 19 county seats, as well as five settlements (Fig. 1), each with a population over 50,000. The role these settlements play in sports has increased significantly, especially in the past two decades, which is clearly reflected in the role that they have played in the most popular team sports since 1990: in the 1950s, in the most popular team sports (football, handball, basketball, water polo and ice hockey) only 13% of teams winning the Hungarian championships played in these cities, but in the 1990s, this number was 70%.

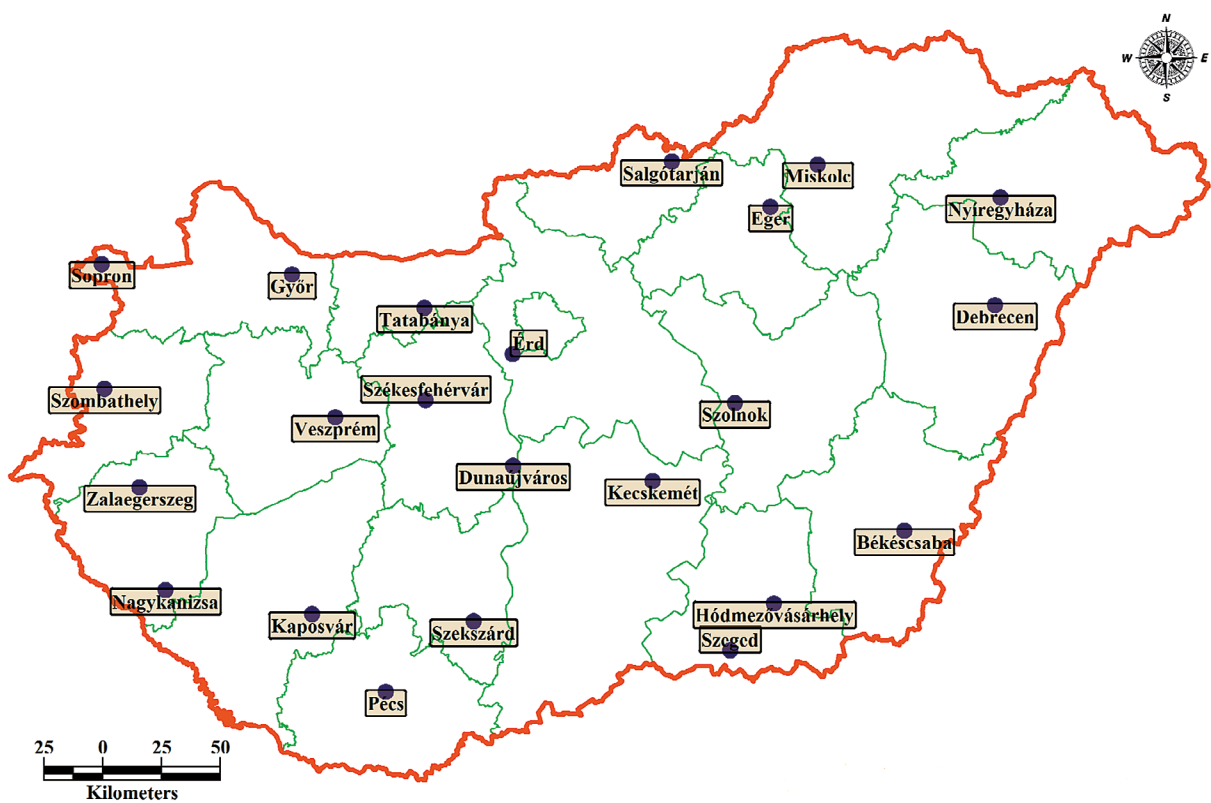


Fig. 1. Location of Hungarian regional centres

Source: Own work

In the course of the research, 161 sports facilities have been examined out of which only 127 serve the purpose of sports, while the rest – in line with the processes that can be observed in Hungary and in other Central European countries – have been decommissioned and are currently used for other purposes.

On the basis of their physical size, two groups of sports facilities can be distinguished: large-scale facilities which include football fields and sports complexes, and small-scale facilities such as outdoor basketball and handball fields, sports arenas, ice rinks and swimming pools.

The research was based on two important sources: on the one hand, we studied the maps of the settlements concerned, and on the other hand, we also used literature on the sports life and the history of individual settlements (eg. Filep, 1988; Gáspár, 1999; Varga, 1995; Posch et al., 2003; Thékes, 2004; Varga, 2004; Papp, 2005; Kövér, 2009; Orosz, 2009). On the basis of the maps we have determined the location of the sports facilities within the cities at various times, and also calculated their distance from the

city centres. The literature on settlements and sports life was used in two areas. It provided information on the construction and modernisation date of individual sports facilities, and in several cases it also outlined the factors taken into consideration in the selection of the location of those facilities.

### 3. Sports facilities in Hungarian regional centres

#### 3.1. The most important characteristic features in the development of sports facilities

Concerning the development of sports facilities, six stages can be differentiated in the examined cities (Table 1). An important characteristic feature of pre-1920 period was (Table 2) that, as a result of the dominant role played by gymnastics, in larger cities gymnasiums were constructed; however, these facilities could not yet accommodate large numbers of spectators. By contrast, as a result of the increasing popularity of football and athletics, stadiums

were built in several cities; however, in this period, the quality of these facilities (for example, the equipment serving the convenience of the spectators) was very low.

**Table 1.** Stages in the development of sports facilities in the examined cities

	New facility		Significant* modernization
	Total number of facilities	New facilities per year	of existing facility
Before the 1920s	17	1.13	0
Between the world wars	28	1.40	4
Mid-1940s to mid-1960s	27	1.35	4
Mid-1960s to late 1980s	72	2.88	11
Late 1980s to late 1990s	3	0.30	8
Late 1990s to 2010	14	1.40	30

Explanation: \* - significant modernisation: erecting a roof over the facility (e.g. skating rink) or expanding the number of spectator facilities (sports hall, football stadium)

Source: Own survey

**Table 2.** The link between the date of construction of new sports facilities and the type of the facilities

	Large-scale		Small-scale sports facilities	
	sports facilities	outdoor fields	sports arenas	ice rinks, swimming pools
Before the 1920s	11	0	6	0
Between the world wars	23	0	2	3
Mid-1940s to mid-1960s	12	7	4	4
Mid-1960s to late 1980s	17	5	33	17
Late 1980s to late 1990s	1	0	1	1
Late 1990s to 2010	0	0	5	9

Source: Own survey

We can identify the first large period in terms of the development of the sports facilities between the two world wars, when several important developments took place: on the one hand, facilities that served new branches of sports (e.g. football, athletics, rifle shooting, tennis) and at the same time provided a higher standard of services to both spectators and participants of sports were constructed; on the other hand, as a reaction to the increasing demand for higher quality, significant efforts to modernize the existing facilities were made (Filep, 1998).

The period of approximately 20 years after World War II (until the middle of the 1960s) was characterised by a slower paced development of sports facilities, which can be explained by two reasons.

Firstly, as a result of the developments in the earlier period, for the most part, the existing facilities were able to satisfy the arising demands. Secondly, the financial resources available in these decades were primarily directed towards economic development as well as towards infrastructural projects more directly serving the needs of the population (education, health). As a result, the amount of resources available for investments of larger sport-related investments were hardly sufficient.

The period between the mid-1960s and the mid-1980s saw a second great wave in the development of sports facilities, which was due to several factors. At the beginning of this period, the state and party leadership recognised that the improvement of the material conditions and facilities of sports was nec-

essary (Bakonyi, 2007). As a result of the economic development in this period, there were one or two large companies in most cities which, realising the importance of sport, not only provided sources for the operation of their sports clubs but, when necessary, even carried out major infrastructural developments for them (Posch et al., 2003; Varga, 2004; Papp, 2005).

The local governments had more financial resources (Varga, 1995) at their disposal, which they partly used for investments aimed at increasing the population's standard of living (including sports-related developments). As a last major incentive it should be mentioned that the international standards of certain branches of sports also became stricter (for example, it became a requirement in the case of the increasing number of ball games that they be played indoors), which made further investments/modernisations necessary.

The period between the mid-1980s and the late 1990s witnessed a significant drop as regards the development of sports facilities, which can be clearly seen in the almost total absence of new facilities, as well as in the fact that primarily smaller facilities were modernised at that time (Table 1). There are two possible explanations for this fact. On the one hand, the facilities built in the earlier periods were fundamentally suitable for satisfying the arising needs. On the other hand, as a result of the economic crisis accompanying the political changes, the central government and the local governments, as well as private companies lacked the financial resources that they could devote to this purpose.

The third big wave in the development of sports facilities can be observed from the end of the 1990s. In this period modernisation and upgrading played a more important role than new investments (Table 1). In the background of this development we can find, first of all, the increasing demands toward these facilities: international sporting events (e.g. UEFA Champions League and European League, World and European Championships) could now only be organised in facilities that provided a high standard of services. Secondly, the central governments in power from the late 1990s (especially the Orbán administration in power between 1998 and 2002) devoted special attention and allocated significant financial resources, provided for by economic growth. Thirdly, we can mention the growing interest of the private sector which be mentioned, manifested also in infrastructural developments.

### 3.2. The types of locations of sports facilities and their location factors

The location of sports facilities within cities (Table 3) and the factors influencing this spatial configuration are closely linked to the periods of developments described above (Table 1), as well as to the different types of those sports facilities. Before World War II, in the case of the gymnasiums, the most important factor was accessibility, and due to this reason, as a result of the low level of the available public transportation, the typical location of these facilities was within the city or in the city centre (Table 4).

**Table 3.** The location of newly constructed sports facilities of different types within the cities at the time of their construction (%)

	Large-scale sports facilities			Small-scale sports facilities		
	A	B	C	A	B	C
Before the 1920s	0.0	18.2	81.8	50.0	33.3	16.7
Between the world wars	4.2	16.7	79.2	25.0	75.0	0.0
Mid-1940s to mid-1960s	0.0	22.2	77.8	26.7	40.0	33.3
Mid-1960s to late 1980s	0.0	25.0	75.0	5.7	52.8	41.5
Late 1980s to late 1990s	-	-	-	-	.	.
Late 1990s to 2010	-	-	-	15.4	46.2	38.5

Explanation: A – city centre, B – within the city, C – edge of the city/suburbs

Source: Own survey

**Table 4.** The distance of newly constructed sports facilities from the centre of the given city in the various periods (the figures are in % and indicate the ratio of the distance between the facility and the city centre on the one hand and the radius of a city with the same area as the one examined on the other hand)

	Large-scale sports facilities	Small-scale sports facilities
Before the 1920s	44.35	28.09
Between the world wars	54.39	23.63
Mid-1940s to mid-1960s	50.30	38.75
Mid-1960s to late 1980s	58.30	51.33
Late 1980s to late 1990s	-	-
Since the late 1990s	-	47.89

Source: Own survey

By contrast, when deciding on where football stadiums were to be built, preference was given to locations on the edges of cities, which can be explained by two factors. The first factor that must be mentioned was the need for vacant land areas of significant size, which were typically available on the edge of the settlements. The second factor was due to the fact that a significant part of the developments was financed by the Hungarian State Railway (Filep, 1998; Kövér, 2009) or some other large company (Varga, 2004; Papp, 2005). Their premises were on the edge of the city, and since these facilities also served the purpose of providing recreational opportunities for the employees of these companies, it was obvious that they would be built in close proximity.

By the period following World War II lasting until the mid-1960s, two trends could be noticed in the selection of the location of facilities. Firstly, in the case of larger sports facilities, due to the above-mentioned availability of vacant land areas, location on the edge was still typical. Secondly, in the case of smaller sports facilities, location in the city centre or within the city dominated, which can be explained by the need of smaller land area in the case of handball and basketball courts (Gáspár, 1999; Orosz, 2009), as well as by the fact that in this way easier accessibility of these facilities could be ensured.

The trends which can be witnessed between the mid-1960s and the mid-1980s were partly identical with and partly the opposite of what could be noticed earlier. Three of the four large stadiums constructed in these decades (the speedway stadiums in Debrecen and Szeged; Rába ETO stadium in Győr) and some of the youth sports complexes (Debrecen, Székesfehérvár) were built on the edge of the city (Thékes, 1994; Papp, 2005), while the location

chosen for youth sport complexes in Miskolc and Győr was within the city in order to be closer to the potential users.

Different processes were taking place in the case of smaller facilities. First of all, in the course of the development of new open-air handball stadiums, municipal sports halls and ice skating rinks, there was a clear effort to choose locations within the settlements, so that these facilities would be easily accessible by public transportation (Orosz, 2009). As a result of the scarcity of vacant lots close to the city centre (a constraint) and the development of the system of public transportation (an opportunity), the dominant tendency was to build new facilities farther away from the city centre.

As a second factor concerning the development of sports halls linked to companies, the location on the edge of settlements dominated. The main reason for this fact was that in addition to satisfying the demands of professional sports, these facilities also served the purpose of amateur sports of companies, which made it necessary to build them close to the premises of the given companies (Posch et al, 2003). A third factor was that ensuring a better management of the available properties as a declared intention first appeared in this period as a new consideration in the location of facilities (Thékes, 1994). This meant that some of the new developments were built in the urban areas that had previously already been used for the purposes of sports (e.g. Debrecen, Szeged, Miskolc).

As can also be seen in Table 1, in the last major stage of the development of sports facilities (the first decade of the new millennium), an important role was still played by the modernisation processes that had commenced in the previous period. The prima-

ry location where newly constructed smaller sports facilities were found was within the city, which is related to the requirement of good accessibility. In addition to the above, the intention to use the small-scale sports facilities as part of urban rehabilitation also emerged, as did the demand for linking them to the existing endowments of the city, which is evidenced by the decrease of the distance of the facilities relative to one another.

#### 4. Conclusions

Having examined the development of sports facilities, it can be observed that until the early 1920s an increase in terms of quantity took place, while in the period between the two world wars a bigger emphasis was placed on quality. The second great wave of development was the period between the mid-1960s and the end of the 1980s, and then the new millennium brought another big upsurge; however, at this time an important role was played by

the modernisation/upgrading of the facilities constructed earlier.

As regards the location of the sports facilities within the cities, facilities requiring larger areas (stadiums, sports complexes) were mainly located on the edge of cities or in the suburbs, which is very much in line with the trends that we can also observe across Europe. By contrast, in the case of smaller facilities – with the exception of those mentioned earlier (e.g. sports halls linked to companies) – a bigger role was played by locations within the city boundaries. At the same time, the spatial development of the settlements also caused certain changes: a significant part of the facilities constructed before World War II would rather count today as being located within the city boundaries.

Regarding the factors influencing the spatial location of sports facilities (urban – the available free land areas, logistic – good accessibility, social – proximity to the potential users, economic – proximity to existing facilities) subject to the types of the facilities, certain similarities and differences can also be observed between the periods (Table 5).

**Table 5.** Importance of location factors influencing the newly built sports facilities in different periods

	Location factors							
	large-scale sports facilities				small-scale sports facilities			
	urban	logistic	social	economic	urban	logistic	social	economic
Before the mid-1940s	***	*	***	*	*	**	**	*
Mid-1940s to mid-1960s	***	**	*	*	*	***	**	*
Mid-1960s to late 1980s	***	**	*	**	*	**	**	**
Late 1990s to 2010	n.a	n.a	n.a	n.a	*	***	*	**

Explanation: \*\*\* - very important (it can be observed in the case of at least 66% of new facilities), \*\* - important (it can be observed in the case of at least 33% but less than 66% of new facilities), \* - not important (it can be observed in the case of less than 33% of new facilities)

Source: Own survey

In the case of large-scale sports facilities, the urban factor played an important role in each of the periods examined, while the role of the logistic factor has increased in the decades after the Second World War. The importance of the social factor (for example, proximity to companies) can be emphasised especially in the early period, while the economic factor has started to receive more attention from the middle of the 1960s.

In the case of small-scale sports facilities, fundamentally opposite processes can be observed. Due to the smaller land footprints, the role of the urban factor was never of outstanding importance, while in the case of the logistic factor the exact opposite tendency can be identified. The role of the social factor was most important during the 40 years following World War II, while the importance of the economic factor has increased in the past few dec-

ades, similarly to large-scale sports facilities. As a consequence of the above, the average distance between the sports facilities has been decreased and in most cities a spatial concentration of sports facilities can be observed which resembles what can be generally experienced in continental Europe (Smith 2010).

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