

STUDY OF SPORTS CONSUMPTION HABITS IN A CENTRAL EASTERN EUROPEAN CAPITAL CITY

SPORTFOGYASZTÁSI SZOKÁSOK EGY KÖZÉP-KELET-EURÓPAI FŐVÁROSBAN

This study investigates attitudes toward sports experiences, public sports, and sports facilities in Budapest, focusing on sports-related needs and habits. Based on a quantitative survey of 1.000 respondents who regularly engage in sports, it assesses their opinions and expectations regarding municipal roles in promoting local sports. Nearly 80% of participants believe that local governments should play an active role in supporting community sports. The findings reveal that around 70% of Budapest residents exercise independently, primarily engaging in outdoor cardio activities, indicating notable price sensitivity. Consequently, investments in public sports equipment parks should be prioritized. Respondents spending less on sports express a demand for cost reductions from local authorities. The results also confirm that a city's sports infrastructure has a strong influence on local participation rates. Furthermore, gender, education level, and place of residence significantly affect sports-related expenditures, while economic awareness shapes residents' sports choices and spending behaviour.

Keywords: sport consumption, sport expenditure, sport infrastructure, sport economy, public service provision, physical activity, recreational sport

Jelen kutatás a sportolási élmények, a fővárosi sportlétesítményekhez fűződő attitűdök, a sportolási igények és szokások megismerésére fókuszál, budapesti viszonylatban. A cikk célja, a rendszeresen sportoló populáció megismerése kvantitatív kutatási módszerrel, 1000 fős mintán. A közösségi tapasztalat ismerete kulcsfontosságú a városvezetés szakpolitikai döntéseinek, hiszen a rendszeresen sportolók közel 80%-a az önkormányzati beavatkozást várja. Budapesten a lakosság közel 70%-a önállóan végez fizikai aktivitást, és ők leginkább a kültéri kardió sporttevékenység űzését helyezik előtérbe, ami egyfajta érzékenységre is utal, ami a sportinfrastrukturális fejlesztések esetén a közterületi sporteszközparkok priorizálását szorgalmazza. Ez a réteg kimutathatóan kevesebbet költ sportcélú kiadásokra, valamint lakossági költségcsökkentési igényként is megfogalmazódott a helyi önkormányzatok felé. A sportágak népszerűségének aránya is kapcsolatot mutat a tudatos gazdasági alapú sportágválasztással, mely esetben a lakossági érzékenység hangsúlyosan megjelenik. A szerző továbbá azonosította, hogy a városi sportinfrastruktúra alapvetően meghatározza a sportágak helyi népszerűségét, míg a nem, az iskolai végzettség és a lakóhely szignifikánsan befolyásolja a sportkiadások mértékét.

Kulcsszavak: sportfogyasztás, sportkiadások, sportinfrastruktúra, sportgazdaság, közszolgáltatás nyújtása, fizikai aktivitás, rekreációs sport

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Author/Szerző:

Hentz Zsuzsanna^a (hentz.zsuzsanna@edu.pte.hu) PhD student

^aUniversity of Pécs (Pécsi Tudományegyetem) Hungary (Magyarország)

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Through its continuous development, modern sport has become a sector with significant social and economic impact (Sárközy, 2017). The economic situation of sport has improved significantly, with considerable growth observed in several areas, including industrial organizations, economics, and labor economics. These areas demonstrate the complexity and diversity of sports economics, both as an academic discipline and as a practical field (Leeds et al., 2022). The growing interconnection between sport and broader economic systems reflects its dual role as a cultural phenomenon and an economic driver.

The global sports economy was worth USD 512 billion in 2024 and is expected to reach USD 800 billion by 2030 (Deloitte, 2025). Based on this, the main sources of revenue are media rights, sponsorship, merchandising, and sports tourism, but the economic role of recreational sports is also growing, as recreational sports participants can generate more than EUR 200 billion in economic value annually in the EU (ISCA, 2025). In addition, the EU budget has steadily increased its spending on leisure and sports activities, given their significant economic and social impact, from €44.070 million in 2013 to €60.500 million in 2022. The government's priority in this area has clearly increased, with support growing particularly during the pandemic. This sector is a significant social and economic driver, especially in local communities.

Sport increasingly became a commodity during the 20th century and developed into an extremely profitable industry, bringing about a broader transformation of leisure and the emergence of a market-driven consumer culture. It has been proven that increasing physical activity in society brings great benefits to the national economy (Ács et al., 2011; Ács et al., 2016).

If a municipality has low levels of sport participation or if appropriate sporting opportunities are not available for certain groups, local leaders can take targeted measures to address the problems. In addition, sport consumption is closely linked to the functioning of the local economy. Playing sport, attending sporting events and buying sport-related products can have economic impacts, create jobs, increase the turnover of local businesses and contribute to tourism. The development of sport consumption can therefore be interpreted as an economic indicator, and sport therefore plays a key role in the performance of local and municipal authorities.

The study by Szabó, Máté and Havran (2021) is one of the first comprehensive Hungarian studies on the economic role of recreational sports in Central and Eastern Europe, with a particular focus on Hungary. Between 2010 and 2019, households significantly increased their spending on leisure sports services and sports equipment. In Hungary, this increase was around 14%, while in Bulgaria it was 34% and in Slovakia 29%. This suggests that, although there is still some catching up to do in terms of market size in the euro area, consumer demand is showing an upward trend.

Based on data from the Central Statistical Office (2023), it can be concluded that, according to the per

capita consumption volume indices for the household sector in Hungary, the demand for goods in the culture, entertainment and leisure sports showed an average annual growth of 4.25% between 2000 and 2023. The impact of the COVID-19 pandemic deserves special attention, as it caused demand to fall by 1.2% in 2020. However, in 2021, with the easing of pandemic measures, the consumption volume index rose by 20.8%, followed by a further 17.2% increase in 2022. Although the pace of expansion slowed in 2023, growth was still 6.2% higher than in the previous year. This trend is supported by the fact that in the post-pandemic period, the population's affinity for sports increased significantly, related market segments expanded dynamically, and sports consumption behavior underwent a major transformation. In comparison, actual household consumption increased by only 2.5% on average between 2020 and 2023. In the post-COVID-19 period, the willingness to engage in physical activity slowly and gradually returned to pre-pandemic levels (Fenyves, 2023), but changes in the way physical activity was performed persisted.

Over the past years, a number of transformations (e.g. COVID-19, inflation) have had an impact on the quantitative and qualitative realization of physical activity (Skinner & Smith, 2021; Evans et al., 2020; Horky, 2020; Parnell et al., 2020; Ratten, 2020), and it is therefore of paramount importance to examine the current situation, both by identifying the current influencing factors and by learning from existing opinions and experiences. In this research, the focus of the study of sports consumption is on active sports consumption, including both formal, i.e. with market transactions, and informal, i.e. without market transactions (Kokolakakis et al., 2017). Formal sport intuitively refers to club-based sports in which governing bodies can make important decisions, exercise control, and establish operating models (Jeanes et al., 2019). Informal sport can intuitively be considered as sport practiced "outside" these structures, such as soccer played in the park, group cycling tours (O'Connor & Brown, 2007), and "parkrun" (Hindley, 2018).

The study focuses on sporting experiences, attitudes towards public sports and sports facilities in the capital, sporting needs and sporting habits. The aim is to find out the attitudes and opinions of the population that regularly participates in sports in Budapest. The main categories of the exploratory research were the population playing sports independently without a coach, the population playing sports under the guidance of a coach, the certified amateur athletes (inter-organised sporting activities) and the professional athletes (inter-organised sporting activities).

In the following, the paper summarises the theoretical framework of sports consumption and puts into context the characteristics of different forms of sports. It then describes the environmental influences that are most likely to affect the propensity to participate in sports and thus influence different sports attitudes. Finally, the study presents its quantitative findings and draws various conclusions and recommendations that can serve as

incentives for urban sports orientation, with a particular focus on Budapest, the capital of Hungary.

Budapest as an urban area is a particularly relevant location for studying sports consumption for several reasons. On the one hand, the capital is Hungary's most populous and economically developed settlement, where a significant part of sports services, infrastructure, and market opportunities are concentrated. On the other hand, Budapest's unique socio-economic and cultural background, as well as its historical development, influence the patterns and prevalence of sports consumption. Budapest is home to a significant proportion of the country's population, which represents an extensive demand base for sports consumption services (Hajdú, 2016). The city has a well-developed network of sports facilities and high-quality sportclubs and sporting events, which promote formal sports consumption (Szabó, Máté & Havran, 2021). This is particularly important in sports consumption involving market transactions, such as gym memberships, competitions, and the purchase of sports equipment.

Recreational sports and sports consumption

Nowadays, doing sports is a value, a priority in many aspects of life, including health promotion and development, but it also plays an important role in public education, tourism, media and the economy (Csernák, 2023). The sport economy has a significant impact on the labour market, health and local economies, and is therefore closely linked to society as a whole (Ács et al., 2020). With its significant social and economic impact, it is necessary to seize all opportunities to increase physical activity (Ács et al., 2011; Stocker & Ács, 2012; Ács et al., 2016).

During the 20th century, there was a strong separation between recreational and professional sports (Sárközy, 2013). The increased amount of leisure time and the spread of a health-oriented worldview gave rise to new leisure habits, thus the emergence of recreational sports (Kovács, 2010), and, in contrast, the importance of the need for hard competition and performance, thus the other pole, professional sports, was also intensified (Fóris & Bérces, 2005).

Recreational sport is a voluntary, informal, active, physically demanding leisure activity involving physical exertion and physical exercise, according to specific rules (Nagy, 1995). There are both formal, i.e. with market transactions, and informal, i.e. without market transactions (Dénes & Misovicz, 1994), as sport can be played in commercially based service providers, public institutions, public parks, squares, NGOs (associations) and at home (Szabó, 2011). Professional sports are clearly for-profit industries, but there are also business elements in recreational sports. For this reason, sport consumption can be understood in both professional and recreational sports. According to Dénes and Misovicz (1994), sports consumption is nothing other than the production, distribution and exchange of sports goods and services, as well as the set of decision alternatives that arise in consumption and their realisation.

Sports consumption was previously divided into three domains by Stewart et al. (2003). The first of these is active sport consumption, where individuals engage in sport on their own, through active participation, while investing their time, energy and money. The second area is passive sport consumption, i.e. passive participation, where the individual becomes involved in the sporting activity merely as a spectator. The third element takes the form of various sports products and equipment, sports services (Csóka & Töröcsik, 2018).

In the case of passive sport consumption, participation in sport is only indirect, as individuals participate passively and thus only consume the experience of sport (Csóka et al., 2020). In recreational sports, the direct source of revenue can be the consumer, sponsorship and merchandise market, while the indirect source is the sports market (Szabó, 2012). For providers of recreational sports, they are manufacturers and suppliers of sports equipment, equipment and sportswear. With regard to this market, we can speak of derived demand, since, if consumer demand and demand for recreational sports services increases, then demand for sports equipment, sports equipment, sports clothing will also increase.

According to Kovács et al. (2015), the main inhibiting factor for the consumption of leisure sports is the lack of leisure time, while the cost of the sport is only second. The Eurobarometer (2022) also identified lack of time as the main reason for not taking part in sports (Kosztin & Balatoni, 2019), but for socially disadvantaged populations, financial constraints are at least as strong a barrier. It is therefore clear that, in addition to inadequate attitudes and lack of time, the dimension of money is also a strong determinant of sport. According to Paár (2010a), money, the dimension of income, is the most important influencing factor, since in Hungary sports consumption expenditure is considered a luxury good, so we can only spend our leisure time on leisure sports consumption in an appropriate economic and social environment (Paár, 2010b), whereas for instance in Germany the characteristics of sports consumption is significantly different (Paár et al., 2021).

However, in addition to these, a secondary filter is also present in the area of sport consumption, namely the quality of the various sports services. Quality has become a fundamental factor in determining consumer satisfaction (Szabó, 2012). The intangible values that are generated in the consumer have become the main focus of value creation (Stocker, 2013), and sports does not only create value in tangible form for the consumer of the sports service.

The emergence and spread of the COVID-19 virus have directly affected all areas of the world. In a very short time, the virus outbreak has changed many lifestyle habits and behavioural patterns (Mutz & Gerke, 2021). Sport is one of the areas that has been strongly affected by the outbreak. In 2020, a significant downturn was identified in the sports industry, affecting both competitive and recreational sports systems and players, as well as impacting related sports markets, sports tourism or even sports media sectors (Skinner & Smith, 2021; Evans et al., 2020; Horky, 2020; Parnell et al., 2020). Restrictions have also

had a significant influence on the physical activity of the population and on the development of their sporting habits (Ráthonyi et al., 2021; Stockwell et al., 2021) and even their psychological well-being (Laczkó et al., 2023).

Stockwell and colleagues concluded in their study of 64 representative studies conducted in countries around the world that during the first wave of the COVID-19 epidemic, the time spent in physical activity decreased and the time spent in sedentary activities increased in almost all countries worldwide. Only 3 of the 45 studies in the adult population found no significant reduction in time spent exercising (Romero-Blanco et al., 2020; Muriel et al., 2020). 17.7% of studies in the adult population found a reduction in time spent exercising of more than 50% (Stockwell et al., 2021).

During the COVID-19 pandemic, physical activity levels in Hungarian sports also changed significantly ($p < 0.001$), decreasing by 166 ± 1128 minutes (mean \pm SD) per week on average. Physical activity levels decreased the most in women (-286 ± 980 minutes per week) and children (-304 ± 951 minutes per week), and the least in middle-aged people (-83 ± 1024 minutes per week) and graduates (-99 ± 982 minutes per week). Better quality of life was experienced by those who were more physically active during the pandemic ($p < 0.001$) or even increased their physical activity ($p = 0.030$). The more physically active people are, the greater their well-being (Szabó et al., 2020).

Based on data from the Central Statistical Office (2023), it can be concluded that, according to the per capita consumption volume indices for the household sector in Hungary, demand for goods in the culture, entertainment and recreational sports in Hungary showed an average annual growth of 4.25% between 2000 and 2023. The impact of the COVID-19 pandemic deserves special attention, as it caused a 1.2% decline in demand in 2020. However, in 2021, with the easing of pandemic measures, the consumption volume index rose by 20.8%, followed by a further 17.2% increase in 2022. Although the pace of expansion slowed in 2023, growth was still 6.2% higher than in the previous year. This trend is supported by the fact that in the post-pandemic period, the population's affinity for sports increased significantly, related market segments expanded dynamically, and sports consumption behavior underwent a significant transformation. In the post-COVID-19 period, the propensity to exercise slowly and gradually returned to pre-epidemic levels (Fenyves, 2023), but changes in the way in which physical activity was performed persisted.

In addition to the lifestyle changes caused by the epidemic, various economic factors such as economic growth, income levels, inflation and unemployment also have a significant impact on sport consumption and sporting habits. The relationship between the economic situation and sport is complex and multidimensional. Economic growth and high income, levels tend to increase attendance at sporting events, and the amount spent on sport (Muszbek, 2018). In contrast, economic downturns and declining incomes can reduce sport consumption, as

households reduce non-essential expenditures, including sport-related expenditures, which are considered luxuries, as disposable income becomes less valuable (Paár, 2010b).

The number of academic articles examining the direct relationship between inflation and sport consumption is very limited, but empirical research suggests that inflation has a significant and direct impact on the quantity and quality of sport consumption (The Financial Times, 2024).

According to the most recent data from the Hungarian Central Statistical Office (KSH), inflation in Hungary averaged 3.7% in 2024, rising to 4.6% in December. In 2024, prices rose by an average of 3.7% year-on-year (KSH, 2024), with food prices increasing by 2.8% and services by 8.9%.

Economic factors, such as inflation, can indirectly affect sport consumption through social interactions and changes in consumer habits, and are therefore an important background factor for this research.

Research design

An examination of the associated social influences is essential to the current understanding of sporting habits and attitudes, and the background of this study was influenced and framed by this theoretical inquiry. Based on the literature review, the following research questions (RQ), and hypothesis (H) were proposed:

Research Question1: *What differences can be identified between formal and informal leisure sports habits, by type of sports activity?*

Hypothesis1: *There is a significant difference between the sporting habits of informal and formal recreational athletes.*

Research Question2: *What relationship can be identified between the demand for active sports consumption (amateur and professional certified athletes playing sports in organised settings) and supply (number of sports clubs and sports enterprises operating in the districts of Budapest)?*

Hypothesis2: *Active sports consumption demand (amateur and professional certified athletes performing in an organised setting) and supply (number of sports clubs and sports enterprises operating in districts of Budapest) have a linear relationship.*

Research Question3: *What kind of relationship can be observed between demographic factors and the level of spending on sports activity?*

Hypothesis3: *Gender, educational attainment, and place of residence significantly affect the level of spending on sports.*

Data and methodology

In order to collect data, I conducted a primary online questionnaire survey. The questionnaire was compiled based on previous domestic and international research on sports consumption and leisure habits (Downward & Riordan, 2007; Eurobarometer, 2022) and used a previously validated 25-item questionnaire structure that represents a five-dimensional (consumer attitude) sports consumption

attitude model. This tool allows for a quantitative analysis of sports consumer attitudes. The questionnaire was based on responses received between March and September 2024.

The sample consisted exclusively of Budapest residents aged between 14 and 65 who regularly participate in sports (based on place of residence). The sample therefore did not represent the entire population of Budapest, but a specific subgroup.

Budapest has a population of approximately 1.65 million, of which approximately 65-70% are between the ages of 14 and 65. According to Eurobarometer (2022) data, the proportion of people who regularly participate in sports in Hungary is 35-45%, which means that the estimated size of the Budapest population is 480,000, and the sample size is 0.2%.

I selected the elements of the population using a stratified random sampling method (N=1000), as the research focused on the population that regularly participates in sports. I rounded the sample numbers presented for easier interpretation.

The theoretical background of the research was further supported by a personal survey of sports sector employees in the 23 districts of Budapest, which will be used to compile a list of all sports facilities in Budapest. The results were corrected by document analysis and online data collection (Table 1).

practised sport, and different subjective factors, whereby experiences, needs and subjective values were expressed.

The aim of the questionnaire survey was to examine the results of social listening on a larger sample, focusing on sporting experiences, attitudes towards public sport and sport facilities in the capital, sporting needs and sporting habits. The research focused exclusively on the attitudes and opinions of the regular sports population, relying on the direct experience of sports participants.

This combined research method allowed to nuance the results obtained in more detail and contributed to the validation of the research, given the cross-validation of different data sources. It also made better performance estimation more achievable and reduced bias.

The results of the exploratory research have been demonstrated through frequency calculations. A linear regression (β) test was used to examine the extent of gender, education and residence as independent variables and sport expenditure as dependent variable. The fit test of the regression model was complemented by a coefficient of determination (R^2) calculation. The relationship between the type and number of sports facilities available in Budapest and the most popular sports was also measured using multiple linear regression. In addition, I examined whether the number of sports clubs and sports enterprises is correlated with the proportion of physical

Table 1.

Characteristics of the participants (sample) of the questionnaire survey

Characteristic	Category	Percentage	Absolute number (individuals)
Age	mean	34.5 yr	–
	median	29.7 yr	–
	mode	35.6 yr	–
	min	14 yr	–
	max	65 yr	–
	standard deviation	14.8 yr	–
Place of residence	living in the Buda district (I., II., II., XI., XII.)	39%	390
	living in the Pest district (IV., V., VI, VII., VIII., IX., X., XIII., XIV., XV., XVI., XVII., XVIII., XIX., XX., XXI., XXII., XXIII.,)	61%	610
Education level	bachelor's degree	28%	280
	secondary education	51%	510
	tertiary education	21%	210
Gender/sex	men	48%	480
	woman	52%	520

Source: own compilation

The qualitative questionnaire research used closed questions and open-ended questions as well to find out respondents' personal opinions, attitudes, experiences and motivations about playing sport. The questions covered demographic factors such as gender, age, place of residence (including district), different attitudinal, sociocultural factors such as: type of sporting activity, level of spending on sport, areas of sport consumption,

activity performed in organised settings and the proportion of amateur and professional certified athletes performing in organised settings. When applying statistical analyses, categorisation was carried out, on the basis of which the extracted data and information were organised, grouped and classified into categories. The purpose of the categorisation was to make the raw data processable and to organise it according to aspects related to the

research questions. On this basis, the categories made it possible to identify relationships and patterns between the different elements. I used a paired t-test to compare the quantitative and qualitative assessment of sporting opportunities.

Results

According to the representative survey 71% (N=710) of the respondents are recreational athletes who carry out physical activity independently, 28% (N=280) are recreational athletes who carry out physical activity in an organised setting. A respondent group, accounting for 1% (N=10), was unable to categorize the way they engage in physical activity.

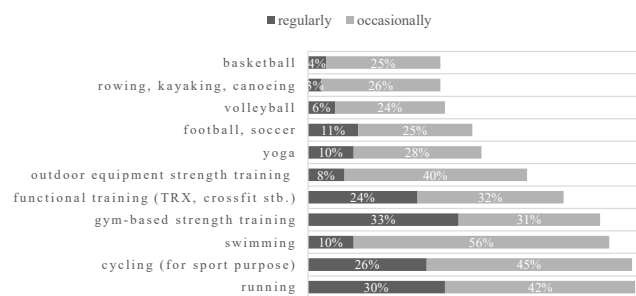
13% of respondents (N=130) are certified amateur athletes and 5% (N=50) are certified professional athletes who play sport for pay. They also practise sport in their free time, both independently and under the guidance of a coach. They are therefore assessed in the research as recreational sports athletes.

The majority of respondents (88%, N=880) exercise at least 1-2 times a week and two thirds (62%, N=610) more often. Among those who exercise independently without the guidance of a coach, men are in the majority (53%, N=376), whereas almost three quarters of those who exercise under the guidance of a coach are women (70%, N=196) and the vast majority have at least a secondary education (93%, N=260). For amateur or professional certified athletes, two thirds are male (67%, N= 120), the majority are under 30 (56%, N= 100), more often than average have a primary education (21%, N= 37) and more than one third are Buda residents (35%= 63).

Figure 1 shows the distribution of sporting habits by sport and frequency. Among the sports regularly practised, the most common is strength training on gym equipment (33%, N=330), followed by running (30%, N=300) and cycling (26%, N=260). Swimming (56%, N=560) is the most popular of the occasional sports. The majority also play two sports (61%, N=610).

Figure 1.

Sporting habits by sport and frequency



Source: own compilation

The research question 1. sought to identify differences between formal and informal recreational sports activities, and the hypothesis 1. was that there is a significant difference between the sports habits of informal and formal recreational athletes.

In this regard, the research data show a significant relationship between the population playing sport independently without a coach (informal sport) and outdoor cardio exercise ($\chi^2=9.788$; $d=4$, $p=0.038$), i.e. people without a coach often choose outdoor cardio exercise (running, cycling for sport). The population exercising under the guidance of a coach ($\chi^2=9.59$; $df=4$, $p=0.049$) prefers indoor type of exercise, more strengthening or relaxing (gym strengthening, yoga).

The number of sports clubs and sports enterprises operating in Budapest is not correlated with the proportion of physical activity performed in an organised setting and the proportion of amateur and professional certified athletes performing in an organised setting ($p=0.068$), and the null hypothesis cannot be rejected. The sports infrastructure serving the sports is an important independent factor, as its categorised quantitative representation is comparable to the dependent factors examined in this research. The areas suitable for sports in Budapest are summarised in Table 2.

Table 2.

Areas suitable for sports in Budapest

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	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	summa
other	1	0	31	1	0	0	0	2	2	23	7	1	5	0	2	12	3	4	0	0	0	2	1	97
public park	4	18	1	3	1	2	1	0	21	6	10	6	16	2	5	6	1	14	2	2	8	10	1	140
swimming pool	1	2	3	2	0	1	2	2	4	3	7	5	8	4	1	2	2	4	2	1	3	1	0	60
sports complex	1	6	6	8	1	0	2	2	6	11	7	3	7	5	5	0	1	3	3	1	17	3	2	100
sports field	1	3	4	2	0	1	0	6	3	7	3	3	0	8	32	7	5	1	0	0	29	1	0	116
stadium	0	0	1	2	0	0	0	3	2	0	0	0	1	1	1	0	0	0	1	1	2	0	0	15
sports hall	0	1	4	10	0	1	2	0	9	3	9	2	5	3	3	2	0	3	0	3	2	2	1	65
summa:	8	30	50	28	2	5	7	15	47	53	43	20	42	23	49	29	12	29	8	8	61	19	5	

The division based on the 23 districts of Budapest.

Source: own compilation

The sports facilities were grouped according to the type of sports facility/sports area in which they are located (11 categories were created according to the sports processed in Figure 2). The proportions of these categories were compared with the popularity of the sports.

Examining Research Question 2, a positive–albeit moderate–relationship between the popularity of playing a sport and the number of categorised sports facilities and outdoor sports areas ($\beta=0.396$; $p=0.047$, $R^2=0.314$) can be identified, suggesting that if the number of sports facilities serving a given sport increases, the popularity of playing that sport is expected to increase (e.g. The reason for the moderate relationship is that there are a number of other factors that influence the popularity factor, such as quality of service, international success of the sport, distance of facilities from the residence, financial situation, etc.)

Looking at the development of sporting opportunities, it can be said that athletes in Budapest are rather satisfied, with only less than a fifth of them having a particularly negative opinion. There are no social groups that are significantly less satisfied than the average, but it can be said that men (9%; $N=90$), young people (11%; $N=110$), people from Buda (8%; $N=80$) and recreational sportspeople who play without a coach are less satisfied with the sports facilities in the capital. The quantitative and qualitative maturation of sporting opportunities is summarised in Figure 2.

Overall, more than half of Budapest citizens (54%, $N=540$) are satisfied with the amount of sports activities available, in this case, the rather satisfied and clearly satisfied ratings were combined. On the scale of quality of sports facilities, 52% of respondents ($N=520$) were either satisfied or clearly satisfied. A comparison of the two factors, i.e. quantitative and qualitative ratings, reveals no significant difference between the two scores, thus confirming the respective outcomes ($t=0$, $p=0,988$).

Figure 2.

Quantitative and qualitative assessment of sporting opportunities



Source: own compilation

In the quantitative assessment, revealed a need for more outdoor sports areas and identified the lack of equal opportunities per district as a problem. When quality was assessed, the most common problems identified were:

crowding, crowds; neglected conditions; lack of shaded, covered spaces (to protect against rainfall or heat); difficulty in using outdoor spaces in winter.

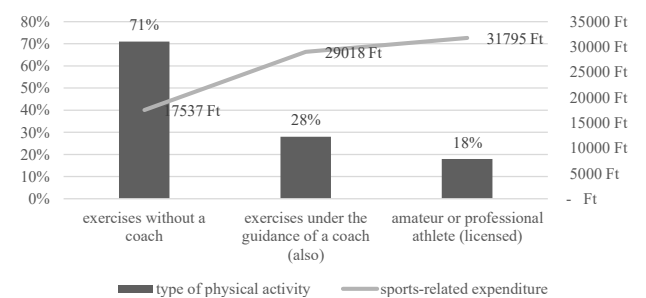
Besides the quality factor, the willingness to spend was also examined. The analysis of the respondents' sports spending shows that more than 90% ($N=900$) spend on tickets, season tickets or sportswear. On average, members of the population spend slightly more than HUF 20.000 per month on sports.

The questionnaire survey revealed that the average amount spent on sports by those Budapest residents who exercise without the guidance of a coach ($N=710$) is estimated at HUF 17.537/month, while those who exercise under the guidance of a coach spend an average of HUF 29.018/month on sports.

Research question 3 focuses on differences between demographic factors and the level of expenditure on sports activities, and, based on hypothesis 3, whether gender, educational attainment, and place of residence significantly influence the level of expenditure on sports. When examining gender, education and residence as independent variables and the level of sport expenditure, gender, education and residence are found to significantly affect the level of sport expenditure ($p=0.003$). However, when examining between variables, there is a low fit ($p=0.003$; $R^2=0.387$), i.e. biological and environmental conditions explain little variance in the level of sport expenditure. This may be due to the fact that other untested factors, such as specific wages, health status, amount of leisure time, etc., may influence the outcome, i.e. the evolution of sport expenditure. When comparing sport expenditure, it can be concluded that women spend on average more on sport than men and that gender has a significant effect on the level of expenditure ($p=0.03$; $\beta=0.387$). The type of sport activity and the monthly amount of expenditure on sport are illustrated in Figure 3.

Figure 3.

Type of sporting activity and amount of sport expenditure per month



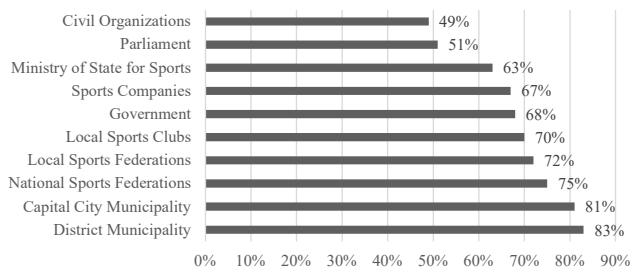
Source: own compilation

The survey explored the basic perceptions of sport development, identifying who people expect to provide solutions and inputs. Respondents strongly disagree that sport and physical activity should be a private matter for everyone and therefore less should be spent on it by local authorities or the state. The vast majority of respondents believe that the promotion of recreational sport is an important task

for local authorities, and half of them would also expect events to be organised. According to 83% (N=1.000) of respondents (N=830) to the online questionnaire, the support of recreational sport and the provision of local sporting opportunities is primarily the responsibility of district municipalities. 81% (N=810) of respondents (N=810) consider the Municipality of Budapest to be the second most important player, while national sports federations (75%, N=750), local sports associations (72%, N=720) and local sports clubs (70%, N=700) were also identified as important players. Respondents attributed less importance to state actors and the private sector in the provision of local recreational sport, with fewer respondents identifying these areas as the responsibility of the government in power (68%, (N=680), the national decision-making body, i.e. parliament, scored 51%, the role of sports enterprises 67% (N=670) and the role of NGOs 49% (N=490) (Figure 4).

Figure 4.

Analysis of the competence of sport development



Source: own compilation

The first-ranked district governments can be points of intervention for sport at the local level, the Metropolitan Municipality can play a strong role in conceptual policy-making at the Budapest level, while national and local sports federations can have an impact along specific sports

lines. The ordering of competences is clearly interpreted in relation to recreational sport, while an almost opposite ordering is likely for elite sport.

The summary of the research results is summarised in Table 3.

Discussion

In the following, the research results will be evaluated and the trends and sub-results of Budapest will be compared with those of some Central and Eastern European countries (Romania, Bulgaria, Poland, Slovakia).

Based on the research results, Hypothesis1, that there is a significant difference between the sporting habits of informal and formal recreational athletes, is supported. In the Central and Eastern European region, the popularity of home-based physical activity is outstanding, with 62% in Slovakia, 60% in Romania and 55% in Bulgaria exercising independently without the guidance of a coach (Perényi, 2015). This is even higher in Hungary, the capital city, where 71% of respondents (N=710) engage in this form of physical activity.

Citizens who exercise independently without a trainer, i.e. those who engage in informal recreational sports activities, are most likely to choose outdoor cardio training ($\chi^2=9.788$; $d=4$, $p=0.038$), (running, cycling for sport), while citizens who exercise under the guidance of a coach prefer indoor type of exercise, more of a strengthening or relaxing nature (gym strengthening, yoga) ($\chi^2=9.59$; $df=4$, $p=0.049$). The results are similar in the Central and Eastern European region, with outdoor sports such as running, cycling and hiking being particularly popular in the Czech capital Prague, and fitness training in gyms being the second most popular (Czech Statistical Office, 2021).

Price sensitivity may be one of the reasons behind the choice of sporting activities (Paár, 2011). Those who

Table 3.

Regression models

Variable / Measure	β	χ^2	d	R ²	p-value	t-value	VIF
sporting habits							
informal sport – cardio exercise		9.788*	4		0.038*		3.78
formal sport - indoor type of exercise		9.592*	4		0.049*		3.99
organised frameworks							
clubs, enterprises - amateur and professional					0.068.		1.54
infrastructure							
type of sport and the number of categorised sports facilities	0.396*			0.314*	0.047*		3.91
sportinfrastructure. - quantitative and qualitative ratings					0,988.	0	1.02
expenditure							
gender, education and residence - sport expenditure				0.387***	0.003***		3.66
woman – sport expenditure	0.387*				0.031*		2.62

Significance codes: 0 '***' 0.01 '**' 0.05 '*' 0.1 '.'

Source: authors' edition based on SPSS calculations

engage in sporting activities independently, without a coach, are likely to want to minimise their expenditure on sport, so they choose outdoor sports activities that require a one-off financial outlay or do not require spending money at all. In addition, ease of learning the sport may be an important consideration, and the risk of improper performance of the movement is likely to be minimised, given that there is no coach supervision during the sporting activity. In the case of coach-led sports, it can be assumed that price is not a determining factor and that those who choose a professionally led form of exercise are those for whom it represents quality and for whom they are willing to pay.

The presence of price sensitivity is further supported by the fact that the proportion of people following sports broadcasts (viewing without financial investment) is more than twice as high as the proportion of those attending sports events in person (viewing with financial investment).

Some research has found that lack of adequate income is a barrier to participation in recreational sport (Humphreys & Ruseski, 2006; Lera-López & Rapún-Gárate, 2007; Eakins, 2018), but some authors argue that although higher income increases the likelihood of sport participation, it reduces or has no effect on the amount of time spent in physical activity (Downward & Riordan, 2007; Lera-López & Rapún-Gárate, 2011; Humphreys & Ruseski, 2011). Several studies confirm that sport is a luxury good (Paár, 2011; Pawlowski & Breuer, 2012).

My assumptions were that citizens who exercise under the guidance of a coach basically spend more on sports than those who exercise independently. The questionnaire survey revealed that citizens of Budapest who exercise without the guidance of a coach ($N=710$) spend an estimated average of HUF 17.537/month on sports, while those who also exercise under the guidance of a coach spend an average of HUF 29.018/month on sport. Compared to the Czech Republic and Slovenia, Hungarians spend half as much on sports goods, sports equipment and sportswear (Gósi, 2019).

Laczko and Stocker (2018) studied spending on sporting events and their findings show that Hungarians spend on average HUF 8.000 per day, i.e. they spend on sporting events lasting 3-4 days what they usually spend on sport per month (HUF 24.000-32.000). In contrast, foreign spectators spend an average of HUF 26.250 per day on such sporting events.

The monthly sports expenditure generated by regular participants in sport, is basically higher than for a population that does not participate in sport or only occasionally. Regular athletes spend more on sport than those who do not regularly play sport, but some who do not play sport still spend on it, this is mostly reflected in passive sport consumption, but there could be several reasons. For example, it could be that someone does not play sport, but they pay a membership fee or season ticket for a family member who plays sport regularly, or they may spend money on season tickets or sports clothing but end up not being physically active.

A positive–albeit moderate–relationship between the popularity rate of a sport and the number of categorised sports facilities and outdoor sports areas ($\beta=0.396$; $p=0.047$, $R^2=0.314$) can be identified, suggesting that if the number of sports facilities serving a given sport increases, the popularity of that sport is expected to increase. The reason for the moderate relationship is that there are a number of other factors that influence the popularity factor, such as quality of service, international success of the sport, distance of facilities from the place of residence, financial situation, etc. This result is confirmed by a study from Poland, which showed that sport infrastructure alone does not lead to development in sport, other resources are needed (Müller-Frączek, 2020, 2021).

It was investigated (Hypothesis2) whether the demand for active sports consumption (amateur and professional certified athletes playing sports in organised settings) and the supply (number of sports clubs and sports enterprises operating in the districts of Budapest) are linearly related, but the results suggest that this hypothesis have to be rejected. The number of sports clubs and sports enterprises in Budapest are not correlated with the proportion of organised physical activity and the proportion of organised amateur and professional certified athletes ($p=0.068$). A limitation of the study, however, is that the maximum capacity of sports associations and clubs is not known, so the relationship cannot be determined with complete accuracy.

According to Hypothesis3: Gender, educational attainment, and place of residence significantly affect the level of spending on sports. When examining gender, educational attainment, and place of residence as independent variables and the level of spending on sports, it is found that gender, educational attainment, and place of residence significantly affect the level of spending on sports ($p=0.003$). This suggests that the hypothesis is supported, but that there is not a very high fit between the variables ($p=0.003$; $R^2=0.387$), i.e. demographic conditions explain little of the variance in the level of sport expenditure. This may be due to the fact that other factors, such as income, health status, amount of leisure time, etc., which are not examined, may influence the results, i.e. the evolution of sport expenditure. Paár (2011) calculates that sport consumption increases by 2.06% for a 1% increase in net income. However, when comparing sport expenditure, women on average spend more on sport than men and gender has a significant effect on the level of expenditure ($p=0.03$; $\beta=0.387$). Previous research has shown that men are more likely to participate in sport and also spend more time in sporting activities than women (Lera-López & Rapún-Gárate, 2007; Humphreys & Ruseski, 2006; Downward & Riordan, 2007; Hovemann & Wicker, 2009; Kokolakakis et al., 2011; Widdop et al., 2018; Eakins, 2018), however, Lera-López and Rapún-Gárate (2011) found in their study that women participate in sport more frequently than men. The frequency factor may also have an impact on expenditure on sport, as a more frequent number of exercise sessions (exercising under the guidance of a coach)

leads to higher expenditure, either due to the purchase of gym passes, group class passes, etc.

Macro data from European Union countries show a correlation between education and sports participation (Humphreys & Ruseski, 2006; Downward & Riordan, 2007; Breuer & Wicker, 2008; Hovemann & Wicker, 2009; Kokolakakis et al., 2017).

Hypothesis4: People in Budapest are generally satisfied with the sports facilities in Budapest:

More than half of Budapest residents (54%, N=540) are satisfied with the quantity and quality of sports facilities available (52%, N=520). No significant difference between the two factors was found ($t=0$, $p=0.988$). The results suggest that it is important for the population to have access to sports facilities and sports facilities, but it is also important to know their condition and quality. The results show that the needs of the population are largely met and that the facilities are able to provide sports services at the expected level, but that there is room for improvement in terms of both the number and quality of sports facilities available. By increasing both the quantity and quality elements, higher sporting activity rates can be generated, making this an important area for improvement for city leaders.

A look at Central and Eastern Europe shows that Prague has a similar appreciation of sports facilities and sports infrastructure in the city, with a high proportion of the population satisfied with these (Czech Statistical Office, 2021). In the case of Romania, young people in Timisoara are satisfied with the quality of sports facilities and developments, yet 47.8% of them do not participate in sports (below the national level). Research (Nadolu, 2020) shows that motivation for sports activity is at a rather low level, and therefore sports investment per se is not associated with an increase in sports activity.

Conclusions

The findings of this research extend beyond the Budapest context, revealing correlations and trends that may inform broader interpretations and applications. The exploratory study classified respondents into four groups: individuals exercising independently, those training under professional guidance, qualified amateur athletes, and professional athletes—all categories applicable to any municipality or national context.

Key determinants of sports participation include local-level (societal) factors and individual traits or motivations. Results indicate that sports infrastructure strongly influences physical activity levels, with quality emerging as a critical determinant of participation. Regardless of exercise type, all activities depend on available infrastructure.

Respondents attributed primary responsibility for developing recreational sports and maintaining local facilities to district governments (83%) and the Municipality of Budapest (81%). This perception is justified, as local authorities play a central role in promoting recreational sports core elements of public service delivery that directly affect sport consumption and community activity levels.

Limitations and further research directions

The analysis revealed that gender, education, and place of residence significantly correlate with sports spending, a relationship that could be clarified by incorporating additional variables. The high p-value suggests extending the model to enhance explanatory power and capture further influencing factors.

Findings indicate that local authorities are key stakeholders in addressing consumer expectations and ensuring access to sport. Accordingly, future research should continue along two lines: exploring public perceptions and examining mayors' goal-setting practices.

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