

# The Social and Economic Importance of Sports

---

**Prudky, Ivan**

*Source / Izvornik:* **Naše gospodarstvo/Our Economy, 2022, 68, 61 - 71**

**Journal article, Published version**

**Rad u časopisu, Objavljena verzija rada (izdavačev PDF)**

<https://doi.org/10.2478/ngoe-2022-0018>

*Permanent link / Trajna poveznica:* <https://um.nsk.hr/um:nbn:hr:192:567077>

*Rights / Prava:* [In copyright](#)/[Zaštićeno autorskim pravom.](#)

*Download date / Datum preuzimanja:* **2024-07-17**



SVEUČILIŠTE U RIJECI  
**EKONOMSKI FAKULTET**

*Repository / Repozitorij:*

[Repository of the University of Rijeka, Faculty of  
Economics and Business - FECRI Repository](#)



# The Social and Economic Importance of Sports

**Ivan Prudky**

University of Rijeka, Faculty of Economics and Business, Croatia  
ivan.prudky@efri.hr

---

## ARTICLE INFO

*Original Scientific Article*

*Article History:*

Received June 2022

Revised August 2022

Accepted August 2022

---

*JEL Classification:*

Z20

Z28

---

*Keywords:*

Sports participation

Sports and social aspects

Sports and economic aspects

Sports policy regulation

---

UDK: 796.01:33:316

DOI: 10.2478/ngoe-2022-0018

---

*Cite this article as:* Prudky, I. (2022).

The Social and Economic Importance of Sports. *Naše Gospodarstvo/Our Economy*, 68(3), 61-71. DOI: 10.2478/ngoe-2022-0018.

---

©2022 The Authors. Published by Sciendo on behalf of University of Maribor, Faculty of Economics and Business, Slovenia. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

---

## Abstract

Sports participation does not produce benefits solely on a personal level but also numerous benefits on different societal levels, as well as the level of economies. The paper represents a contribution to the exploration of factors of individuals influencing regularity in sports participation. A logistic regression model was used based on the data from the Eurobarometer special survey from 2018. According to the findings, middle-aged men are the most likely to regularly participate in sports activities and individuals with active socio-professional status are also more likely to practice regular sports activities than individuals who are passive. The same is true for individuals living in less urbanised areas and those with positive life satisfaction compared to those living in urban areas or those who are not satisfied with their life. The results of our research are important for economic policymakers both at the national and regional levels, as well as at the level of individual municipalities. They facilitate the management of sports activities of individuals but are limited to a smaller number of factors with measurement specifics. Suggestions for further research are also presented.

## Introduction

Sports participation goes beyond influencing an individual's quality of life and has a significant social and economic impact on the whole community. Policymakers aim for better management of sports activities, with the goal of a more successful valorization of positive effects produced by sports activities. Institutions invest in research on the socio-economic impacts of individual sports participation habits to determine the economic and public health benefits of regular physical activity (Ács et al., 2016; Schüttoff et al., 2021). Based on acquired knowledge, institutions adapt and tailor incentive measures and guidelines, aiming for benefits to individuals and the community (Official Journal of the European Union, 2013) and develop indicators to measure the effectiveness of government policies regarding sports and

sports activity (World Health Organisation, 2016, 2018). An EU-level survey investigates individuals' habits on physical and sports activities tied with their socio-economic and demographic characteristics (European Commission, n.d. b). The result is an overview of participation in sports, motives, barriers, and potential opportunities for local communities (European Commission, 2018). Research findings prove that national government spending and public health policies focused on sports and physical activity are positively related to the increase in the share of people with perceived good health and negatively related to obesity (Szczepaniak, 2020).

A bibliometric analysis emphasizes the rising importance of the sports participation issue. Scientific research focusing on individual sports and physical activity will provide valuable knowledge (Hovermann & Wicker, 2009; Downward et al., 2014; Ley, 2020), and the most recent data on a large sample represents a valuable source of information for the analysis of new impacts influencing sports participation. Gradual, constant changes in population and economy create a need for understanding based on the latest available data to form and adopt new directives stimulating sports participation, with the overall goal of improving the social and economic well-being of the community.

In this paper, we focus on determining an individual's socio-demographic and economic factors (age, gender, socio-professional status, degree of urbanization of residential area, life satisfaction) recognized as significant impacts on regular participation in sports. Based on these findings, it is possible to form precise campaigns adapted to target groups, encouraging individuals' greater sports participation and consequently forming a better social and economic situation on a personal and community level.

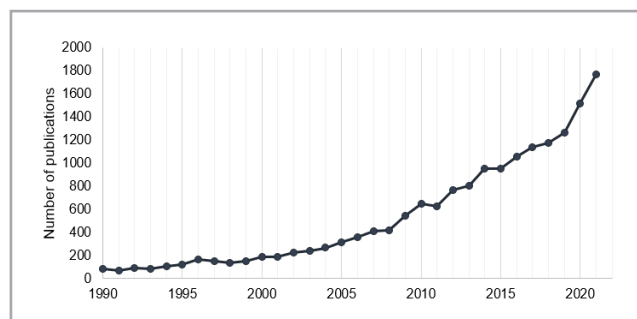
### Literature Review and Research Framework

The importance of sports participation and physical activity impacts multiple levels of the community. On a national level, an increase in residents' sports participation leads to numerous economic (Ács et al., 2016; Hautbois et al., 2020; Schüttoff et al., 2021) and social (Ruseski et al., 2014; Hoekman et al., 2016; Mills et al., 2019) benefits. An increase in public health directly decreases government public health service expenditures (Ács et al., 2016, 2020; Schüttoff et al., 2021). Sports encouragement measures are seen as positive expenditures to prevent future negative consequences of the population's inactivity, as opposed to post-damage repairing expenses, such as public health

costs. An increase in subjective well-being and social benefits urges governments and policymakers to put more effort and means aiming for the population's increase in sports participation (Ruseski et al., 2014). Inclusiveness and seizing inequality are social benefits associated with increased population sports activity (Van Tuyckom, 2011; Hoekman et al., 2016). The European Union, based on the premise of equality for all citizens, recognizes the potential of sports and successfully uses sport to achieve one of its primary goals (European Commission, n.d. a, n.d. b, n.d. c). Policymakers use sports programs in lower socio-economic areas to overcome class-based inequalities (Hoekman et al., 2016). Moving down, the local administration encourages increased sports participation by investing in infrastructure (Downward et al., 2014) and holding sports events where the population is an active participant, not a passive observer. All offer the possibility of achieving economic, social, and psychological gains for the local community (Andersen et al., 2019; Hautbois et al., 2020).

A short bibliometric analysis shows an exponential increase in published scientific documents on "sports participation" (Figure 1). Searching the Scopus database (category: Title-Abstract-Keywords), the term „sports participation“ presents 18,582 document results (as of June 2022). The spikes in increase coincide with major world organizations' publications regarding the importance of physical activity (World health organisation in 2004, 2010, 2016, 2018). Numerous governing institutions finance research on the topic of "sports participation". Highly positioned funding sponsors include the U.S. Department of Health and Human Services, the Government of Canada and the European Commission.

**Figure 1**  
Number of publications with the topic "sports participation", 1990-2021

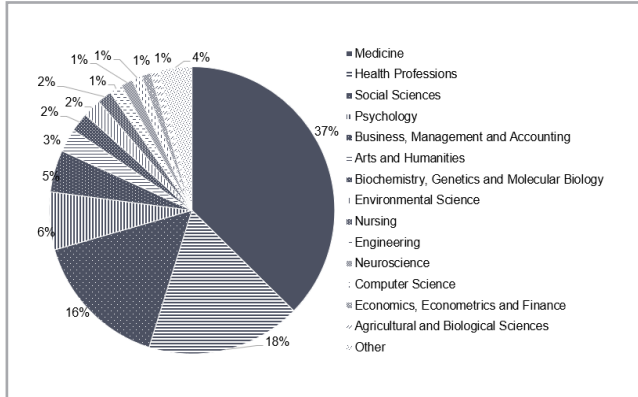


Source: Author's research, based on Scopus, 2022

Areas of research dealing with sports participation are presented in Figure 2. In addition to medicine and health professions, high shares of research occur within social sciences, economic and business sciences, and environmental sciences. All stated research areas support

research on improving individuals or communities on a socio-economic level.

**Figure 2**  
*Sports participation in different research areas*



Source: Author's research, based on Scopus, 2022

Different internal and external factors determine the individual's willingness to participate regularly in sports. Economic, social, and demographic characteristics were most frequently researched (Hovemann & Wicker, 2009; Kokolakis et al., 2012; Downward et al., 2014; Hallmann & Breuer, 2014; Laczkó et al., 2020; Magno et al., 2020). The age of individuals negatively affects the regularity, frequency, or intensity of sports participation, in some country-specific cases (e. g. Slovakia) (Laczkó et al., 2020). Men tend to engage in sports and physical activities more regularly, as show studies for the EU (Hovemann & Wicker, 2009), England and Spain (Kokolakis et al., 2012), and for Brazil (Magno et al., 2020). Contrary, in the case of Germany (Hallmann & Breuer, 2014), women are the ones who participate more regularly in sports activities. Gender as a factor of influence can be impacted by the underlying aspect of country and culture. Men and women also have different reasoning for active sports participation (Magno et al., 2020; Ley, 2020). Thus, a gender-sensitive approach should be considered when making policies encouraging sports activity (Ley, 2020; Laczkó et al., 2020).

Personal social characteristics such as level of education, socio-professional status, and marital status determine an individual's free time. In the 2000s, more educated and employed people spent significantly less time in sports activities (Hovemann & Wicker, 2009). In the 2010s, the population changed its habits, and people with higher levels of education (Kokolakis et al., 2012; Hallmann & Breuer, 2014; Magno et al., 2020, Laczkó et al., 2020), as well as people in active employment and with longer working hours (Kokolakis et al., 2012; Hallmann & Breuer, 2014), start to engage more in physical and sports activities. Most recently, white-collar job holders see sports

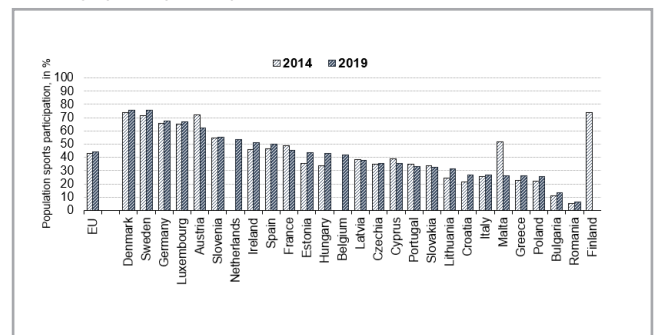
participation as part of their lifestyle (Laczkó et al., 2020). Married individuals and those with children engage in sports activities less regularly (Hovemann & Wicker, 2009) than single individuals (Laczkó et al., 2020). The level of life satisfaction is directly related to sports participation. Sports activity positively impacts life satisfaction (Wiese et al., 2018; Zhang & Chen, 2019). Still, the relationship goes both ways, as higher levels of subjective well-being stimulate the desire for sports participation (Mutz et al., 2020).

The residence size can also impact one's possibilities for regular sports activity, as the availability of infrastructure suggests greater sports participation. People in big cities (Hovemann & Wicker, 2009; Magno et al., 2020; Laczkó et al., 2020) and more urbanized areas (Van Tuyckom, 2011; Magno et al., 2020) participate more regularly in sports activities. Still, specific country and cultural characteristics are other underlying factors (Van Tuyckom, 2011). The Netherlands is an example: more urbanized areas offer lower opportunities to participate in sports activities (Hoekman et al., 2016). Promoting sports programs in lower socio-economic regions is advisable for policymakers to overcome class-based inequalities.

### Research Model and Hypotheses Development

The research model was formulated based on the literature review and the Eurostat statistical data and surveys (presented in the following paragraphs). The statistical data provided by Eurostat (2022) show (Figure 3) the relative proportion of the population over 15 years of age participating in sports and recreational (leisure) physical activities at least once a week for the years 2014 and 2019. The EU average is 43% in 2014 and 44% in 2019. Most countries recorded an increase in the value of sports participation, except Malta, Austria, France, Portugal, Latvia, and Slovakia.

**Figure 3**  
*Level of sports participation at least once a week*



Source: Eurostat, 2022

General trends across the EU can be observed from the latest data. Men are more active as 47% partake in sports, while the average value for women is 42%. The trend is valid in most countries, excluding Denmark, Sweden, Luxembourg, and Latvia. With the aging population, sports participation decreases, starting with the EU average value of 65% for the age group from 15 to 24 years and ending with the average EU value of 31% for the age group 65 years and over.

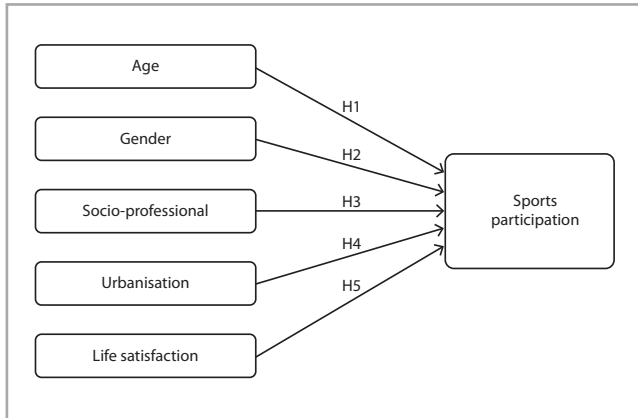
Citizens with different income levels show other habits in engaging in sports activities. According to the EHIS data (Eurostat, 2022), with an increase in income, the average participation in sports activities also increases: (1) first income quintile – 37% of people, (2) second income quintile – 38% of people, (3) third income quintile – 44% of people, (4) fourth income quintile – 48% of people and (5) fifth income quintile – 55% of people. Different level of education is also associated with varying habits in sports participation. Grouped according to the International Standard Classification of Education (ISCED) (Eurostat, 2020), the average share of EU citizens who spend at least 150 minutes on health-enhancing, non-work-related physical activity weekly is as follows: (1) low level education (ISCED 0-2) – 25% of people, (2) medium level education (ISCED 3-4) – 33% of people and (3) high level education (ISCED 5-8) – 42% of people.

The well-being of the population is one of the main goals of every country. Encouraging the people to engage in sports activities is one of the institutional goals of governments and regional integrations. Knowledge of relevant factors influencing engagement in sports activities presents a critical research gap. Based on the findings from Eurostat, the EHIS survey results (Eurostat, 2022), and relevant scientific research, a general hypothesis is set: personal characteristics and external factors significantly influence an individual's intention to participate in sports activities. The specific knowledge can be of great benefit to different policymakers. Proper management aims to engage irregular participants in more sports activities, ultimately creating socio-economic benefits for the community.

Derived from the general hypothesis, five different sub-hypotheses (Figure 4) will be tested:

- H1: *Age has a significant negative influence on sports participation.*  
Age is the incremental part of every conducted survey on sports activity and participation (Eurobarometer, EHIS) and scientific research of multiple authors (Hovemann & Wicker, 2009; Kokolakis et al., 2012; Downward et al., 2014; Hallmann & Breuer, 2014; Laczkó et al., 2020; Magno et al., 2020). Previous findings and statistical data (Eurostat, 2022) suggest that with increasing age, participation in sports decreases. Certain EU countries show irregular trends (Eurostat, 2022; Laczkó et al., 2020), giving additional reasoning for researching age as a specific factor influencing sports participation.
- H2: *Gender has a significant influence on sports participation.*  
Gender is another indispensable researched factor in conducted surveys (Eurobarometer, EHIS) and the subject of scientific analysis regarding the impact on sports participation. Based on the previously stated statistics (Eurostat, 2022), the male population seems more likely to participate regularly in sports activities, with some countries as exceptions. Scientific research comes to the same conclusion (Hovemann & Wicker, 2009; Kokolakis et al., 2012; Laczkó et al., 2020), but not unanimously (Hallmann & Breuer, 2014).
- H3: *An active socio-professional status has a significant favorable influence on sports participation.*  
The Eurobarometer survey on sports participation collects data on individuals' socio-professional status as the subject of the analysis. Eurostat's (2022) statistics present data where the population with an active working status more regularly participates in sports activities. Previously conducted research has come to non-uniform conclusions, stating negative (Hovemann & Wicker, 2009) and positive correlations (Kokolakis et al., 2012; Hallmann & Breuer, 2014; Laczkó et al., 2020).
- H4: *Urbanisation level has a significant positive influence on sports participation.*  
The Eurobarometer survey on sports participation provides data on the perceived urbanization level of residency. Previous scientific research gives mixed results for the correlation effect (Van Tuyckom, 2011; Heokman et al., 2016; Magno et al., 2020). Based on the assumption that the availability of infrastructure in urban areas makes regularity in sports participation more possible, available data and inconclusiveness in previous research make the urbanisation levels as an impact very relevant to the study.
- H5: *Life satisfaction is positively correlated to sports participation.*  
Based on the previously stated statistics, it is observed and concluded that the population with more regular participation in sports activities has higher life satisfaction levels. The connection has proven to be mutual: subjective well-being has a positive impact on sports activity, as does sports activity on the subjective well-being of individuals (Mutz et al., 2020).

**Figure 4**  
Sports participation influential factors



Source: Author's research

- AG age group,
- PROFD socio-professional status,
- URB subjective urbanization,
- SAT life satisfaction.

**Table 1**  
Characteristics of survey participants

Variable	Number (%)
<b>Gender</b>	
Male	13586 (48.5)
Female	14445 (51.5)
<b>Age group (years)</b>	
15-24	3730 (13.3)
25-34	4096 (14.6)
35-44	4576 (16.3)
45-54	4778 (17.0)
55-64	4395 (15.7)
65-74	3833 (13.7)
75 and over	2623 (9.4)
<b>Socio-professional status</b>	
Active	13348 (47.6)
Passive	14683 (52.4)
<b>Subjective urbanization</b>	
Rural village	8314 (29.7)
Small/medium size town	12467 (44.5)
Large town	7250 (25.9)
<b>Life satisfaction</b>	
Yes	23813 (85.0)
No	4218 (15.0)

N = 28031 participants

Source: Author

## Data and Methodology

Eurobarometer publication »Sport and physical activity« provides data based on a large sample to test the stated hypotheses. Performed periodically (2002, 2009, 2013, and 2017) in EU member states, the survey from December 2017 had a sample size (N) of 28,031 citizens of diverse demographic and social characteristics. The survey participant characteristics are shown in Table 1.

Data on the citizen's involvement in sports activities and their essential demographic and social characteristics were selected. Based on the European Health Interview Survey (Eurostat, 2022) definition of sports participation and physical activity, the citizen's sports participation regularity was determined by the provided answers to the questions „How often do you exercise or play sport?“ and „And how often do you engage in other physical activity such as cycling from one place to another, dancing, gardening, etc.?“. The offered answers to the cited questions were identical on a scalar basis and thus comparable (5 times a week or more, 3 to 4 times a week, 1 to 2 times a week, 1 to 3 times a month, less often, never, and don't know). For the analysis, a binary logistic regression model will be constructed (Tabachnick & Fidell, 2019).

The binary logistic regression model is:

$$\ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1SEX + \beta_2AG + \beta_3PROFD + \beta_4URB + \beta_5SAT + e \quad (1)$$

where the variables are:

- SP sports participation,
- SEX gender,

The overview of variables and their operationalization is shown in Table 2. For the sake of „sports participation“, the results from the two beforementioned survey questions were merged and used for the analysis. The variable sports participation (SP) is used as the model's dependent variable. The dependent variable SP was defined as a nominal dummy variable: 0 representing irregular sports participation (constructed from the answer values: never, less often, and 1–3 times a month), and 1 representing regular sports participation (constructed from the answer values: 1–2 times a week, 3–4 times a week and five times a week or more). The independent variables are gender (SEX; dummy: male – 0, female – 1), age group (AG; nominal; groups: 15–24 years, 25–34 years, 35–44 years, 45–54 years, 55–64 years, 65–74 years, 75+ years), socio-professional status (PROFD, dummy: active status (constructed of groups: self-employed, managers, other

white collars, manual workers) – 0, passive status (created of groups: house person, unemployed, retired, students) – 1), subjective urbanisation (URB; nominal; groups: rural village,

an individual not regularly participating in sports activity than the likelihood to participate.

**Table 2**

*Model variables operationalization*

Variable	Operationalisation	Scale
Dependent variable: Sports participation (SP)	Regular weekly participation in sports (0 = no, 1 = yes)	Dummy
Independent variables: Gender (SEX)	0 = male, 1 = female	Dummy
Age group (AG)	0 = 15–24 years, 1 = 25–34 years, 2 = 35–44 years, 3 = 45–54 years, 4 = 55–64 years, 5 = 65–74 years, 6 = 75 years and over	Nominal
Socio-professional status (PROFD)	0 = active, 1 = passive	Dummy
Subjective urbanisation (URB)	0 = rural village, 1 = small/mid-size town, 2 = large town	Nominal
Life satisfaction (SAT)	0 = no, 1 = yes	Dummy

Source: Author's research.

small/mid-size town, large town) and life satisfaction (SAT; dummy: not satisfied – 0, satisfied – 1).

The model is constructed as a binary logistic regression (Tabachnick & Fidell, 2019). The dependent variable is a binary nominal variable. The independent variables gender, socio-professional status, and life satisfaction are binary dummy variables. The variables age group and subjective urbanization are categorical covariates with three and seven categorical group values, respectively. A demi-dummy coding for the categorical variables was enforced starting from the last category. Maximum likelihood estimates were used to estimate the logistic regression function, denoting changes in the log odds of independent variables. We used the Wald test to test the significance of the regression coefficients, the Omnibus test to test the predictive capacity of the regression equation, and the Nagelkerke R squared value to assess the goodness to fit of the model. For testing purposes, the threshold for the significance will be at the 0.01 level to reduce the possibility of Type I error.

## Results

The results of the model are presented in Table 3. Using the Wald statistic (Tabachnick & Fidell, 2019), a hypothesis was tested if the probability of being a defaulter versus a non-defaulter is equal. We can reject the null hypothesis (sig. = 0.000) that there is an equal number of people within the sampling variability. The negative value of the regression model intercept indicates a higher likelihood for

Based on the Omnibus test of model coefficients, the listed Chi-square values are statistically significant to test if there is some predictive capacity in the regression equation (sig. level < 0.01). Additional information about the predictivity capacity of the modes was provided using the Nagelkerke R squared value, giving an insight into the explained variation of the independent variable (Tabachnick & Fidell, 2019). The independent variables account for only 4% of the dependent variable, which is expected since other factors influence one's regular sports participation.

The model's validity was tested using the Hosmer and Lemeshow test – the Chi-square value is statistically insignificant (sig level > 0.01), indicating the predictability possibility of the model. The contingency table for the test for the segregated probabilities in the categories shows that the accounted difference in the number of people in those categories for the expected and observed values is zero indicating a high predictive capacity in the model. The classification table of the model shows that irregular sports participation was correctly predicted by 81.7%, while the same value for regular sports participation is 27.1%. Overall, the model's predictive capacity is 57.9% (+1.5 PPS compared to the null model).

Based on the unstandardized beta coefficient (Table 3), we draw interpretations in terms of the movement of the value of the dependent variable. All values represent a change in a log scale, with negative signs suggesting that the log of the odds of regular sports participation is decreasing, or if positive, the log of the odds of regular sports participation is increasing. Model (1) is expressed in the form (2):

$$Odds(SP = 1) = e^{\beta_0 + \beta_1 SEX + \beta_2 AG + \beta_3 PROFD + \beta_4 URB + \beta_5 SAT} \quad (2)$$

The interpretation of the influence of variables is transformed into ratios instead of the difference in change of variable units. Based on the results, we found evidence to support hypothesis 2. On average, the probability that women regularly participate in sports activities equals 43.1% (sig. < 0.01) of the likelihood for men, indicating that gender affects the regularity of sports participation. Also evident is that the socio-professional status of an individual affects the individual's sports activity. The probability that socio-professionally passive individuals

(house person, unemployed, retired, students) regularly participate in sports activities equals 53.3% (sig. < 0.01) of the probability that holds for socio-professionally active individuals (self-employed, managers, other white collars, manual workers) on average, supporting hypothesis 3. The findings give an insight into the connection of a person's life satisfaction, as it increases the odds that a person regularly participates in sports activities by a ratio of 2.805 (sig. < 0.01). The upper value rises to the value of 3.234, meaning those who stated positive life satisfaction are three times more likely to participate in sports activities regularly, proving hypothesis 5.

**Table 3**  
Results of logistic regression

Variable	β	Wald	df	Sig.	Exp(β)	95% C.I. for Exp(β)	
						Lower	Upper
AG		214.272	6	0.000			
AG(1)	0.148	0.748	1	0.387	1.160	0.829	1.623
AG(2)	-0.044	0.067	1	0.796	0.957	0.684	1.338
AG(3)	0.278	3.845	1	0.050	1.320	1.000	1.743
AG(4)	0.677	29.181	1	0.000	1.967	1.539	2.514
AG(5)	0.552	23.544	1	0.000	1.737	1.390	2.171
AG(6)	-0.401	30.781	1	0.000	0.670	0.581	0.772
SEX	-0.842	93.250	1	0.000	0.431	0.363	0.511
PROFD	-0.629	67.863	1	0.000	0.533	0.459	0.619
URB		191.238	2	0.000			
URB(1)	-0.610	22.788	1	0.000	0.544	0.423	0.698
URB(2)	-1.085	166.779	1	0.000	0.338	0.287	0.398
SAT	1.032	202.438	1	0.000	2.805	2.434	3.234
Constant	0.077	0.630	1	0.427	1.080		
Model x <sup>2</sup>	859.473		11				
Block x <sup>2</sup>	859.473		11				
Nagelkerke R <sup>2</sup>	0.040						
% of correct predictions	57.9						

Notes: AG = age group 75 years and over; AG(1) = age group 15–24 years; AG(2) = age group 25–34 years; AG(3) = age group 35–44 years; AG(4) = age group 45–54 years; AG(5) = age group 55–64 years; AG(6) = age group 65–74 years; SEX = gender; PROFD = socio-professional status; URB = large town; URB(2) = rural village; URB(2) = small/medium size town; SAT = life satisfaction.

Source: Authors



The values for the independent variable age group, while comparing the age group 75+ years to the younger age groups (15–24, 25–34, and 34–44 years), prove to be insignificant (sig. > 0.01). While comparing the difference between the age group 75+ years to the older age groups (45–54, 55–64, and 65–74 years), the values in change prove to be significant (sig. < 0.01). The results say that the odds that a person aged 45–54 years regularly participates in sports activity is 1.967 more likely, a person aged 55–64 years is 1.737 times more likely, and a person aged 65–74 years is 0.670 times more likely to regularly participate in a sports activity than a 75+ years old person. Additionally, when comparing the age groups 15–24, 25–34, and 34–44 years to the base age group of 75+ years, the insignificant results suggest that their sports participation habits are entirely different. Based on these conclusions, we can prove hypothesis 1, stating that age significantly affects the regularity of an individual's sports participation.

The urbanization level negatively affects the regulatory sports participation level – the odds that a person regularly participates in a sports activity gets lower by the ratio of 0.544 when comparing people living in small/medium-sized towns to people living in rural villages, and the value further decreases when comparing regular sports activity of people living in large cities to people living in rural villages. Hypothesis 4 is rejected (sig. < 0.01), as the results show that the increase in urbanization level actual decision to be involved negatively affects the regularity of sports participation.

## Discussion

Sports participation has long ceased to be a point of interest at an individual's level. Governments, institutions and policymakers are actively interested in studying sports and physical activity effects on the community. The positive impact on individuals directly expands to economic and social conditions of the community – for example, lower total health care costs generated at the state level (Sato et al., 2019; De Boer et al., 2020; Coughlan et al., 2021; European Commission, n.d. c). Governments and regional institutions recognize the positive effects – the European Union is widely known for wanting to create coherence, unity and identity conditions within its population, and sport is one of the ways they intend to achieve this goal (European Union, 2019; European Commission, n.d. b). Therefore, the EU makes efforts and invests significant funds in designing and constituting decisions and rules on sports to gain numerous benefits it can provide to the community. The Scopus database provides insights into numerous institutions that

fund the research and publication of scientific papers based on sports participation, putting the topic under the scrutiny of scientific research. Various study areas deal with different viewpoints of “sports participation”, all contributing to raising awareness of sports having a profound potential to influence the socio-economic status of communities.

Numerous benefits on multiple levels stemming from sports participation and activity create the need for knowledge about factors impacting the individual's motivation for regular sports participation. Based on the data of the Eurobarometer research, an analysis of factors influencing sports participation was conducted. As in previous studies (Hovemann & Wicker, 2009; Van Tuyokom, 2011; Kokolakis et al., 2012; Downward et al., 2014; Hallman & Brener, 2014; Hoekman et al., 2016; Magno et al., 2020), some socio-economic and demographic characteristics have positively influenced sports participation. Still, some negative ones have also been determined. This research also found that socio-professional status positively impacts sports participation, with individuals in an active working status more regularly participating in sports activities, which is in line with the results of studies conducted after 2010 (Laczkó et al., 2020). Research has shown that men are slightly more involved in sports participation than women, but the ratio is close to an equal distribution. It is possible to notice a slight shift from the findings of Hovemann and Wicker (2009) and Kokolakis et al. (2012) based on a general EU level. The individual's age was proved statistically significant, in line with previous research. The research highlights the differences in sports participation between younger and older age groups. Urbanization was also a variable of significant influence, although the impact proved to be negative, contrary to the stated assumption and previous findings (Magno et al., 2020; Laczkó et al., 2020). People living in more urbanized environments are less involved in regular sports participation than people living in less urbanized areas, although the availability of infrastructure would suggest otherwise. It seems that outdoor activities are more likely to occur in a more rural environment. Lastly, people who stated positive life satisfaction are prone to participate more regularly in sports activities than individuals with negative life satisfaction (approx. three times more likely). This is in line with the findings of Mutz et al. (2020), adding to the theory that higher levels of subjective well-being stimulate the desire for sports participation.

Knowledge of the benefits of sports participation is essential. Still, knowing which factors influence individuals' participation in sports is necessary. It is easier to achieve multi-level socio-economic benefits from sports participation if known. Thus, the results of our research are important

for policymakers at the regional, national and local levels of government. It is necessary to encourage horizontal and vertical implementation of measures to increase participation in sports to achieve the desired positive socio-economic effects. The actions and directives must be aimed at the inactive population, and it is necessary to tailor them according to observed factors of significant impact.

## Conclusion

Our research shows that regular sports activity is, on average, the domain of men, especially between the ages of 34 and 64, those with active socio-professional status who do not live in a highly urbanized environment, all of which describe men who have achieved a certain position in their professional career. Therefore, the results of our research show that it makes sense to take appropriate measures to encourage women to participate in regular sports activities on an equally frequent basis, which means that it makes sense to determine the obstacles or reservations that prevent this. An efficient measure may be an organized workout for women at the municipality level, especially for women in different age groups. The results of our research are also crucial for the designers of study programs, as younger people, especially students, are less likely to regularly participate in sports activities than the group mentioned above (middle-aged men who

are professionally active). Regular sports activity should thus become an important part of extracurricular activities, which should be regularly organized or even part of traditional study programs. Given the EU directives and the established positive impact of regular sports activity on an individual's physical and mental well-being, research in this field, presented in this paper only from the point of view of some selected influencing factors, is important.

The research conducted is limited to a few personal characteristics of individuals, which is reflected in the overall explanatory value of the model. The individual characteristics were carefully selected concerning previous studies that did not provide unambiguous results. Another limitation of the research is the operationalization of selected independent variables – socio-professional status divided into an active and passive state, instead of choosing occupation of individuals as a determinant, and the life satisfaction measurement defined as a binary variable instead of a specific scalar value.

Several extensions to our research are possible. Future research may include additional different characteristics (such as working-class affiliation, generational groups, level of education, marital status and experience in sports) or otherwise determine categorical variables (e.g. other age groups, multiple levels of socio-professional status, grouping by gender and age at the same time, various levels of life satisfaction).

## References

- Ács, P., Kovács, A., Paár, D., Hoffbauer, M., Szabó, P., Szabó, T., & Stocker, M. (2020). Comparative analysis of the economic burdens of physical inactivity in Hungary between 2005 and 2017. *BMC Public Health*, 20(S1). DOI: 10.1186/s12889-020-08478-y.
- Ács, P., Stocker, M., Füge, K., Paár, D., Oláh, A., & Kovács, A. (2016). Economic and public health benefits: The result of increased regular physical activity. *European Journal of Integrative Medicine*, 8, 8–12. DOI: 10.1016/j.eujim.2016.11.003.
- Andersen, M. H., Ottesen, L., & Thing, L. F. (2019). The social and psychological health outcomes of team sport participation in adults: An integrative review of research. *Scandinavian Journal of Public Health*, 47(8), 832–850. DOI: 10.1177/1403494818791405.
- Coughlan, D., Saint-Maurice, P. F., Carlson, S. A., & Matthews, C. E. (2021). Leisure time physical activity throughout adulthood is associated with lower medicare costs: evidence from the linked NIH-AARP diet and health study cohort. *BMJ Open Sport & Exercise Medicine*, 7(1). DOI: 10.1136/bmjsem-2021-001038.
- Data.europa.eu (2018). *Special Eurobarometer 472: Sport and physical activity*. Directorate-General for Communication. Retrieved from [http://data.europa.eu/88u/dataset/s2164\\_88\\_4\\_472\\_eng](http://data.europa.eu/88u/dataset/s2164_88_4_472_eng).
- De Boer, W. I. J., Dekker, L. H., Koning, R. H., Navis, G. J., & Mierau, J. O. (2020). How are lifestyle factors associated with socioeconomic differences in health care costs? Evidence from full population data in the Netherlands. *Preventive Medicine*, 130. DOI: 10.1016/j.ypmed.2019.105929.
- Downward, P., Lera-López, F., & Rasciute, S. (2014). The correlates of sports participation in Europe. *European Journal of Sport Science*, 14(6), 592–602. DOI: 10.1080/17461391.2014.880191.

- European Commission (2018). *Special Eurobarometer Report 472: Sports and physical activity*. Retrieved from <https://www.europarc.org/wp-content/uploads/2020/01/Special-Eurobarometer-472-Sports-and-physical-activity.pdf>
- European Commission (n.d. a). *Sport - About sport in the EU*. Retrieved from <https://sport.ec.europa.eu/sport-in-the-eu>.
- European Commission (n.d. b). *Sport and society*. Retrieved at <https://sport.ec.europa.eu/policies/sport-and-society>.
- European Commission (n.d. c). *Physical activity and health*. Retrieved at <https://sport.ec.europa.eu/policies/sport-and-society/physical-activity-and-health>.
- European Union (2008). *EU Physical Activity Guidelines*. Brussels: European Union. Retrieved from [https://ec.europa.eu/assets/eac/sport/library/policy\\_documents/eu-physical-activity-guidelines-2008\\_en.pdf](https://ec.europa.eu/assets/eac/sport/library/policy_documents/eu-physical-activity-guidelines-2008_en.pdf).
- European Union (2018). *Sports Statistics 2018 edition*. Luxembourg: Publications Office of the European Union. Retrieved from <https://ec.europa.eu/eurostat/documents/4031688/8716412/KS-07-17-123-EN-N.pdf/908e0e7f-a416-48a9-8fb7-d874f4950f57?t=1520415140000>.
- European Union (2019). *EU sports policy – Going faster, aiming higher, reaching further*. European Parliament. Retrieved from [https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/640168/EPRS\\_BRI\(2019\)640168\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/640168/EPRS_BRI(2019)640168_EN.pdf).
- European Union (2020). *European Health Survey (EHIS wave 3) Methodological manual, Re-edition, 2020 edition*. Luxembourg: Publications Office of the European Union. Retrieved from <https://ec.europa.eu/eurostat/documents/3859598/10820524/KS-01-20-253-EN-N.pdf/2d66d5d7-b966-38ba-881a-a8f4b6d3f5e0?t=1588680461000>.
- Eurostat (2020). *International Standard Classification of Education (ISCED)*. Retrieved from: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=International\\_Standard\\_Classification\\_of\\_Education\\_\(ISCED\)#Implementation\\_of\\_ISCED\\_2011\\_28levels\\_of\\_education.29](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=International_Standard_Classification_of_Education_(ISCED)#Implementation_of_ISCED_2011_28levels_of_education.29)
- Eurostat (2022). *Statistics on sport participation*. Retrieved from: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Statistics\\_on\\_sport\\_participation](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Statistics_on_sport_participation).
- Hallmann, K., & Breuer, C. (2014). The influence of socio-demographic indicators economic determinants and social recognition on sport participation in Germany. *European Journal of Sport Science*, 14(sup1). DOI: 10.1080/17461391.2012.704078.
- Hautbois, C., Djaballah, M., & Desbordes, M. (2020). The social impact of participative sporting events: A cluster analysis of Marathon participants based on perceived benefits. *Sport in Society*, 23(2), 335–353. DOI: 10.1080/17430437.2019.1673371.
- Hoekman, R., Breedveld, K., & Kraaykamp, G. (2016). Sport participation and the social and physical environment: Explaining differences between urban and rural areas in the Netherlands. *Leisure Studies*, 1–14. DOI: 10.1080/02614367.2016.1182201.
- Hovemann, G., & Wicker, P. (2009). Determinants of sport participation in the European Union. *European Journal for Sport and Society*, 6(1), 51–59. DOI: 10.1080/16138171.2009.11687827.
- Kokolakakis, T., Lera-López, F., & Panagouleas, T. (2012). Analysis of the determinants of sports participation in Spain and England. *Applied Economics*, 44(21), 2785–2798. DOI: 10.1080/00036846.2011.566204.
- Laczko, T., Makai, A., Prémusz, V., Ács, P., & Paár, D. (2020). A comparison of sporting activities across the Visegrad Group countries. *Health Problems of Civilization*, 14(3), 199–210. DOI: 10.5114/hpc.2020.98444.
- Ley, C. (2020). Participation motives of sport and exercise maintainers: Influences of age and gender. *International Journal of Environmental Research and Public Health*, 17(21), 7830. DOI: 10.3390/ijerph17217830.
- Magno, F., ten Caten, C. S., Reppold Filho, A. R., Callegaro, A. M., & Ferreira, A. de. (2020). Factors related to sports participation in Brazil: An analysis based on the 2015 national household survey. *International Journal of Environmental Research and Public Health*, 17(17), 6011. DOI: 10.3390/ijerph17176011.
- Mills, K., Dudley, D., & Collins, N. J. (2019). Do the benefits of participation in sport and exercise outweigh the negatives? *An academic review, Best Practice & Research Clinical Rheumatology*, 30(1), 172–187. DOI: 10.1016/j.berh.2019.01.015.
- Mutz, M., Reimers, A. K., & Demetriou, Y. (2020). Leisure Time Sports Activities and Life Satisfaction: Deeper insights based on a representative survey from Germany. *Applied Research in Quality of Life*, 16(5), 2155–2171. DOI: 10.1007/s11482-020-09866-7.
- Official Journal of the European Union (2013). Council recommendation of 26 November 2013 on promoting health-enhancing physical activity across sectors (2013/C 354/01). Retrieved from: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2013:354:0001:0005:EN:PDF>.
- Ruseski, J. E., Humphreys, B. R., Hallman, K., Wicker, P., & Breuer, C. (2014). Sport Participation and Subjective Well-Being: Instrumental Variable Results from German Survey Data. *Journal of Physical Activity and Health*, 11(2), 396–403. DOI: 10.1123/jpah.2012-0001.
- Sato, M., Inoue, Y., Du, J., & Funk, D. C. (2019). Access to parks and recreational facilities, physical activity, and health care costs for older adults: Evidence from U.S. countries. *Journal of Leisure Research*, 50(3), 220–238. DOI: 10.1080/00222216.2019.1583048.

- Schüttoff, U., Pawlowski, T., & Lechner, M. (2021). Die ökonomische Analyse des individuellen Sporttreibens. In Güllich, A., and Krüger, M. (Eds.), *Sport in Kultur Und Gesellschaft: Handbuch Sport und Sportwissenschaft*, pp. 661–677. Heidelberg: Springer, Spektrum.
- Szczepaniak, M. (2020). Public sport policies and health: comparative analysis across European Union countries. *Journal of Physical Education and Sport*, 20(sup2), 1022-1030. DOI: 10.7752/jpes.2020.s2142.
- Tabachnick, B. G., & Fidell, L. S. (2019). *Using Multivariate Statistics* (7<sup>th</sup> edition). U.S.: Pearson Education.
- Van Tuyckom, C. (2011). Macro-environmental factors associated with leisure-time physical activity: A cross-national analysis of EU countries. *Scandinavian Journal of Public Health*, 39(4), 419–426. DOI: 10.1177/1403494810396553.
- Wiese, C. W., Kuykendall, L., & Tay, L. (2017). Get active? A meta-analysis of leisure-time physical activity and subjective well-being. *The Journal of Positive Psychology*, 13(1), 57–66. DOI: 10.1080/17439760.2017.1374436.
- World health organisation (2004). *Global Strategy on Diet, Physical Activity and Health*. Geneva: World Health Organization. Retrieved from <https://www.who.int/publications/i/item/9241592222>.
- World health organisation (2010). *Global recommendations on physical activity for health*. Geneva: World Health Organization. Retrieved from <https://www.who.int/publications/i/item/9789241599979>.
- World health organisation (2016). *Physical activity strategy for the WHO European Region 2016-2025*. Copenhagen: WHO Regional Office for Europe. Retrieved from [https://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0014/311360/Physical-activity-strategy-2016-2025.pdf](https://www.euro.who.int/__data/assets/pdf_file/0014/311360/Physical-activity-strategy-2016-2025.pdf).
- World health organisation (2018). *Physical activity factsheets for the 28 European Union member states of the WHO European Region*. Copenhagen: WHO Regional Office for Europe. Retrieved from [https://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0005/382334/28fs-physical-activity-euro-rep-eng.pdf](https://www.euro.who.int/__data/assets/pdf_file/0005/382334/28fs-physical-activity-euro-rep-eng.pdf).
- Zhang, Z., & Chen, W. (2018). A systematic review of the relationship between physical activity and happiness. *Journal of Happiness Studies*, 20(4), 1305–1322. DOI: 10.1007/s10902-018-9976-0.

## Družbeni in ekonomski pomen športa

### Izvleček

Športno udejstvovanje ne prinaša koristi le na osebni ravni, temveč tudi številne koristi na različnih družbenih ravneh, pa tudi na ravni gospodarstva. Članek predstavlja prispevek k raziskovanju dejavnikov posameznikov, ki vplivajo na rednost športnega udejstvovanja. Uporabljen je bil logistični regresijski model na podlagi podatkov posebne raziskave Eurobarometra iz leta 2018. Na podlagi ugotovitev je najbolj verjetno, da se bodo redno ukvarjali s športnimi dejavnostmi moški srednjih let, prav tako je bolj verjetno, da se bodo redno ukvarjali s športnimi dejavnostmi posamezniki z aktivnim socialno-profesionalnim statusom kot posamezniki, ki so pasivni. Enako velja za posameznike, ki živijo na manj urbaniziranih območjih, in tiste, ki so zadovoljni z življenjem, v primerjavi s tistimi, ki živijo na urbanih območjih oz. tistimi, ki s svojim življenjem niso zadovoljni. Rezultati naše raziskave so pomembni za oblikovalce gospodarske politike tako na nacionalni in regionalni ravni kot tudi na ravni posameznih občin. Olajšujejo upravljanje športnih aktivnosti posameznikov, vendar so omejeni na manjše število dejavnikov s posebnostmi merjenja. Predstavljeni so tudi predlogi za nadaljnje raziskave.

*Ključne besede:* športno udejstvovanje, šport in družbeni vidiki, šport in ekonomski vidiki, ureditev športne politike