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SCIENTIFIC PAPER

ECONOMIC IMPORTANCE OF THE HUNGARIAN SPORTS SECTOR IN INTERNATIONAL COMPARISON

Zsuzsa Koroknay

PhD student,
University of Debrecen, Faculty of Economics and Business, Institute of Sports Management

koroknay.zsuzsa@econ.unideb.hu

Abstract: Sport is one of the most dynamically developing sectors in the world. During my research, I was looking for the answer to why and how the economic aspects of sport have evolved in recent times. I examined and evaluated sports economy indicators for the global (The European Union) and territorial (Hungary) units (for the last twenty years). The need for measurability is constantly increasing nowadays. This can also be seen in the markets of the sports sector, so we can find databases that are increasingly expanding in this sector. I have analysed EUROSTAT databases - with indexing – which can provide relevant information. The research field was two economic aspects, the number of employee and trade in sporting goods. The number of employees was analysed separately by the European Union and Hungary. In the examination of trade in sporting goods The Hungarian trade in sporting goods was compared to the neighbouring European Union countries. Based on my results, I can say that the economic importance of the sports sector has increased within the European Union and Hungary as well because the number of employed people in sports and the trade in sporting goods has increased.

Keywords: *sport sector, economic importance, employment in sport, trade in sporting goods*
(JEL Classification: *L83, Z20*)

INTRODUCTION

Nowadays people have more leisure time which has resulted in the increased competition between market participants. Sport has a positional advantage in this market because people need motion and physical activity due to their biology. So, sport is one of the strongest participants in this competition. In my research, I have investigated the economic dimension of sports, during the last 20 years.

The economic importance of sport has steadily increased since the 2000s. In recent decades more and more research has appeared in connection with sporting activities (ANDREFF and SZYMANSKI, 2006); in addition, in many disciplines can be found academic research (HUMPHREYS and RUSESKI, 2008). The professionalization and growth of sport has given changes in the production, consumption, and management of sport (HOYE et al., 2018). This demonstrates that sports alone share 2.5 – 3% of world trade (ÁCS, 2015; NÁDORI and BÁTONYI, 2011; NÁDORI, 2000; SZYMANSKI, 2010). The average annual growth rate of the sports market was 7% around 2010. This means that the growth rate of the sports sector has exceeded that of GDP's (COLLIGNON and SULTAN, 2014). The expenditure of private households on sporting goods and services reached $700 billion, which is equivalent to 1% of world GDP (BÁCSNÉ BÁBA et al., 2018).

In the European Union during the past 20 years, already 2% of the gross domestic product could be attributed to the sports sector. Demand for sporting goods and services created annually about €16.5 billion (NÁDORI, 2000). In 2018 the sport-related GDP was 279.7 bn Euros, what was 2.12% of total GDP (EC, 2018). In most of the EU-27 the leisure, cultural and sporting services are in the top three sectors in terms of gross value added (BÁCSNÉ BÁBA et al., 2018). The direct effects of sport and the multiplier effect together contributed 3% of total gross value added (GVA) in the European Union. Also, it can be said that the national income elasticity of the sport sector is 1.14. This means that if the national income grows by 1%, GVA in sport will increase by 1.14% (BÁCSNÉ BÁBA et al., 2018). Reference (EC, 2012) points out that sport belongs to the major economic sector. The economic performance of sport is almost equivalent to that of agriculture, forestry and fishing (BÁCSNÉ BÁBA et al., 2018; EC, 2012). These numbers make it clear that sport is playing an important and growing role in national economies, especially when we can see that its contribution to GDP is detecTable. "The GDP stands for Gross Domestic Product and represents the total monetary value of all final goods and services produced (and sold on the market) within a country during a period (typically 1 year)" (KSH, 2015; WORLDOMETERS, 2019).

Reference (WHO, 2018) summarized the percentage of GDP for health, education and sports in The European Union in 2018 (Table 1, Table 2).

Table 1 Averages for the European Union

Country	GDP per capita (€)	Health (GDP)	Education (GDP)	Sports (GDP)
Averages of EU	25 907	6,1%	5,0%	0,3%

Source: Own editing based on WHO (2018), 2019

According to data from all countries, the GDP per capita is 25.9 thousand euros. The percentage of health-related products and services is the highest (6.1%) in its contribution to GDP. The next is the expenditure on education with 5%. The average contribution of sport to the GDP in the EU is 0.3%. In the contribution to GDP, health (8.6%) and education (6.9%) are the largest in Denmark, but Hungary is the first (1.1%) in sports (Table 2).

These proportions can be compared among those countries which have almost the same GDP per capita as Hungary. These countries are Croatia, Poland and Latvia. The Health (GDP) is the highest in Croatia, but Hungary follows with 4.8%, ahead of the other two countries. The Education (GDP) has the highest proportion in Poland, after that Latvia, and Hungary with 4.9%. In the case of Sports (GDP), Hungary has the highest rate (1.1%) no in just among these countries, but also in the European Union.

Table 2 Percentage of GDP for health, education and sports in the member of the European Union

Country	GDP per capita (€)	Health	Education	Sport
Austria	36 300	8,0%	4,9%	0,3%
Belgium	34 400	7,4%	6,4%	0,4%
Bulgaria	6 000	5,0%	3,4%	0,2%
Cyprus	21 600	2,6%	6,0%	0,3%
Czech Republic	16 500	7,4%	4,6%	0,4%
Denmark	45 800	8,6%	6,9%	0,4%
United Kingdom	31 800	7,6%	4,7%	0,2%
Estonia	13 700	5,3%	5,9%	0,4%
Finland	34 800	7,2%	6,1%	0,5%
France	31 800	8,1%	5,4%	0,5%
Greece	17 100	4,9%	4,3%	0,3%
Netherlands	39 800	7,7%	5,3%	0,5%
Croatia	11 100	6,5%	4,8%	0,1%
Ireland	53 100	5,2%	3,3%	0,1%
Poland	11 200	4,6%	5,8%	0,3%
Latvia	11 000	3,7%	5,5%	0,2%
Lithuanian	12 000	5,8%	5,2%	0,2%
Luxembourg	81 700	4,8%	4,8%	0,5%
Hungary	11 300	4,8%	4,9%	1,1%
Malta	19 700	5,6%	5,4%	0,1%
Germany	34 700	7,2%	4,2%	0,2%
Italy	25 900	7,0%	3,9%	0,3%
Portugal	16 900	5,9%	4,9%	0,3%
Romania	7 700	4,0%	3,7%	0,3%
Spain	23 800	6,0%	4,0%	0,4%
Sweden	42 600	6,9%	6,6%	0,6%
Slovakia	14 600	7,4%	3,8%	0,2%
Slovenia	18 500	6,7%	5,6%	0,3%

Source: Own editing based on WHO (2018), 2019

On the other hand, the data can be compared among the neighbouring countries of Hungary (Austria, Croatia, Romania, Slovakia and Slovenia). In the rank of GDP per capita, Hungary is the third after Austria and Croatia. The Health (GDP) rates are higher than 6.5% in neighbouring countries – except for Romania with 4% and Hungary with 4.8%. In the case of Education (GDP), Hungary is the same as Austria, and only Slovenia has a higher rate of gross value added. In this comparison, it can be said too that Hungary has the highest proportion of Sports (GDP) among the neighbouring countries (Table 2).

MATERIALS AND METHODS

During my research, I used several databases. These databases were downloaded from the Eurostat system, which I revised and use to create my own database. Databases provide an all-round picture of sports employment and trade in sporting goods.

The number of employees was determined by considering gender, age and qualification between 2011 and 2017. In these classifications, I created more sub-categories based on 1-1 additional criteria. The number of employees was grouped then divided into gender: male and female. The data is presented in three age groups by age: 15-29 year, 30-64 year and over 65 years. The qualification group has three sub-categories based on the International Standard Classification of Education 2011 levels (ISCED 2011). The first sub-category is the 0-2 levels, which includes early childhood education, primary education and lower secondary education students. The second sub-category includes the 3-4 levels, which comprise upper secondary education and post-secondary non-tertiary education (e.g.: OKJ education). The third sub-category is the 5-8 levels, which includes the short-cycle tertiary education, bachelor, master, doctoral or equivalent students (ISCED-2011; 2019).

The database of trade in sporting goods contains the turnover of sports products value in Euro. Exports and imports were presented in two different group, intra-EU28 and extra-EU28. The intra-EU28 criteria means that the trading partner is a member of The European Union. The extra-EU28 criteria means that the commercial partner is not a member of The European Union. According to the description of the database (EUROSTAT, 2019), sporting goods are understood as follows: skis and ski-related equipment, skate, water sports equipment, golf, racket (tennis and badminton) equipment, balls, gymnastic, sporting and swimming equipment, fishing equipment, bicycle, parachutes, sportswear, shoes, shooting equipment.

During my research, I have done an economic analysis, from which I chose to index. The index numbers can characterize economic phenomena, consistency and results by quantitatively. The statistical index numbers are usually derived dates. The most common types of derived numbers are ratios, averages, and indices (SÁNDOR et. al, 1997). Using this method of analysis, two areas of the sports economy were examined.

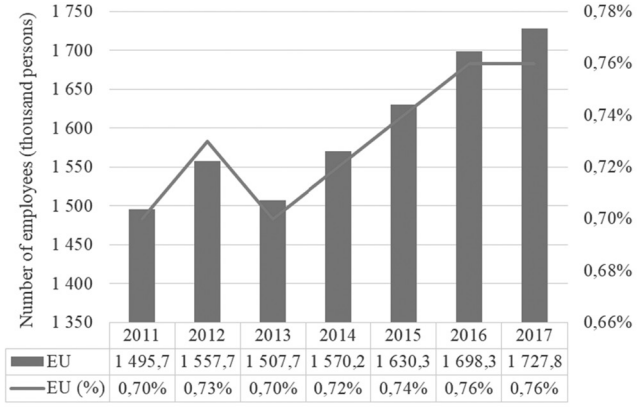
RESULTS AND DISCUSSION

In this chapter, I would like to present my results. The results are presented in the subdivision of the two examined areas, employment in the sports sector and trade sector in sporting goods.

Employment in the sports sector

First of all, I would like to present the study of sports employment in general with the help of Figure 1 and 2. I can say that both the Figure and the columns represent the number of employees, and the lines represent the sport employees' ratio of total employees.

Figure 1 Evolution of employment between 2011 and 2017 in Europe

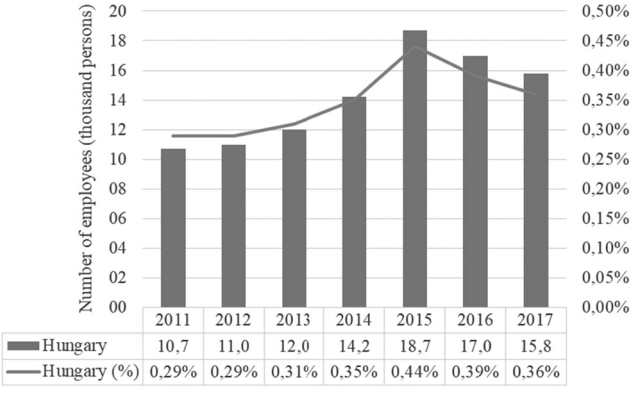


	2011	2012	2013	2014	2015	2016	2017
EU	1 495,7	1 557,7	1 507,7	1 570,2	1 630,3	1 698,3	1 727,8
EU (%)	0,70%	0,73%	0,70%	0,72%	0,74%	0,76%	0,76%

Source: Own editing based on Eurostat, 2019

In the European Union both the numbers of employees and the ratios have steadily increased since 2013 (Figure 1). The number of people employed was 1.5 million in 2011, which represents 0.7 percent of total employment. Compared to the base year (2011), it can be said that both examined parts were steadily increasing until 2017, although there are different changes in each year. Between 2016 and 2017 the number of employees continued to grow (+29.500 person), but the ratio of total employees did not change.

Figure 2 Evolution of employment between 2011 and 2017 in Hungary



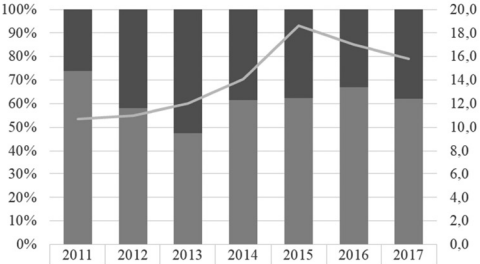
	2011	2012	2013	2014	2015	2016	2017
Hungary	10,7	11,0	12,0	14,2	18,7	17,0	15,8
Hungary (%)	0,29%	0,29%	0,31%	0,35%	0,44%	0,39%	0,36%

Source: Own editing based on Eurostat, 2019

The number and the ratio were also steadily increasing between 2011 and 2015 in Hungary (Figure 2). In this period the number of professionals in sport increased by eight thousand, which means an increase of 0.13% in total employment. After that, the numbers and the ratio decreases by about three thousand people and 0.05%. On the one hand, it's surprising because the training offered by the sports federations and the number of participants in higher education courses is constantly increasing. On the other hand, many employees have become self-employed persons due to more favourable tax conditions, and those people were not included in the number of employment in the sports sector.

The division of the employed by gender (Figure 3) shows an average of 62-38% between men and women. During the period under investigation, the gender ratio shows the majority of men, except one year (2013) when the number of women was larger than the men.

Figure 3 Division of Hungarian sports employees by gender



	2011	2012	2013	2014	2015	2016	2017
women	26,17%	41,82%	52,50%	38,30%	37,63%	32,94%	37,97%
men	73,83%	58,18%	47,50%	61,70%	62,37%	67,06%	62,03%
number (thousand persons)	10,7	11,0	12,0	14,1	18,6	17,0	15,8

Source: Own editing based on Eurostat, 2019

Table 3 shows that in the total of Hungarian sport employees a considerable number fall into the 30-64 age group. However, it can be also seen that there is not data for the over 65s or the 15-29 age group in 2011-2012.

Table 3 Division of Hungarian sports employees by age group

Year/Age group	15-29	30-64	65-
2011	-	8,5	-
2012	-	8,4	-
2013	3,8	7,8	-
2014	4,7	9,2	-
2015	5,9	12,7	-
2016	6	10,8	-
2017	5,7	9,8	-

Source: Own editing based on Eurostat, 2019

Table 4 Division of Hungarian sports employees by qualification

Year/ ISCED11 levels	0-2 levels	3-4 levels	5-8 levels
2011	-	6,7	2,8
2012	-	6,4	3,9
2013	-	6,9	4,7
2014	-	7,5	6,4
2015	-	10,7	7,7
2016	-	9,2	6,9
2017	-	9,5	5

Source: Own editing based on Eurostat, 2019

Table 4 shows that the data grouped by the qualification of the employees. According to the data, the majority of the employees have a qualification level of 3-4 based on ISCED11. It is also noticeable that between 2011 and 2015, the number of those with levels 5-8 increased more than those with lower levels. This is a positive thing, because the number of employees who have higher qualifications increased in the Hungarian sports sector, so it can be assumed that those people have higher competence.

Trade-in sporting goods

In this chapter, the Hungarian trade in sporting goods is compared to the neighbouring EU countries between 2005 and 2014 (Table 5, Table 6).

Table 5 Export of sporting goods compared to neighbouring countries

Year	HR	HU	AT	RO	SI	SK	RS
2005	57%	100%	849%	254%	186%	78%	4%
2006	62%	100%	745%	227%	158%	74%	9%
2007	51%	100%	578%	239%	153%	73%	11%
2008	92%	100%	565%	243%	182%	90%	9%
2009	45%	100%	623%	248%	142%	102%	8%
2010	78%	100%	452%	181%	82%	75%	7%
2011	54%	100%	412%	181%	73%	67%	7%
2012	82%	100%	376%	165%	71%	71%	12%
2013	29%	100%	352%	155%	63%	64%	11%
2014	34%	100%	385%	167%	53%	75%	9%

Source: Own editing based on Eurostat, 2019

Table 5 shows the evolution of Hungarian exports in sporting goods between 2005 and 2014 in comparison to neighbouring countries. The benchmark was the annual export value of Hungary in thousands of euros. The base ratios for the other countries were calculated relative to the Hungarian value. It can be seen that the proportions of Croatia, Slovakia (except 2009) and Serbia were not 100%, which means that those countries export less sporting goods than Hungary. In the case of Austria, the export value decreased from 8.5 multiple to 3.9 multiple. This is favourable for Hungary, because the export value of Austria increased in the same way as Hungary's, but the decrease in ratio shows the dynamic development of Hungary. In summary, therefore, it can be said that the Hungarian export activities in sporting goods constantly improved during the period researched.

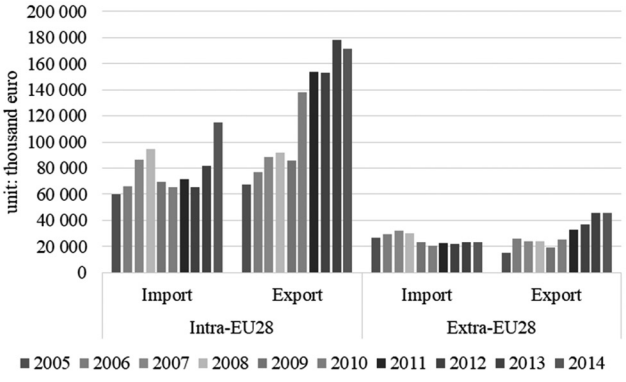
The evolution of Hungarian import in sporting goods (Table 6) is favourable compared to neighbouring countries. Serbia is the only one who constantly imports less than our country, and all the import a higher amount than Hungary. Compared to Austria, the Figures for the beginning and the end of the period have decreased proportionately although the values have continued to increase. The total value of import in sporting goods has increased by about 60% under the research period in the case of Hungary.

Table 6 Import of sporting goods compared to neighbouring countries

Year	HR	HU	AT	RO	SI	SK	RS
2005	250%	100%	700%	69%	110%	72%	25%
2006	214%	100%	673%	80%	119%	84%	26%
2007	180%	100%	493%	89%	109%	67%	33%
2008	230%	100%	510%	120%	130%	81%	39%
2009	138%	100%	701%	105%	115%	120%	41%
2010	154%	100%	843%	104%	113%	122%	37%
2011	115%	100%	841%	98%	119%	128%	36%
2012	234%	100%	892%	111%	119%	150%	42%
2013	197%	100%	815%	93%	104%	138%	33%
2014	137%	100%	660%	80%	80%	102%	27%

Source: Own editing based on Eurostat, 2019

Figure 4 Hungarian trade in sporting goods by partner



Source: Own editing based on Eurostat, 2019

The exports and imports were presented in two different groups, intra-EU28 and extra-EU28 (Figure 4). The Intra-EU28 criteria shows how our trade value evolved with the members of the European Union. During the research period, exports were much more dominant than imports in Hungary. The export value was more than 120 million euro from 2010

by Intra-EU28. Imports increased until the economic crisis and after that they decreased by 25 million euro. 2014 was the first time when the Hungarian import value achieved higher value than in 2008. The Extra-EU28 criteria shows how our trade value evolved with the non-members of the European Union. During the first half of the research period (between 2005 and 2009) it can be observed that the importation was determinative. After 2010 the exportation became determinative in trade with non-members of EU.

In summary, it can be said (Figure 4) that the importation and the exportation are both more significant in trade with the members of the EU than with the non-members of the EU.

CONCLUSION

In my research, I examined the sports sector in a global context. When I refer to the global dimension, I mean the European Union, for which I did an economic analysis of sports employment and the trade in sporting goods.

The total number of sports employees in the EU increased not only in value but also in proportion to the total employment, which was 0.76% in 2017. It can be stated that Hungarian employment in sport has increased by eight thousand from 2011 to 2015, which meant 0.15% growth in proportion to total employment. After that a decrease can be seen by three thousand persons in Figure 2. This is a little surprise, because training is supported by the national sports federations. On the other hand, the tax conditions changed and as a consequence, persons who were previously employees have now become self-employed persons.

The division of Hungarian sports employees by gender (Figure 3) shows an average of 62-38%: men and women respectively. Based on the division by age group the majority of people are in the 30-60 year age group. Based on the division by qualification most people have a level 3-4 education (based on ISCED 11). But it is also positive that the number of those who have a level 5-8 education increased from 2011 to 2015 in the Hungarian sports sector employment. As the results show, there are more employees with a higher education employed in sport which may mean higher competence and greater development opportunities.

The other research field was the trade in sporting goods. A comparative analysis of trade between Hungary and neighbouring countries was presented/made in this study. In the case of exportation (Table 5), Hungary is the third in rank after Austria and Romania. Those countries export more sporting goods than Hungary. The Hungarian export activity dynamically improved in comparison with the export value of Austria. In the case of importation (Table 6), Hungary is located in a favourable situation. Serbia is the only one who permanently imports fewer sporting goods to their own country and all the others import to a higher value than ours. The total value of imported sporting goods to Hungary increased by almost 60% between 2005 and 2014.

The Hungarian trade in sporting goods was introduced by partner. Figure 4 shows that Hungary has a closer partnership with the members of the European Union. But Hungary has a less significant but not negligible partnership with the non-members of the European Union. The Hungarian exportation of sporting goods more significant than importation, which is a favourable position for Hungary.

In conclusion, sport is becoming a growing industry and its economic importance is continuously increasing in the European Union and Hungary too.

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