

**Doctoral thesis for the degree of Doctor of Philosophy (PhD)**

**DETERMINING THE COMPETITIVENESS FACTORS OF  
SUCCESSFUL INDEPENDENT SPORTS IN HUNGARY UNDER THE  
APPROVAL OF YOUNG SPORTS CONSUMERS**

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# 1. RESEARCH BACKGROUND

I chose the topic of the research due to my personal involvement, as during the 19 years of my active career as a judo player I represented Hungary at various junior world competitions. During my career as an athlete, I also qualified for the Olympic Games, and in this way I was a member of the Hungarian Olympic team in London in 2012. In my weight category, I was among the best 16 competitors, and finished 9<sup>th</sup>.

As an individual athlete, on several occasions I found myself in a situation where I myself had to collect the grants needed for my participation at the sports events, and I only found sponsors and patrons among my closest friends. It is therefore why I selected the MSC Sports Manager training jointly accredited by the Semmelweis University Faculty of Physical Education and Corvinus University Business School, where I was awarded a diploma in January 2013. I anticipated that the knowledge acquired during the training would be useful in the management of individual sportsmen and sportswomen.

The subject of my BSc thesis included the economic aspects of managing the judo sport, and I intend to use this thesis as a basis of my present research. Obviously, I wish to expand the subject and – within the framework of the competitiveness research – examine other successful individual sports in Hungary being in a similar position to judo: fencing, gymnastics, wrestling, canoeing and kayaking, and pentathlon.

While analyzing judo in my thesis, the sport was in the hands of the decision-makers, with the risk of being removed from the program of the Olympic Games, which would have brought about the end of this sport. Since then, wrestling and pentathlon are in comparable positions, and similar fears have surfaced in connection with canoeing and kayaking, as well.

During my research I examine what methods are there to improve the competitiveness of sports and save them from being withdrawn from the Olympic program, and also provide a competitive situation that is necessary for achieving continuous good results. I consider it as my mission to serve these sports with the results of my research, present to the associations a new way, a brighter and better vision of the future.

## **2. THE OBJECTIVES OF THE RESEARCH AND THE PRESENTATION OF THE RESEARCH HYPOTHESES**

Following the general presentation of my thesis and the formulation of the relevance of the examined area, in the first chapter of the thesis I intend to present my objectives and hypothesis in connection with secondary and primary research.

### **2.1. Statement of the topic and research relevance**

Sports are significant in determining social, economic, cultural and national identity. For the individual it is a tool of personal achievement and cultured leisure time, representing a healthy lifestyle. For society, it is a factor shaping the community, and even affecting national cohesion. The economic impact of sports is easy to accept, as healthy lifestyle results in greater work capacity, less absence from work, and consequently reduced health insurance costs. The increased importance of sports is also confirmed by the fact that the government has recognized these facts, and since 2010 sport has been regarded to be a high priority sector (MADARÁSZ, 2016b).

The current government looks at sports as a high priority sector, and consequently the sports sector has never been supported to such an extent in Hungary. According to MUSZBEK (2016), 73% of the entire sports area in Hungary is funded by the state, and the remaining 27% is funded by the private sector.

According to ÁCS (2007), funding channels for sports are covered by the central budget or the municipalities. In our country, besides direct budgetary funding, there is a special support system in place, named TAO. In 2010, the Government of Hungary voted for and introduced the system to furnish priority support to team spectator sports – football, water polo, handball, ice hockey and basketball. Volleyball has also been added to these sports, and therefore today there are six priority TAO sports. The TAO abbreviation originates from the name of Act LXXXI of 1996 on *corporate income tax and dividend withholding tax* (SÁRKÖZY, 2002). The support system works in a way that the state waives part of its tax revenue, and offers the opportunity to organizations to choose how to use some of their tax payments. A company is free to decide whether to support sports, though such support can be specified to be used for expenditures relating to junior sports. By adopting the law, the European Union and the Government created a precedent for this type of financing sports. However, due to the uniqueness of the system, the EU has given permission to distribute funds in this form until 2017. By now, it has been revealed that the TAO system – although in a somewhat different form – may be sustained as TAO-2. TAO has yielded incredible sports development in the area of team sports, which could never have been realized without the continued efforts of the Government. The primary target area of such sports funding were team sports and spectacular sports.

However, such target area is contrary to sports successes, as in the past few years and decades they were far less successful than individual Olympic sports.

However, these sports – and especially football – generate the broadest interest in Hungary. In the background there may be the era of the “Golden Team”, which fundamentally defines our sports history. Ever since, Hungarian sports fans have been hoping for the revival of Hungarian football. A proof of this is the 2016 European Football Tournament when “national catharsis” was experienced. In the summer of 2016, the adult Hungarian national football team won a historic success: they not only qualified for the European Football Championship in France, but they were very successful there as well, finished first in the group, and then they were among the eight finalists. The whole country was ecstatic about football and people were supporting the Hungarian footballers – regardless of political, social, religious, or other supporting views – in Hungary and France as well. The intensity of this experience was increased by the many years of unsuccessful games, which acted as a catalyst of the cathartic experience.

And then, in the summer of 2016 the Olympic Games were organized in Rio de Janeiro. The success of Hungarian athletes must be mentioned: they won a total of 8 gold medals, ranking the country 12<sup>th</sup> among 207 countries. However, in my opinion, this fantastic performance caused less catharsis than the one I mentioned in connection with the European football championship. Individual sports were always considered secondary behind team sports – and especially football – therefore those sports did not often receive appropriate recognition.

However, there has been unique performance of athletes participating in the Olympic Games since 1896: if the 490 medals won by Hungarian athletes in summer Olympic Games are compared to the population of the country, Hungary ranks as outstanding 3<sup>rd</sup> in a list of 142 countries (MEDALSPERCAPITA, 216). The government identified the situation and created a special support system for 16 sports (which was reduced to 15 when volleyball was listed under the sports supported through TAO).

Sports supported through the TAO system, as well as individual sports are provided significant state funding; however, according to SÁRKÖZY (2013), it can only be sustained temporarily. Spectacular and team sports are facing a huge risk: due to the presence of massive state funding, sponsorship in the classic sense disappears from the Hungarian sports system. The increased framework amounts may be of weighty assistance in the short term, but in the long term a sports funding structure following the Western, businessbased example seems to be inevitable.

Obviously, following a decrease in state funding; only the competitive sports will survive in the “sports market”. According to DÉNES (2015), only a few sports are capable of meeting the needs of the professional competition system in the long-term. Two of the team sports (football, rugby), and seven

individual sports (car racing, tennis, athletics, golf, cycling, boxing, dancing) has professional operation systems developed on a continental level. However, each country is seeking to operate sports professionally.

ÁCS (2007) states that “In Hungary competitive sport is characterized by focusing on the Olympics”; however, our athletes participating at the Olympic Games show outstanding performance in sports with “relatively reduced international importance”.

Maybe their professional management could be developed?

## **2.2. Objectives and formulation of hypotheses**

The **basic hypothesis of the thesis** – based on international and Hungarian literature, as well as my research – is as follows: *Sports traditionally considered individual success sports in Hungary are disadvantaged when compared to team sports internationally and in Hungary as well. Such sports may be considered as sources of social cohesion, and they – when successful – will positively affect our national identity. Currently, these sports are part of the Olympic program, providing them high quality and sufficient amount of media presence every four years, however, there is a potential threat of being removed from the Olympic program. On a regular basis Hungary shows outstanding results at the summer Olympic Games, therefore it is the most important for the sports and the sports fans to ensure their presence every four years.*

The purpose of my research is to reveal and present the factors affecting the competitive potential of individual sports, because, in my opinion, identifying these factors will help maintaining or improving the competitive position of successful individual sports in Hungary, such as fencing, gymnastics, pentathlon, canoeing and kayaking, wrestling and judo. The question can also be formulated as follows: in the case of these sports how can social recognition and economic profitability be ensured in addition to sports successes?

The **objectives** of the thesis are as follows:

- O1: To present the system of competitiveness research, and to identify the elements of the competitiveness of individual sports.
- O2: To examine why individual sports are disadvantaged when compared to team sports. Can the situation of these sports be described as sports discrimination?
- O3: To analyze the factors that could broaden the group of persons interested in individual sports.
- O4: To formulate any necessary changes to improve the competitive position of individual sports.

My dissertation is also aimed at revealing in Hungary – by means of successful individual sports – the factors promoting the increase of international popularity of various sports, in order to create larger interest in these sports.

The **hypotheses** of my thesis are as follow:

- H0: The aspects determining the competitiveness of individual sports can be identified.
- H1: I presume that individual sports are disadvantaged when compared to spectacular team sports by audience rating. I presume that the audience rating of the six selected individual sports is low, which is caused by the less spectacular movement type and the conduct of the events.
- H2: I presume that people follow sports because of the excitement, the superhuman power and the outstanding spectacular features.
- H3: I presume that men are more interested in sports events than women.
- H4: I presume that men are more interested in the type and quality of the sports event than the additional programs, services or the ticket prices.
- H5: I presume that women are more influenced by the show components of the sports event than the end result, or the struggle in the sports field.
- H6: I presume that people are more likely to watch outstanding sports events on television instead of their usual other TV programs.

### **3. BACKGROUND, METHODS USED AND PRESENTING THE RESPONDENTS**

#### **3.1 Basis of the research**

On the basis of literature available on the concepts of competitiveness I have developed the concept of competitiveness most appropriate for my research goal. When defining competitiveness “it is not sufficient to define only market profitability, since competitiveness is heavily dependent on the success of participation, on existence in the long term, and on the increase of economic potential during the competition. Those concerned need to successfully compete in the demand competition, and on the other hand it is essential to be engaged in complex adaptation in such competition. Those concerned parties may be considered competitive, which seek to maximize these factors while competing with the competitors.” Hereinafter I am going to use this interpretation of competitiveness.

I agree with the interpretation of STOCKER – SZABÓ (2011) stating that competitiveness in sports can be interpreted in two ways: as national economy competitiveness of the profession, or as sports economy competitiveness on national economy level.

I must note here that globally there is sports professional and sports economical competition. Individual sports are less able to compete with the sports-economic potential of spectacular and team sports, however, due to their sports successes, it is important to explore the factors that could assist these sports in remaining competitive.

After examining these sports through the relevant literature, I have made the conclusion that they can be compared on the basis of audience rating. This is the key factor of sports-economic success, as it produces income from broadcasting rights, support of the International Olympic Committee (IOC), and state funding in Hungary. On the other hand, this can be primarily provided by sports successes. In Hungary, the sports successes of the individual sports examined in my thesis is obvious, therefore, it can be concluded, that by increasing the audience rating, sports-economic success can also be expected.

In my thesis I examine the competitiveness of the sports from the perspective of audience rating. During the research, I try to explore the components generating and affecting this factor, in order to increase the competitiveness of these sports.

#### **3.2 Databases and methods used for the secondary research**

When studying the relevant literature, I examined international and Hungarian research, reports, reference books and scientific articles closely connected to the research topic. During the analysis I tried to present the international and Hungarian situation of individual sports included in the Olympic program. As I mentioned above, the main purpose was to present the current situation and to create a basis for the primary

research, and in this way to reveal the methods used in my research area, and to present the results of studies published so far.

During the collection of Hungarian statistical data and reports, I used the website of the Ministry of Human Capacities State Secretary of Sports, and the websites of the associations of the examined sports, while the international data were collected from the online databases of EUROSTAT, FATO, AND OECD. The professional articles and studies were accessed through *SCHOLAR*, *GOOGLE.HU*, *MATARKA*, *SCOPUS search databases*.

Taking into account the nature of secondary and primary data, and in order to conduct the processing according to the purpose of the research, I used various statistical analysis procedures. In addition to simple descriptive statistics, I also used the statistical methods of cross tabulation analysis, independent t-test, factor analysis and Mann-Whitney test.

### **3.3. Databases and methods used for the primary research**

The results and correlations revealed in the course of studying the literature served as the basis of my primary research. In my primary research I used both quantitative and qualitative methods. I used the quantitative research method when I needed the exact numbers and statistical data. I used qualitative research when my purpose was to understand the situation of individual sports in detail and in context.

During my own research, in addition to the qualitative methodology, I also conducted an in-depth semistructured interview. The exploratory research methods are fundamental processes, defining the studied problem or creating the possibility of the accessibility of a specific problem (MALHOTRA – SIMON, 2009). My main objective was to achieve that the interested persons can explain – within the framework of a more or less informal conversation – their opinion and experience regarding the examined topic. Attention was called to the importance of this type of survey by LEHOTA (2001), stating that *semi-structured interview* is halfway between in-depth individual interviews and quantitative questionnaire interviews blending them to a degree – as it includes closed or optional questions, as well as scaled-type questions and also a number of open questions, which, similarly to in-depth interviews, allows the responders to express their individual thoughts and opinions. The interview contained open and closed questions as well. The main purpose of the closed questions was to reveal precise and exact answers, while the open questions offer the possibility to express opinions (LEHOTA, TOMCSÁNYI, 1994). *The interviews* with the leaders of gymnastics, judo, pentathlon, fencing and wrestling associations were conducted from July 2016 to August 2016. 5 persons were interviewed, as these sports associations were the most relevant ones for my research, and the selection was also based on this aspect.

My questions were built around the following topics:

- Data relating to the sports clubs involved in the sports associations.
- Information relating to the facilities and funding of the associations.
- Information on the modification of regulations of various sports.
- Data relating to the sports events organized by the associations.
- Data on the audience rating, in case the sport is included in the program of any media service provider.

After conducting the in-depth semi-structured interviews, the questionnaire was compiled. According to BABBIE (2000), a questionnaire is “a document made up of questions and other items appropriate for the acquisition of information suitable for analysis”. Questionnaire surveys are particularly suitable for describing larger populations (BABBIE, 2000). I found conducting a questionnaire survey important, as the resulting data can be analyzed and compared with the use of statistical and mathematical methods. The compilation of the questionnaire was preceded by a thorough theoretical research, in order to create an accurate and reliable survey. When selecting the question structure, I preferred using structured questions, which pre-determine the alternatives and the form of the answer (MALHOTRA – SIMON, 2009). A test survey was conducted including a smaller number of people to eliminate any possible errors.

The research is not considered representative; the respondents were selected by voluntary sampling. The questionnaire survey was carried out in personal sittings. The basic aim of the test was to present the relationship of the respondents with sports, to reveal the type of sports they prefer to follow, and the reason why they watch those specific sports in the media. My questions were built around the following areas:

- I. Filter questions: in this part the relationship of the respondent with sports was assessed as an active and as a passive sports consumer. Several answers could be selected for each question. If the respondent stated that he/she was actively exercising, he/she had to indicate the name of the sport, and how long he/she had been doing that sport. On the other hand, as a passive sports consumer, I was also interested in the media channel he/she followed sports. Those respondents who were not active or passive sport consumers could move on to filling in section IV.
- II. Examining sports consuming behavior: the respondents provided their answers in respect of visiting and following sports events. They could also select from a variety of answers; for certain questions a Likert-scale was provided to rate the listed features.
- III. Examining the relationship with sports events: the respondents could indicate on a scale of 1-8 the level they were affected by the certain characteristic in following a sports event.
- IV. Background variables: the following demographical data of the respondents were requested: gender, age, place of residence, school qualifications and profession. Within the framework of this chapter I assessed the income of the respondent as well.

In the course of the research I completed a total of 1200 questionnaires during the period from September to October 2017. After receiving the completed questionnaires they were organized to exclude the invalid, inappropriately completed questionnaires. Finally, the number of items used for the analysis was 1006. Based on the questionnaires suitable for evaluation, I prepared the Results chapter of my thesis, as well as the chapters Summary and Conclusions. In the course of entering the questionnaires into the computer and during processing, Microsoft Office Excel 2016 program was used, while for the assessment IBM SPSS Statistics 22.0 software was used. For easier processability, I coded the data entered on the questionnaires. During the processing in Excel, I used simple descriptive statistics and the features of the software (count, countif, minimum, maximum, size, average). I also used diagrams, charts and tables for better interpretability and illustration purposes. From among the simpler statistical indicators I used ratios, average calculation and standard deviation. Ratio is a number indicating the ratio of two statistical data, the most simpler and common tools of analysis (BLOUGH et al., 2012). Out of the ratios I analyzed the dynamic relative numbers (base ratio, chain ratio) and the distribution ratio. In case of a base ratio, all elements and data of the timeline are compared to the date appointed as base date. In case of a chain ratio, each data of the timeline is compared to the immediate previous data. The distribution ratio is a ratio of each part of the population compared to the population as a whole. The percentage of that value determines the ratio of the population part present compared to the population as a whole (SZŰCS, 2002). Distribution ratio was used when the age distribution of the respondents was analyzed; the results – in percentage – were illustrated in a pie chart.

In addition to using ratios, I also calculated average means and arithmetic average. Mean values are important as such, because these indicators are of summary in nature – they are capable of indicating the status of society or economy by one figure. Since mean values indicate the features of the examined population by one figure, it must be calculated carefully. A common feature of averages is that they can be determined with the use of simple or weighted calculation. Simple arithmetic average is calculated when the frequency of the individuals in the population is the same (SZŰCS, 2004).

The IBM SPSS Statistics software used for examining the correlations also was used for bivariate and multivariate analysis. To examine the connection of the variable, I conducted chi-squared test and cross tabulation analysis. I used the Mann-Whitney test for the dependent variables. From the non-parametric tests I used the Mann-Whitney test, as this criterion for the group is binary. The Mann-Whitney test is the non-parametric equivalent of the two-sample t-test, where the elements of the two groups are paired (HUNYADI et al., 1996). I used the Mann-Whitney test to compare the habits of men and women in following sports.

During a cross tabulation analysis we search for the answer whether two nominal or ordinal variables are related (SAJTOS – MITEV, 2007). The cross tabulation analysis describes two or more variables at the same time in a table which shows the joint distribution of one or two limited number categorized variables, or variables taking a value (MALHOTRA, 2009). During my primary research I used the chi-square and the Cramer's association coefficient. The reason why I used these two indicators is that in the course of examining the nominal variables I conducted cross-tabulation analysis in the case of tables with at least 2 rows and 2 columns. Using Pearson's  $X^2$  (chi-square) I could determine if there was a significant relationship between the two variables. Where Pearson's  $X^2$  (chi-square) showed significant results, I conducted further analyses, calculated the contingency-coefficient and Cramer's V. The reason why I applied these two indicators is because during examining the nominal variables I conducted cross-tabulation analysis in the case of tables with at least 2 rows and 2 columns. The contingency-coefficient uses the volume of the samples for calculation, while Cramer's V needs for the calculation the volume of the samples and the number of the known categories offering fewer possibilities. Several researchers find this latter indicator the most reliable one (SAJTOS -MITEV, 2007). I conducted cross-tabulation analysis in respect of genders and sporting habits. I considered the results of the statistical tests significant where they were  $p < 0.05$ .

Prior to starting to analyze the correlations, I checked whether my list of statements is suitable for factor analysis, and determined the Cronbach's Alpha indicator value. When conducting the factor analysis of the questionnaire survey, I analyzed the main component.

I conducted the Bartlett test for the variables, and calculated the Kaiser-Meyer-Olkin (KMO) value as well. Based on the results of the Bartlett test, I concluded that there is a strong correlation between the variables. The KMO-value exceeded the expected 0.5 threshold. Overall, it can be stated that the presence and significance of the correlation, the optimal MSA and KMO values, as well as the significant Bartlett test values evidenced that the variables are suitable for factor analysis.

During my research I used the version of WANN (1995) questionnaire (“Sports Fan Motivation Scale”) that I had translated. The author listed 8 factors to assess sport fan motivation. These are *eustress*, *self-esteem benefit*, *diversion from everyday life*, *entertainment value*, *economic value*, *aesthetic value*, *need for affiliation*, and *family needs*.

The basic 8 Wann factors were set up 23 years ago, and I am convinced that during the time elapsed since 1995 consumer habits changed to a huge extent. Nowadays sport consumers are pleasure consumers as well, meaning that when following sports, they primarily want to have fun. This is supported by the definition of ACS (2007) described previously, stating that sport today is an integral part of the entertainment industry. In my opinion, to ensure development, it is important to break the factors into their elements in order to get

a full picture of the motivation factors. Accordingly, for example I examined the aesthetic factor in respect of three areas: the specific sport, the athlete and the aesthetic elements offered by the facility.

The similarities and differences are shown in *Figure 1*.

<b>WANN, 1995</b>	<b>MADARÁSZ, 2018</b>	<b>NAME OF FACTORS</b>
<b>Aesthetics</b> <b>Eustress</b> <b>Entertainment</b>	<b>Aesthetic of athletes</b> <b>Aesthetics of sports</b> <b>Aesthetics of facility</b> <b>Interestingness of the situation</b> <b>Interestingness of athletes</b>	<b>1. ACQUIRING EXPERIENCE</b>
<b>Group affiliation</b> <b>Family</b> <b>Self-esteem</b> <b>Escape</b>	<b>Encouragement together</b>  <b>Hungarian identity</b>	<b>2. BELONGING TO THE COMMUNITY</b>
<b>3. AWARENESS</b>		
<b>4. TECHNICAL KNOWLEDGE</b>		
<b>5. SPORTS BETTING</b>		
<b>6. INTERACTIVITY</b>		
<b>7. COMMENTARY</b>		
<b>8. TIME FACTOR</b>		

**Figure 1: Table comparing WANN’s sport consumer motivation and own sport consumer motivation results**

Source: Own calculation (2018) based on Wann (1995) and own database (2018)

When creating the community experience factor, I added friends’ groups to family needs in order to examine togetherness. In addition, I also included Hungarian identity in this factor, as in our country sports also function as a factor defining national identity. In my opinion this is unique in Hungary, and I wished to provide proof of it. This step also provided the inclusion of the self-esteem factor of the original questionnaire.

Today's society is characterized by the constant pursuit of information, which can be easily reached with the use of quick-access technical devices. Something extra is needed to stand out from this accelerated information flow and win the attention of spectators. Therefore I created the two factors covering the knowledge base, which two factors include statements on sports knowledge and technical knowledge.

These factors, and factors associated with the audience rating are not included in Wann's research. Statements on interaction, the announcer and his/her competence, as well as the time factor are all in connection with audience rating.

When examining from a statistical point of view the factor system I created, I found that I grouped too many similar statements in each factor. This step had the consequence that the Cronbach- $\alpha$  value provided poor or insufficient values. Therefore I aggregated the similar allegations: for example the various statements in connection with entertainment were grouped in the same factor, so from here 15 elements are included in this factor. The group of belonging to a community includes 6 statements, in contrast with the previous separate components. The additional factors include 3-3 statements. Due to narrowing the questions, I created 8 factors – similarly to the original questionnaire – however, their content is not the same as the grouping according to Wann.

The Sport Fan Motivation Questionnaire I created in my research include 40 statements; the respondent had to provide answers on a Likert-scale from 1 to 8 (0 – do not know, 1 – do not agree, 8 – totally agree). Out of these I used 39 statements when creating the factors.

When determining the number of the factors, at first I considered the Kaiser criterion which states that the eigenvalue of the factors must be at least 1. With the Scree-test I also illustrated the distribution of the factors graphically on the screen plot figure.

To make them available for future analysis, I added the points resulting from the statements of each factor, and with this pooled step the Cronbach- $\alpha$  value remained within good and acceptable values. The dimension values and the associated element numbers are displayed in *Table 1*.

<b>Factor</b>	<b>Example</b>	<b>Cronbach-<math>\alpha</math></b>	<b>Number of statements</b>
1. Élmény szerzése	„Nem érdekel az eredmény, csak a sport öröméért, hangulatáért járok sporteseményre.”	<b>0,82</b>	<b>15</b>
2. Közösséghez tartozás	„Barátaimmal egyéni sportág bajnokságát figyelemmel követni nagyszerű időtöltés.”	<b>0,79</b>	<b>6</b>
3. Tájékozottság	„Szeretem megismerni az általam követett sportágak kialakulásának történetét.”	<b>0,71</b>	<b>3</b>
4. Technical knowledge	"I like the fact that during the sporting sessions, the invited experts give me technical analysis of the movement system of the sport."	<b>0,78</b>	<b>3</b>
5. Sports betting	"For me, a sport event is more exciting if I can bet the result."	<b>0,88</b>	<b>3</b>
6. Interaktivity	"If I have the opportunity to comment on the show during the sports broadcast."	<b>0,81</b>	<b>3</b>

7. Commentary	"The character of the sports commentator is crucial for me (when tracking a sports event)."	<b>0,82</b>	<b>3</b>
8. Time factor	"Sports event should be short and exciting, or I will switch off."	<b>0,72</b>	<b>3</b>

**Table 1: The Cronbach- $\alpha$  value in the factors of the sport fan motivation questionnaire** Source:

Own research (2018)

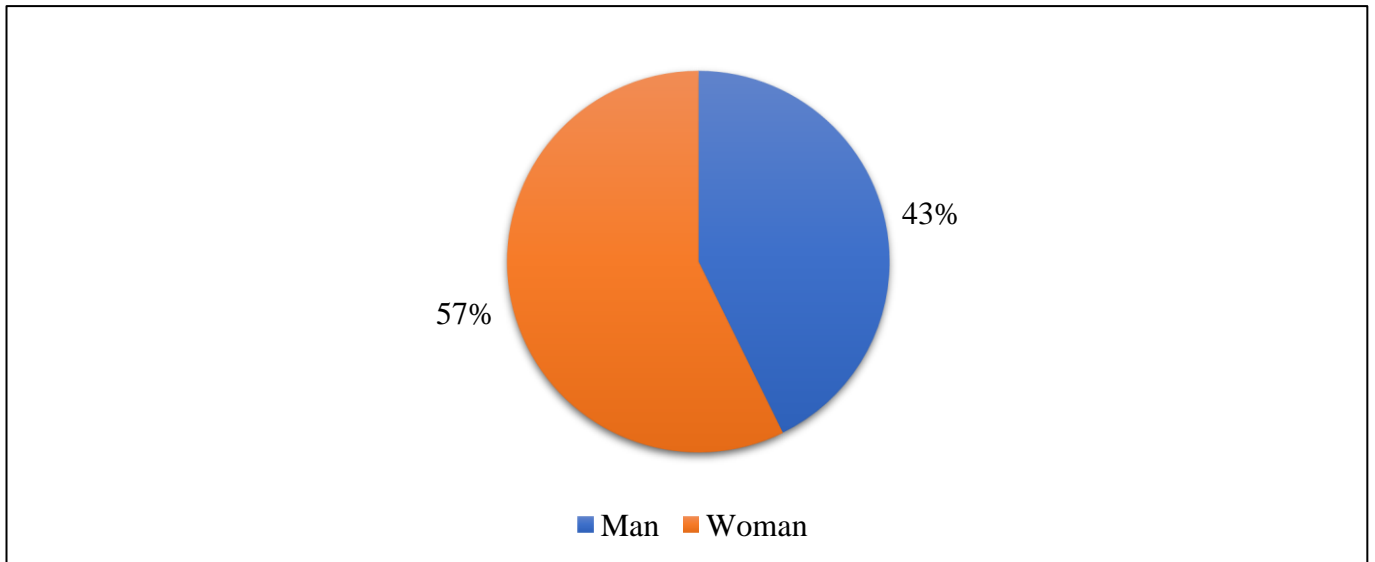
With the use of factor analysis, I was able to provide dimensions representative of the differences between consuming television broadcasts included in the sample. To examine the reliability of the factor groups, I calculated the Cronbach- $\alpha$  value after the factors were finalized, and it showed the inner consistence of the dimensions created for the factors. Overall, the Cronbach- $\alpha$  value measured by the sample questionnaire is 0.93, which indicates good level of reliability. During the exploratory factor analysis I used 39 statements. In this way, similarly to the original structure, on the basis of the scree-test I received 8 separate factors, where the KMO value was 0.9, and the eight factors were responsible for 64.47% of the variance.

Due to the structure of my questionnaire and in order to provide easier interpretation of the more complex analyses, I started the analysis with the presentation of the background variables. Then the correlation between the results are presented in chapter Results.

I used the independent t-test for variables with high values, when I compared the averages of two groups. Using Levene's test I checked the variance of the two groups, and then interpreted the result of the t-test. When using the independent t-test I examined fencing, judo, wrestling, gymnastics, canoeing-kayaking and pentathlon by using the sport following behavior relating to a certain sport as a grouping variable (follow – do not follow), and compared the average points of the factors between the groups. When selecting the sports for examination, it was an important aspect to choose individual sports with outstanding results in Hungary in the history of modern Olympic Games, and still lacking considerable audience rating. The audience rating of the above mentioned sports – during document analysis and in this research as well – show that these individual sports which traditionally achieve large successes, actually generate very low audience rating. Furthermore, it is also important to note that although there have been economic potential studies conducted in respect of sports, but they were mostly relating to team sports, while no exploratory research has been conducted in respect of individual sports.

### **3.4. Description of the primary research**

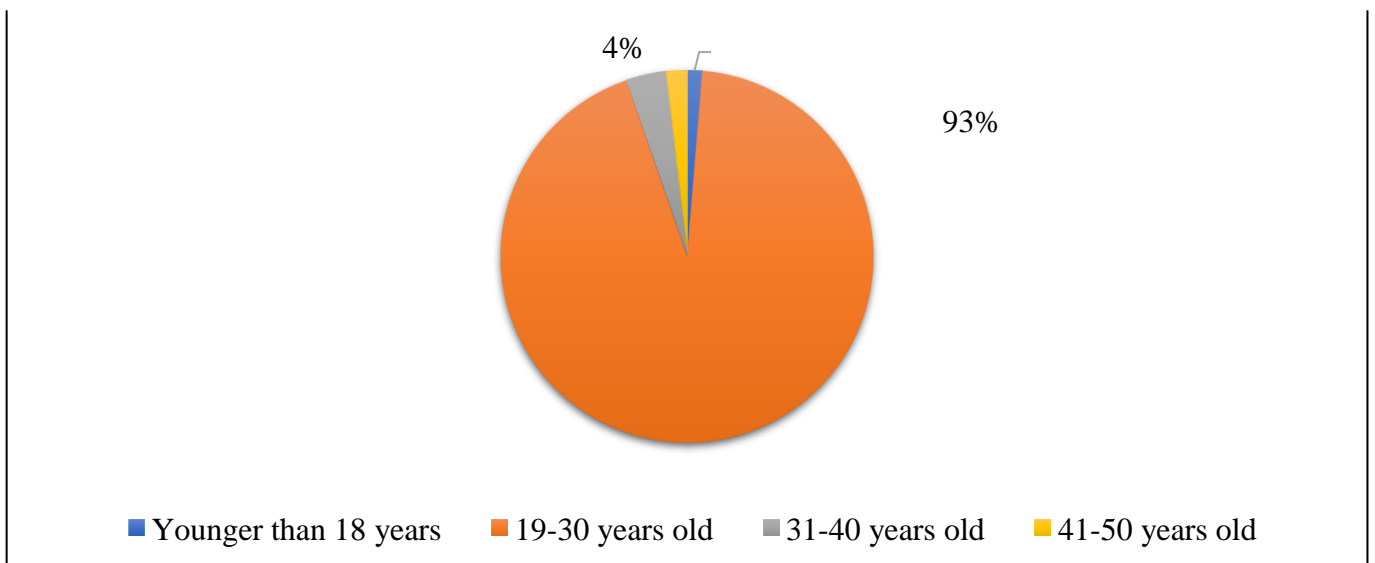
43% of the respondents (430 persons) were men, and 57% (576 persons) were women. The data are displayed in *Figure 2*.



**Figure 2: Distribution of the respondents by gender**

Source: Own database 2017

In respect of the age distribution of the respondents it can be concluded that the age group 19-30 is represented in large quantities (930 persons). A positive factor of the fact that people under the age of 30 represent the 93% of the sample is that this is the age group which later, as parents, can steer the attitude of society towards sports in a more favorable direction. Age distribution data are shown in *Figure 3*.



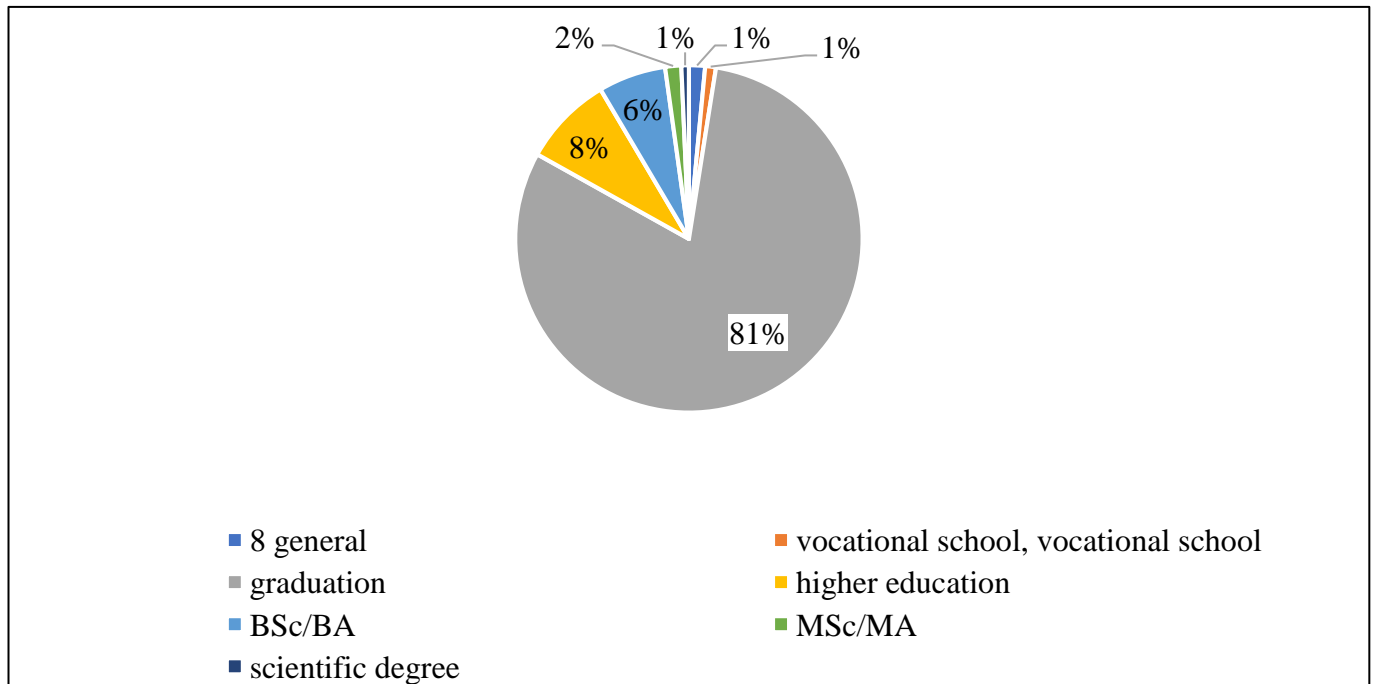
**Figure 3: Age distribution of the respondents**

2% 1%

Source: Own database 2017

In respect of educational background, it can be stated that in accordance with the age distribution most respondents finished secondary education. 81% of the respondents (811 persons) have secondary schoolleaving certificate, while 8% (85 persons) have some kind of degree in higher education. 6% (63 persons) have BA diplomas, and 1.5% (15 persons) have MA diplomas. 1% of the respondents (7 persons)

own a scientific degree. The data on distribution according to educational qualifications are shown in *Figure 4*.



**Figure 4: Distribution of the respondents by education** Source:

Own database 2017

## 4. THE MAIN FINDINGS OF THE ESSAY

**Objective O1:** *To present the system of competitiveness research, and to identify the elements of the competitiveness of individual sports.*

**Hypothesis H0:** *The aspects determining the competitiveness of individual sports can be identified.*

I demonstrated the aspect of competitiveness, as well as its components and various trends, its development and measurement possibilities. Following a general summary I went on to discuss various research conducted in respect of the competitiveness of sports, and I concluded that such research aimed at individual sports is incomplete.

Those sports can be considered competitive which are able to compete with their competitors by successful participation, by maintaining long-term existence, and by maximizing their economic potential. I concluded that globally there are sports professional and sports economical competitions between the sports, however, individual sports are at a disadvantage when competing with the economic potential of spectacular and team sports.

Based on the competitiveness research relating to team sports, and after examining these sports through the relevant literature, I have made the conclusion that they can be compared on the basis of audience rating. This is the key factor of sports-economic success, as it produces income from broadcasting rights, support of the International Olympic Committee (IOC), and state funding in Hungary. On the other hand, this can be primarily provided by sports successes. In Hungary, the sports success of the individual sports examined in my thesis is obvious, therefore, it can be concluded, that by increasing audience rating, sports-economic success can also be expected.

During the detailed examination of the sport consumer behaviors – with the aim of increasing audience rating – I examined the attitude of average persons (that is, those who are not sports fans) as sport consumers to reveal what keeps them from attending sports event and could they be integrated into the world of sports.

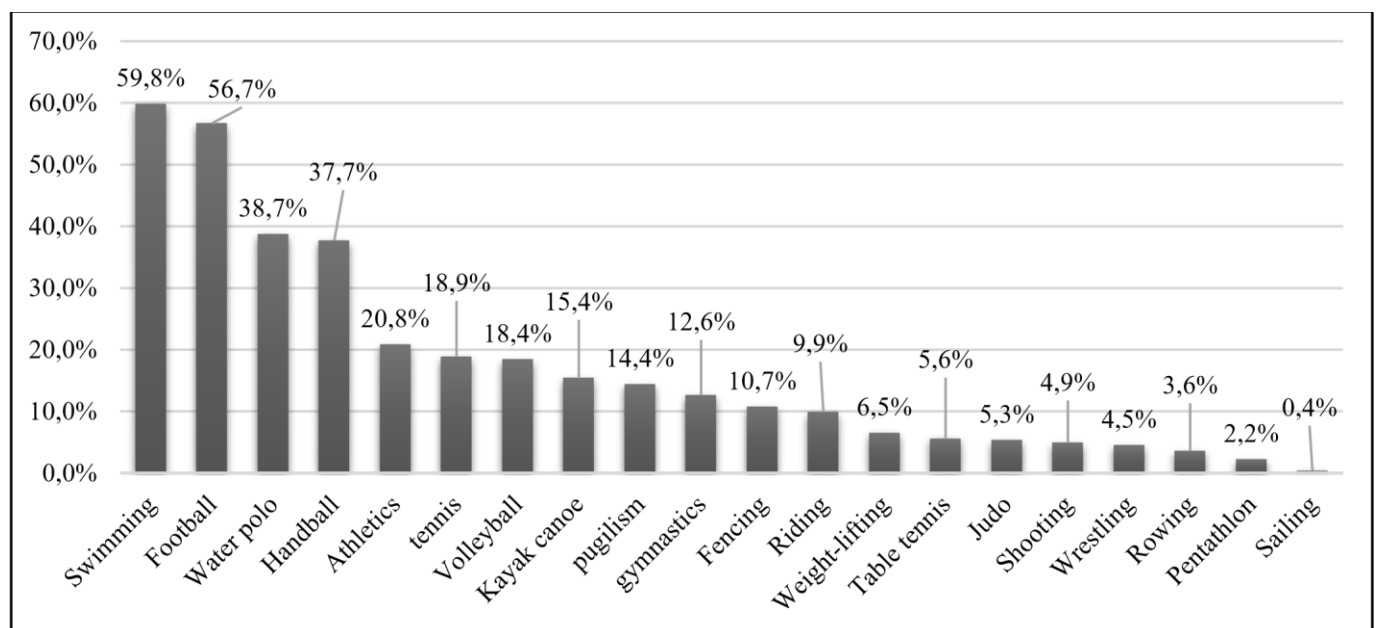
The factor determining the competitiveness of an individual sport is audience rating. By the determination of these factors **I prove my hypothesis H0.**

**Objective O2:** *To examine why individual sports are disadvantaged when compared to team sports. Can the situation of these sports be described as some kind of sports discrimination?*

**Hypothesis H1:** *I presume that individual sports are disadvantaged when compared to spectacular team sports by audience rating. I presume that the audience rating of the six selected individual sports is low, which is caused by the less spectacular movement type and the conduct of the events.*

I have concluded that the media capacity of individual sports falls behind that of team sports with higher audience rating. When researching the competitiveness of sports, I found that the research of individual sports in this respect is incomplete, and largely fall behind that of team sports, which are subjects of more studies. When examining ball games – with a broader market – in respect of competitiveness, I found that the presence of the other market operators is the factor providing the basis for the competition; while in the case of individual sports I stated that their competitiveness should be examined in view of the media presence and their role in the broadcasting market. In my opinion there is no sports discrimination present, since the media offers the opportunity for each sport to be broadcasted on television, therefore, instead of the sector operators it is the competitive situation itself, as well as audience rating that defines the list of the sports actually broadcasted on television – segmentation is caused by the market mechanism of audience rating, and not by discrimination.

I described that 30.4% of the respondents follow sports in the media; however, when analyzing their sport consuming behavior, I concluded that only swimming was fit for competing with football (*Figure 5*). In my opinion, in case the 2017 Water World Championship was not organized in Hungary, ball games would have been dominant in the interest of the respondents, and there would have been no individual sport ranked among the first three. This data is distressing when we take into account the fact that over the last decades the success of team sports in Hungary fell short of the success of individual sports. Canoeing and kayaking, where it is predictable that our athletes win several medals at each Olympic Games (and whether it's a gold, silver, or bronze is only due to actual factors), is only followed by 137 (15.4%) of the respondents – in contrast with 505 persons (56.7%) following football. Based on the above, **I consider my hypothesis H1 as proved and correct.**



**Figure 5: Which sport is followed in the media? (N=891 persons) Source:**  
Own database (2018)

**Objective C3:** *To analyze the factors that could broaden the group of persons interested in individual sports.*

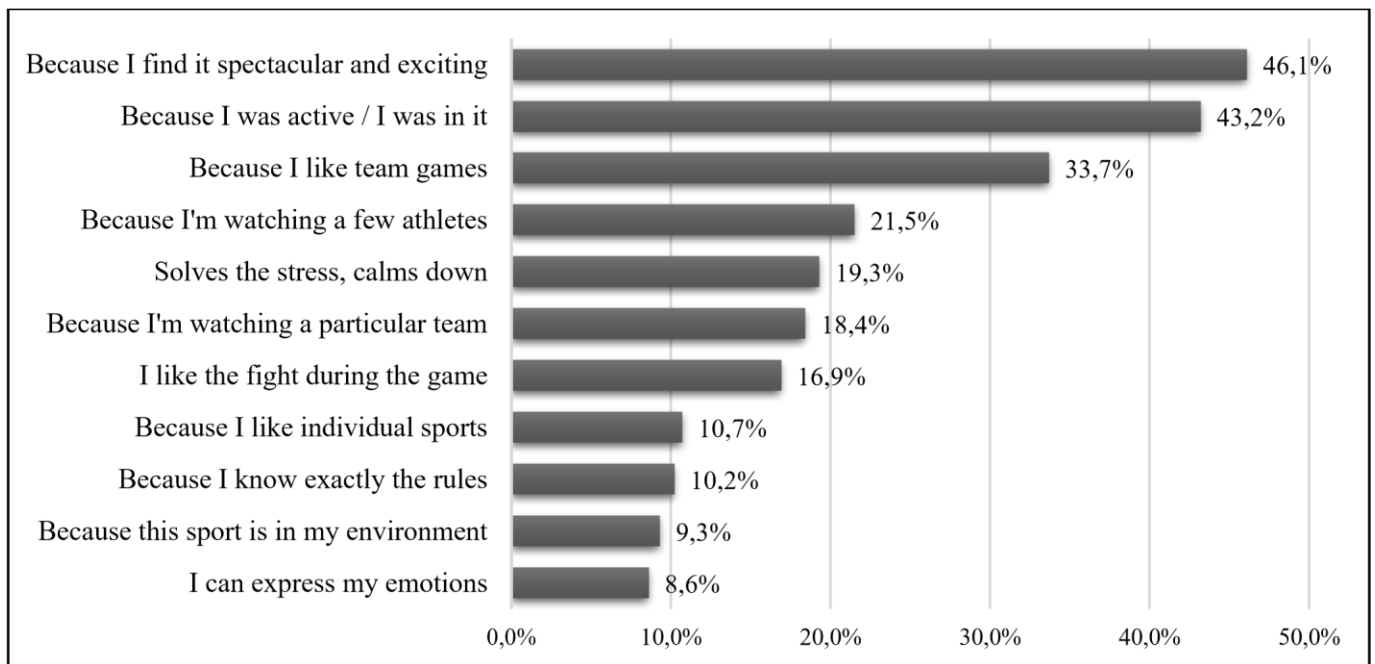
**Hypothesis H2:** *I presume that people follow sports because of the excitement, the superhuman power and the outstanding spectacular features.*

During my secondary and primary research I concluded that the competitiveness of individual sports is determined on the basis of their position in the media. As a result of studying the relevant literature I discovered that after each Olympic Games the International Olympic Committee (IOC) analyzes the audience rating data, and based on their results they make a decision on supporting the sports included in the Olympic program. The sport that attracts more spectators has larger potential in the competition of sports, and therefore it has more rationale and stronger competitiveness than sports generating lower interest.

I described that sports fans seek entertainment by sports, and in this process football has undoubtable advantages. Seeking such entertainment may be reflected in cheering together, where chanting and the overheated atmosphere generate a milieu that have long-term effect on the sport consumer's thoughts and attitude relating to sports.

The presence of overheated emotions in connection with sports is extremely intense due to the mass effect, which creates a kind of flow experience for the sports fan. Experiencing triumph with others, or dealing with the negative effects together with a group has community-forming power, where meeting other fans with similar attitudes offers a kind of leisure experience as well. 19.3% (172 persons) of the respondents follow sports events because it helps to relieve stress accumulated during everyday life, and breaking away from monotonous weekdays helps to deal with anxiety (*Figure 6*).

In my opinion a sport must be spectacular with overheated atmosphere in order to achieve that people follow it enthusiastically for a prolonged period – and my opinion is verified by the research. Almost half of the respondents (46.1%) stated that these factors were essential for them to watch sports events. Therefore, the trend – that characterizes many endangered operators – seems to be confirmed, meaning that a sport needs to be shorter, more exciting and spectacular in order to captivate the attention of sport consumers.



**Figure 6: Why do you follow these sports? (N=891 persons)**

Source: Own database (2018)

If it is possible, it should be established by changing the arrangements, however, if such single activity was not enough to appropriately increase the excitement or the attraction level of the sport, then the rules must be changed. However, such decision is always ambiguous. When about to make changes, the decisionmakers are always faced with ambiguity. Changes dictated by economic interests are always placed before professionally justified steps; therefore these decisions often seem illogical or unreasonable for the sport fans. For the sake of clarity, often the basics are changed, which may have a negative effect on the sport.

Using data from the research it can be stated that increasing the competitiveness of individual sports can be achieved by making the arrangements of each event more exciting and spectacular. Complex movements or lengthy competitions impair the broadcasting value of a sport, which, overall, may deprive the spectators of the excitement of cheering. Furthermore, the advantage could be improved by establishing a system that enables the appearance of different sports in the media on a somewhat regular basis. It is not enough to broadcast certain sports events about six times per year, as the sports regularly broadcasted on television have obvious advantage when compared to those only broadcasted occasionally. Naturally, the quantity is basically not sufficient, since it is also necessary to have high quality arrangements in place, continuously maintaining the uncertainty of the results as well, which is also true to the presence of highly qualified announcers. Based on the conclusions, **I have proved my hypothesis H2.**

**Objective O4:** *To formulate any necessary changes to improve the competitive position of individual sports.*

**Hypothesis H3:** *I presume that men are more interested in the type and quality of the sports event, than the additional programs, services or the ticket prices.*

**Hypothesis H4:** *I presume that men are more interested in sports events than women.*

**Hypothesis H5:** *I presume that women are more influenced by the show components of the sports event and the atmosphere, than the end result, or the struggle in the sports field.*

**Hypothesis H6:** *I presume that people are more likely to watch outstanding sports events on television instead of their usual other TV programs.*

When analyzing the results, I concluded that men choose sports events based on the sports they like, and when they make the decision whether to watch the sports they are interested in on the spot, or through a media channel, the price is not a decisive factor for them. The atmosphere of the sports event could also be a defining component, which is believed to be relating to the high quality of the game or the fight. If the level of the sports event falls below a certain expected minimum, the interest of men in such sport decreases, which fact is perfectly illustrated by examining the attendance of sports fans at the stadiums. When the quality of a game is dramatically improved, an increase in attendance of sports fans at the stadiums can be observed, while in case the quality of performance decreases, the stadium stands are empty. Regular disappointment or failure, resulting from the loss of success of a favorite team or athlete fails to generate positive experiences that could lead to becoming or continuing to be a consumer of a particular sport. According to my assumption, the main reason for this is that sport fans – quite naturally – tend to prefer the joy of victory than negative emotional attitudes resulting from failure. Based on the analysis of the research data, men prioritize sports performance. In summary of the above, **I consider hypothesis H1 proved.**

When researching sport consumer habits, I found differences between the habits of men and women; when such differences are further explored, the success of motivating men or women may be more probable. The results of the survey demonstrate that men are more interested in higher numbers both in team, individual and technical sports than women. With the exception of the radio men use all of the possible platforms to get information on sports. They read sports newspapers, online platforms, and watch sports programs in significantly higher numbers than women. The surplus information acquired by men is reflected in the field of sports betting as well, since men represent a significantly higher number of persons betting for sports events online, or in paper-based forms.

The research results show that the number of people attending sports events is significantly higher among men, they prefer to watch such events live – if they have the possibility. The data are presented in Table 2. Based on these factors **I proved my hypothesis H4.**

How important are the following statements when tracking sports events?	Average Rank		Mann-Whitney's U test value	p
	Man	Woman		
I'm watching team sports. *	<b>511,23</b>	394,76	72234,50	0,01
I watch individual sports. *	<b>467,97</b>	428,74	89192,00	0,02
I observe technical sports. *	<b>514,11</b>	392,49	71105,00	0,01
I read sport magazines. *	<b>523,89</b>	384,81	67272,00	0,01
I watch TV sports channels. *	<b>486,98</b>	413,81	81741,50	0,01
I watch online sports channels. *	<b>502,19</b>	401,86	75778,00	0,01
I follow the sport on radio.	436,41	453,54	94044,00	0,30
I make online sports betting. *	<b>538,54</b>	373,30	61529,00	0,01
I bet on "Tippmix". *	<b>565,14</b>	352,41	51102,00	0,01
If I have the opportunity to watch the sporting events on the spot, I do. *	<b>480,29</b>	419,06	84361,00	0,01

**Table 2: To what degree are the following statements characteristic of the respondents – men and women – when following sports events?**

*\*significant difference,  $p < 0.05$ .*

Source: Own database (2018)

Based on the results of the research it can be concluded that men when compared to women are not interested in the sports event or the end result, but rather the quality and quantity of the show elements relating to the event. These provide them the opportunity to meet the athletes who – due to their successes – live their everyday lives in the crossfire of the media, and supply background information through various tabloids for ordinary people. These famous sportsmen and sportswomen are also known to those who do not belong to the group of sports fans in the classic sense of the term, however, in addition to their sports performance, daily news report on the events of their civil life. Besides the related programs, women are more influenced than men by the price of the entrance fee or season ticket to the sports event, or if there is any available discount. Furthermore, women are significantly more influenced by the behavior of supporting groups. In my opinion the majority of female respondents associated sport fans with extreme supporter groups whose behavior is, in many cases, displayed in the media as negative. The majority of people associate the actions of supporter groups with the term 'dangerous', therefore, this statement is in

connection with the fact that for female respondents in the research a sports event is a community program of significant importance. A significantly larger number of women stated that sports events provide the opportunity to be with family, friends and colleagues – who, in my opinion are also averse to radical fan organizations. The results are presented in Table 3. As a result of these factors **I have proved my hypothesis H5.**

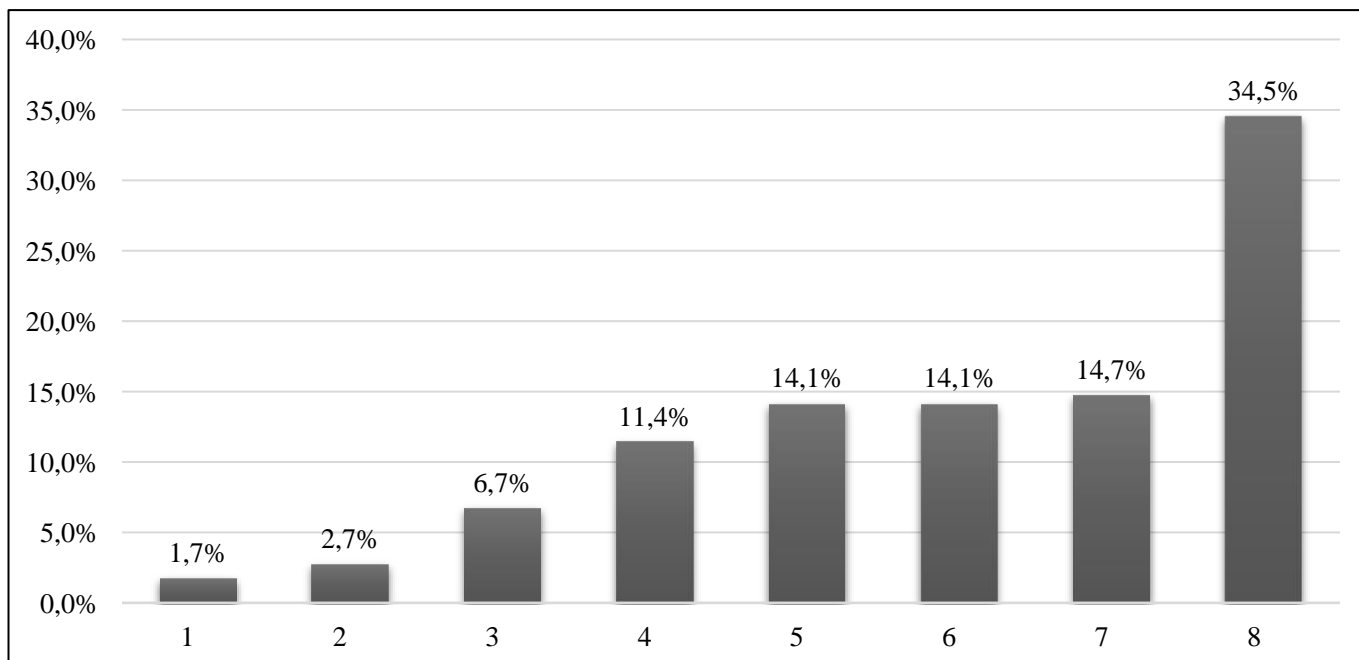
How are the following factors influencing you during the sporting events?	Average Rank		Mann-Whitney's U test value	p
	Man	Woman		
Ticket price *	419,70	<b>466,66</b>	108 115,50	0,01
Discount ticket (family, retired, student) *	409,54	<b>474,64</b>	112 097,50	0,01
Behavior of Fan Groups *	386,33	<b>492,87</b>	121 194,00	0,01
Sport type (team, individual, technical sports) *	<b>490,93</b>	410,71	80 192,50	0,01
Sports event mood *	<b>465,84</b>	430,41	90 025,50	0,03
Marketing of a sports event (poster, flyer, advertisement) *	420,39	<b>466,12</b>	107 841,50	0,01
Related programs (eg: photography with athletes, autographs, fan prizes, competitions, etc.) *	403,87	<b>479,10</b>	114 320,50	0,01
Community Program (I can be together with my family, friends, colleagues, enemies) *	391,03	<b>489,19</b>	119 354,00	0,01

**Table 3: The factors influencing attendance at sports events**

\*significant difference,  $p < 0.05$ .

Source: Own database (2018)

In my **hypothesis H6** presumed that in the case of outstanding sports events people tend to exchange their familiar and conventional TV programs for watching sports broadcasts. The average value received on the 8-grade Likert-scale (6.07) shows that the respondents mostly agree with this statement. 77.4% of those participating in the research agreed with the statement that in case a mega-event is broadcasted in the media, they choose to watch it on TV. Almost half (34.5%) of these respondents stated that this statement is totally true to him/her; therefore when analyzing the results of the survey including 891 persons, I concluded that people are basically not sport-specific passive sport consumers, but they typically follow sports on the basis of sports events, so the need for organizing international mega-events becomes even more important. The results are illustrated in *Figure 6*. Based on the use of the above data I declare that **I consider my hypothesis H6 proved.**



**Figure 6: In case of the Olympic Games, a World Cup, a European Competition, or other primary sports event, I choose to watch the related broadcasts instead of the usual TV shows (N = 891 persons)**

Source: Own database (2018)

During the analysis of the responses I found that the sporting activities of the age group 19-30 are critically low within the examined sample. This is a data similar to the survey of Eurobarometer series (2014), and particular attention should be paid to them, as it draws the attention to the fact that there are important tasks faced by all interested parties regarding the promotion of health-conscious lifestyle. Both the government and each individual have their tasks in respect of improvement. However, since my research area is competitive sport, and the above statement applies to leisure sport, I do not intend to go into details. During the analysis of the sample I revealed that the age group 19-30 mostly gets information through smart devices and online discussion instead of spending time in front of TV screens.

- ***I propose to the International Olympic Committee and sports regulators in Hungary to prepare online sport contents for these users, since in our age of mobility, television is not the primary media source for the younger generations.***

During my research I found that the survival of a number of sports in Hungary is dependent on state funding. The priority funding of the sports sector in Hungary may be attributed to the fact that after the change of the regime development based on self-organization did not take place, and those tendencies that could have resulted in the formation of the western market-based sports model did not appear, or appeared only in part. In the long term the decrease of government funding can be expected, which brings up the need for the market-based financing of sports.

- ***I propose that the professional associations and the sports organizations take steps to increase sponsorship in the classical sense, since such steps may help them in moving on to business-based operation after state funding is stopped.***

The prerequisite of the business-based operation of the sports I examined is the increase of the audience rating of these sports. During my research I used the version of WANN (1995) questionnaire (“Sports Fan Motivation Scale”) that I had modified. The Sport Fan Motivation Questionnaire I created in my research includes 40 statements; the respondent had to provide answers on a Likert-scale from 1 to 8.

I used the 8 factors that I had created to examine the motivation effect of the factors on the sport fans. I summarized the answers provided for the 3 statements within the same area, and averaged the results. Using the resulting values I defined which of the 8 factors have stronger influence on the motivation of following sports.

During the analysis of the data it can be seen that the average of the answers provided for the allegations relating to interaction is the lowest one (2.94), and sports betting (3.14) does not strongly influence the respondents in respect of following sports, either.

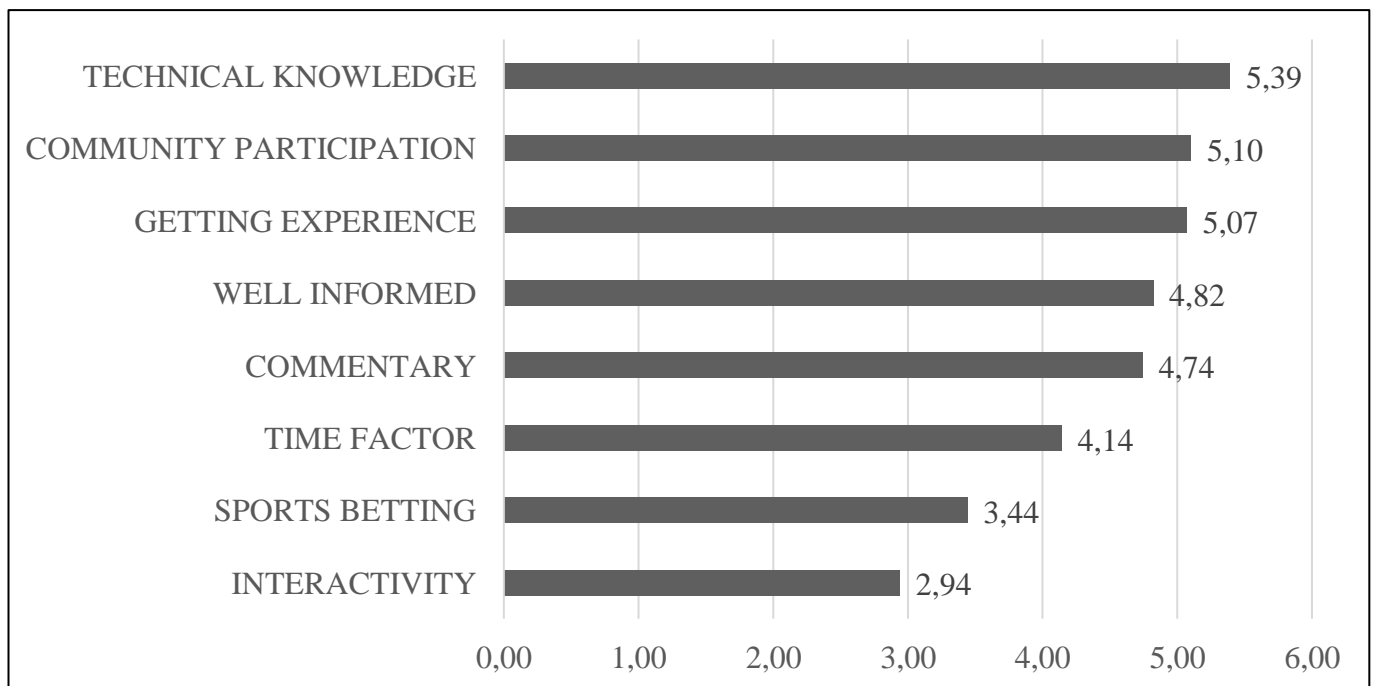
The average point of answers relating to technical knowledge is the highest (5.39), and based on this, I make the conclusion that it is important for the respondents to have the technical knowledge relating to the followed sport. Something extra is needed to stand out from this continuous information flow and win the attention of spectators. Background information and various information service packages are perfect for this purpose, since with the use of modern technical equipment it is possible for the experts to analyze the technical-tactical elements in detail, offering the examination of complex interrelationships that spectators would probably not have noticed when searching for information individually.

The factor of belonging to a community is outstanding as well (5.10), which proves the community forming effect of sports; it can be concluded that each sport needs not only simple and easy to understand set of rules, but a procedure system for running a game as well which leaves room for this community forming effect. In the process of globalization, sports can play a role in preserving national identity.

Based on the results of the entertainment factor (5.07), it can be stated that in case a sport has aesthetic elements, sport fans are more motivated to follow them. Moreover, the aesthetics of a sport, the spectacular, exciting and beautiful movements attract the audience. In this respect sports can compete with other recreational opportunities offering entertainment, such as a music concert, theatre performance or a movie.

The results of the factor of being informed (4.82) and the commentator (4.74) prove that it is important for the respondents to receive information on the sports.

The results are presented in *Table 7*.



**Figure 7: The effects of the 8 factors on the motivation of sports fans (N=891 persons)**

Source: Own database (2018)

On the basis of my results:

- *I propose the simplification of the technical components of sports, and the preparation of informational material to promote the understanding of too complicated rules and tacticaltechnical elements, or the organization of fan meetings where sports fans can meet up close the star athletes of the sports events.*
- *I suggest introducing changes in the procedure system of running the events in order to turn the sports event into community forming events both on the spot and in front of the television screens. In both cases common cheering would be the experience to provide this entertainment.*
- *In order to increase the size of the masses visiting the sports events, I propose that the organizers of sports events consider – in addition to men fans – the interest of women, for whom the quality and quantity of the show elements is of primary importance. By introducing related programs, a sports event can be organized offering actual entertainment, where all members of a family or friends' groups will find a leisure activity ideal for him/her.*

During the analysis of the sports researched, I examined the differences between those who follow, and those who do not follow a certain sport. Based on the results I concluded that lay persons need some extra experience to become sports fans and follow sports results from then.

In terms of audience rating *fencing* is at a disadvantage, since this sport does not offer outstanding spectacular elements. Its broadcasting is at a disadvantage, since – because of the protective clothing – the

astounding actions of the athletes, which could make this sport exciting for the audience – cannot be seen. The moments requiring really tense concentration stay hidden from the audience because of the fencing mask. Due to the protocol rules, on-the-spot cheering cannot be an unforgettable experience, since shouting and extreme cheering is prohibited as the athletes need to extremely concentrate. Because of the complicated rules and the quick movements technical analysis is placed in the foreground. Close-up series of images, showing the action in slow motion, as well as the analysis of the complex movements is essential for the purposes of clarity

When following *canoeing-kayaking* sports events, the fact that they are organized outdoors, both television and on-the-spot viewers are provided a lot of entertainment. During examining its broadcastability, I concluded that spectacular television presence is provided throughout the race. Basically the remote images dominate, but as the athletes near the finish line, the broadcasting becomes more and more exciting, which is increased by close-up images, and by showing the concentration and fatigue expressed on the face of the athletes. The factor of belonging to a community is also present in this sport, and cheering with others also emphasizes the factor of Hungarian identity. The knowledge of the sport, slow motion, the analysis of the tactical solutions of the athletes, and information on the design of the canoe or kayak are important elements of the broadcast, and all of them can be provided by a well-prepared announcer.

Traditionally, *wrestling* is a sport appropriate for cheering. The athletes and the events themselves require the high activity level of the sports fans, which adds to the entertainment factor when watching the event. There are “frauds” and “biased judgements” in this sport, and these must be prevented as a fundamental task of the regulators, since if left untreated, the sport may suffer a loss of prestige. The respondents mainly meet these sports when there are Hungarian participants – this is when they probably watch the matches all through to the end, no matter how long or boring it is.

When examining *gymnastics*, it is important to emphasize that the entertainment factor is highly present in this sport. The appearance of the gymnasts themselves provide aesthetic experience for the audience, which is increased by the movement forms performed on a variety of gym apparatus, in many cases defying the laws of physics with these movement forms. In my opinion, people are in need of admiring the athletes, as well as the performance they achieve. There are similarities with the cheering protocol of fencing, since in the case of gymnastic, not only shouting is prohibited on the spot, but even excessive clapping and other ways of expressing opinions. This is due to the procedure system of running the competition, since at the same time the gymnasts compete in different gymnastic events. In this sport the judges announce the winner based on a very complex scoring system. In order to fully learn and understand it, the lay consumer needs background information. It is assisted by various technical analyzes, where the experts introduce the difficulty of a certain movement, and also attention is drawn to the physical and mental stress on the gymnast when performing that movement. The shortness of the routines maximizes the excitement relating

to cheering, since a floor event is no longer than two minutes, from the moment the gymnast steps to the apparatus, up until the reaction after finishing the routine.

Previously, *pentathlon* was often considered too long and uneventful for the lay spectators. Therefore, the regulators choose to change the order of conduct, which is as follows since 2009: fencing, swimming, horse riding, and combined running and shooting. The five events of pentathlon took up a lot of the broadcasting time, and the several scenes also were challenging for the TV companies. Therefore, according to the decision of the regulators, all events of the sport are organized at the same place – except for swimming. The technical knowledge of pentathlon is essential for the respondents, due to the presence of the various sports within pentathlon. It is important for those who follow this sport to be able to provide their opinion, and in this was to make it interactive. It is important to note that during the Olympic Games – quite uniquely – the sports fans have the opportunity to bet on the finalist of the pentathlon competition. Sports betting possibilities are restricted in case of individual sports, so this possibility relating to pentathlon is unique in the area of individual sports.

It was important for the regulators of *judo* to make this sport more spectacular, and to make it understandable for the simple sport consumer what was happening on the tatami. This proved to be a wise decision, since by analyzing the data from the study, it can be concluded that knowledge on a sport is of particular importance when following such sport. For the purpose of being informed and getting information, it is important for the sport to be broadcasted on television, since the rules of this sport – despite the simplifications – are in many cases hard to understand or too complicated for the average TV viewer. Although no significant difference resulted from the person and the preparedness of the announcer, or from the technical analysis, in my opinion these factors are also crucial to really understand judo as a sport consumer.

- ***I propose to the regulators of the examined sports to possibly increase the presence of these sports in the media, since this is the only way to ensure their continuous presence in public awareness. This step could not only increase the popularity of these sports, but the knowledge of the sport consumers as well, which is essential to turn a lay viewer into a sport consumer. In case the number of people following sports is increased, the potential of each sport will also be increased, and in this way they will be more competitive. As a result, the operation of each sport can be based on stable economic grounds, which is also important for us because of their traditional line of sports successes.***

## **5. NEW AND NOVEL RESULTS OF THE THESIS**

**T1:** During the secondary research, when studying the international and the Hungarian literature, I summarized previous research on competitiveness, and formulated the factor affecting the competitiveness of individual sports. The objective is to increase the audience ratings, which can be easily promoted by increasing the excitement, by providing spectacular and easy to access organization, and by significantly increasing the uncertainty of the output.

**T2:** Based on the literature and the research results, I concluded that sport consumers choose to attend the events, or to watch them in the media on the basis of the outstanding visuals, the quick and exciting events, and the uncertain output.

**T3:** With the use of the created detailed factors, I examined which components influenced the respondents when following each sport. I concluded that technical knowledge was of utmost importance for the respondents. In addition, the factor of Hungarian identity and togetherness were also of utmost importance for sport consumers. Moreover, the aesthetics of a sport, the spectacular, exciting and beautiful movements also attract the respondents.

**T4:** I have conducted a passive sports consumption motivation test, and I concluded that while men are interested in the sports event itself, women are basically motivated by the athlete as a person, the ticket prices, and any related programs – instead of the expected result or the struggle in the sports field.

**T5:** I have concluded that the sport consumption of people depends on grandiose size and quality sports events, therefore the rationale of organizing international sports events is unquestionable.

## 6. SUMMARY

In Hungary sport is a priority sector; it has never seen such a high level of support from the government as today. It is present in the everyday life of the population as social cohesion; visiting sports events reflects a longing to belong to a community. In Hungary, national identity is experienced at its peak through sports, since – due to our national identity – during major international sports events Hungarians will cheer any Hungarian athletes, regardless of political views, and even rival supporting groups will stick together.

During my research I concluded that the competitiveness of sports, and within them the competitiveness of individual sports, should be reviewed by means of television audience rating. In my research I focused on the examination of individual sports, and studied six individual sports, as well as our traditional Olympic success sports through the eyes of ordinary people. Canoeing-kayaking, fencing, pentathlon, wrestling, gymnastics and judo are sports in the Olympic Games program where the athletes of our country have achieved outstanding results; however, their popularity based on data from audience rating is questionable. The main objective of the thesis is to find the factors that could inspire traditional TV viewers to follow sports. For this purpose, I found it important not to include sports fans or supporting groups in my survey, since, in my opinion, such result would distort the real picture.

I explained that the main competition venue for individual sports is the Olympic Games organized every four years, since during the Games even those sports are broadcasted on TV, which were neglected by the media for four years. For this purpose I find it important to emphasize that in the case of sports which are only broadcasted on television during the Olympic Games, it is essential to adapt to the system of criteria of media readiness. I concluded that the traditional historic sports are threatened by the “made for television” sports. Sports that do not take steps to establish a more exciting or more spectacular competition system as soon as possible, will be at disadvantage in the fight for spectators. The formula is very simple: any sport with few or no spectators must be removed from the Olympic Games program, since these – due to the low interest – do not serve the interests of the International Olympic Committee (IOC). The royalties received from TV broadcasts generate huge income for the IOC, and these amounts keep growing from Olympics to Olympics. High audience rating is huge business, generating enormous economic profits for the entire Olympic movement. Based on data obtained during the research I declare that in case a sport is removed from the Olympic program, it is likely that the current prominent role of such sport will cease, too. Regarding the international support of sports included in the Olympic program, the IOC has an outstanding role; following each Olympic Games it analyzes the data and on the basis of audience rating, determines the amount of the subsidy for each sport. In Hungary, the rate of state funding is not based on audience rating, but on the level of success – where the Olympic results have a massive role. Each sport included in

the Olympic Games fights to remain in the program. Such fight is not only against the other Olympic sports, but also against those sports that are not currently included in the Olympic program. The ultimate goal of all of them is to be included in the Olympic Games providing large audience rating.

In order to establish a western type sports structure, it is essential to first create a competitive sports industry, where each sport is not dependent on state funding, but using their own economic potential, they can maximize their profits as independent business organizations. To achieve this goal, naturally, it is necessary to improve sports economy, and to train the relevant personnel, since the sports sector has long outgrown its traditional values, where the joy of movement and recreation were the major aspects. Today this sector is business, where the moral benefits may be supplemented by substantial economic results, in case the operators know and understand the factors affecting the everyday operation of the industry.

In order to achieve independent operation – without the need for state subsidies – the sports organizations need the improvement of the sponsorship system. In my opinion, as long as the state is involved to such a high degree, this process is unimaginable. On the one hand, companies sponsoring sports are at the end of their capacities in respect of further financing, and on the other hand, for the representatives of each sport it is a comfortable situation: today success determines the rate of the state subsidy, therefore, the really successful sports are not reliant on the institution of sponsorship. However, the real problem will be caused by the probable end of state funding. Presently, the main question is simply when such drastic change is going to take place. Those sports and sports organizations which fail to prepare for the change in time, will likely face huge competitive disadvantage because in lack of funding the necessary expenses are likely to lead to pre-bankruptcy conditions quickly. In return, it can be concluded that those who fail to prepare for the approaching danger, are at large risk.

In the course of preparing my thesis I studied the literature relevant to the topic to find the definition of competitiveness most suitable for my use. I concluded that during competitiveness, in addition to market profitability, the interested parties also need to strive to be successful in the demand struggle, and they need to be skilled in effective adaptation. At the same time competitiveness is heavily dependent on the success of participation, on existence in the long term, and on the increase of economic potential during the competition. Those concerned parties may be considered competitive, which seek to maximize these factors while competing with competitors.” I accepted the interpretation of STOCKER – SZABÓ (2011) stating that competitiveness in sports can be interpreted in two ways: as national economy competitiveness of the profession, or as sports economy competitiveness. I concluded that globally there is sports professional and sports economical competition, which are interrelated. I stated that the determining factor in determining their competitiveness is audience rating. Subject to this, I examined sport consumer behaviors based on a survey of 1006 respondents.

I concluded that individual sports are less able to compete with the sports-economic potential of spectacular and team sports, however, I formulated how the audience rating of individual sports with outstanding result could be improved.

On the basis of the research I stated that for the respondents, increasing the knowledge-information base is of primary importance in the case of sports. For the respondents, further priorities are Hungarian identity and togetherness as community forming factors. After further exploring the factors I stated that in the course of following a sports event the sports with aesthetic elements are at advantage, and therefore they are better at attracting the respondents.

I stated that sport consumers choose a sport on the basis of the outstanding visuals, the quick and exciting events, and the uncertain output.

I presented that on the basis of the research data, men are more interested in the sports event itself and its quality, than other related programs – which latter are more interesting for the respondent women.

I concluded that men are more interested in sports events than women. I formulated that women are more interested in the show elements and other programs built around the sports event than in the sports performance and quality. In my thesis I presented that people prefer to watch high quality sports events than usual TV programs; in this respect I called attention to the importance of high priority mega-sports events.

**With the use of my research results, my final proposition is for the international and Hungarian regulators of sports, to possibly establish the possibility for the increased presence of sports in the media. Audience rating is the key factor which is suitable for increasing the potential for competitiveness, since the only tool for maintaining continuous awareness is presence in the media. Increasing the sports knowledge base of sport consumers, and pointing out the interesting correlations will increase the popularity of sports, since without an appropriate information background a lay spectator may not turn into a conscious sport consumer. As a result of voluntarily following sports, the sports will have higher audience rating, and therefore, their economic potential, that is, their competitiveness will be increased. The result of this process will be a sports sector prepared for future challenges, which will cope with operating on economic basis. For Hungarian sports fans success in sports is of primary importance, since for Hungarian people sport also functions as a factor defining national identity.**

## 7. PUBLICATIONS IN THE TOPIC OF THE DISSERTATION



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### List of publications related to the dissertation

#### Articles, studies (6)

1. Gergely, É., **Madarász, T.**, Pierog, A.: A magas szintű teljesítményhez szükséges háttértényezők feltárása hallgatói mintán.  
Taylor 9 (1), 139-145, 2017. ISSN: 2064-4361.
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Taylor 9 (2), 179-187, 2017. ISSN: 2064-4361.
3. **Madarász, T.**: Néhány választott egyéni sportág jelenlegi helyzetének és versenyképességének elemzése Magyarországon.  
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DOI: <http://dx.doi.org/10.21791/IJEMS.2016.1.31>
4. **Madarász, T.**: Stratégiai lehetőségek a birkózás versenyképességének fenntartására Magyarországon.  
Taylor 8 (4), 25-34, 2016. ISSN: 2064-4361.
5. **Madarász, T.**: Stratégiai lehetőségek az öttusa sportág versenyképességének fenntartására Magyarországon.  
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6. **Madarász, T.**, Bácsné Bába, É.: Survey on the Employees' Fitness Condition and the Employers' Health Preservation Possibilities in Case of Small and Medium-sized Enterprises.  
SEA: Practical Application of Science. 4 (2), 205-212, 2016. EISSN: 2360-2554.

The Candidate's publication data submitted to the iDEa Tudóstér have been validated by DEENK on the basis of Web of Science, Scopus and Journal Citation Report (Impact Factor) databases.

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