

Public financing in Croatian sport

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Preliminary communication**

JEL: H41, H76, L83

UDC: 796

doi: 10.3326/fintp.36.2.3

* The authors would like to thank two anonymous referees for their useful comments and suggestions.

** Received: August 24, 2011

Accepted: December 7, 2011

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Abstract

Sport is a complex social activity that encompasses various areas. This, of course, complicates the matter of its financing since it is financed by private and public sources. This is mostly due to the fact that certain sporting activities are considered to be public goods which are then financed by public funds, i.e. the state and local budgets. This paper reports on the analysis of public sources of sports financing. The research confirmed the assumption that in the structure of public sources the local budget prevails, i.e. money coming from local budgets is higher than that coming from central government. Based on the given data concerning local budgets for sports, a trend analysis was conducted. Finally, criteria applied when distributing local funds to sports organizations and single sports were analysed. Based on the correlation analysis, this paper shows that the amount of funds coming from local budgets is correlated with sporting performance (medals won at domestic competitions).

Keywords: sport, public goods, financing, public and private funds, Croatia

1 INTRODUCTION

Sport is a complex social activity that, due to various market failures (see Andrijašević, 2004; Downward, Dawson and Dejonghe, 2009), requires public sector involvement in its financing. The first step in analysing public sector involvement in financing sport is to identify which segments of sport are considered to be of public interest, i.e. to identify the public goods. In this process several characteristics of sport-specific statistics will have to be taken into account. First, the major problem is to address the statistical definition and monitoring of sport activities. This area is treated very differently in the official statistical documents of various countries, which means that no comparative analysis can be conducted. Also, official statistics on sports financing is very poor. This is especially true when talking about private sources of financing and it becomes virtually impossible to conduct a detailed and accurate economic analysis. Therefore, the basic goal of this paper is to analyse “at least” the funds coming from public sources in Croatian sport. The analysis is based on the assumption that the share of local¹ sources in the structure of public sources of financing is higher than the share of state funds for sport. Due to the significance of local sources, detailed trend analysis will be conducted, and the correlation of sources with achieved sports results will be examined.

Based on everything previously mentioned, the structure of the paper will be as follows. In the first part we will examine the theoretical background to how sport is financed and give a brief overview of the structure of the sport financing sources in some European Union countries. Then, a more detailed analysis of sport financing in Croatia will be presented. Questions such as legal framework, the structu-

¹ Local sources are defined by Sports Act (NN 71/06), as “local and regional self-governing units, and the City of Zagreb”. However, in the text the term *local units* or *local sources of financing* will be used.

re of public expenditure for sport, and allocation criteria will be discussed. This part of the paper ends with a trend analysis of local expenditure for sport and recreation. Finally, concluding remarks will be given.

2 SPORT AND PUBLIC FINANCING

Because of its complexity and the width of the functions that sport fulfils², the problem of sports financing is “evident in all countries regardless of their level of development (measured by national income per capita or by some other indicator)” (Bartoluci and Škorić, 2009:31), and it requires the involvement of the entire community. This is mostly revealed in sports, or at least some segments of sport, being considered as public goods due to their goals and social functions³. The use of these goods and services contributes to the well-being of the individuals and of the entire community. Investments in public goods cannot be entirely left to private initiative since there is a real danger that their production would be below a socially optimal level (more in Andrijašević, 2004), and market allocation would fail (Petak, 1992:103). There are many market failures which imply the need for public policy intervention, i.e. monopoly, question of equity, externalities, public goods, imperfect information (see Downward, Dawson and Dejonghe, 2009:14-24). For example, the Government of the Republic of Croatia gives rewards for sport results achieved in various international competitions regardless of the sport in question. In this way, the entire population can, in one way or another, benefit from sporting successes. If this was not the case, we could be faced with a lack of athletes in various sports because only the most popular sporting disciplines could ensure adequate funds for their athletes. Therefore, although the primary goal of sports organizations throughout the world is to ensure that everyone has the opportunity to take part in sport and physical recreation (Council of Europe, 1992), equal opportunities and access to sporting activities for everyone can be ensured only by public sector support (Europa, 2010). This support usually appears in the form of intervention of the state as an agent in sports financing which results in “putting sports participation within everyone’s reach” (Nys, 2006:270). Therefore, it is quite logical that public sources appear as an integral part of the sport-financing system.

In its essence the sport-financing system in Europe⁴ is defined as follows (European Commission, 2007:26): sports organizations have many sources of income, including club fees and ticket sales, advertising and sponsorship, TV and media rights, re-distribution of income within the sports federations, merchandizing, public support, etc. In general the sources of financing can be classified into two basic groups: budget (public) sources and non-budget (specific) means. When sport financing is in question the following can appear as non-budget funds: sponsors, donations, merchandizing, gifts and fees, other resources (raffles, souvenirs,

² More on sport functions in European Commission (2007:7-8).

³ Public goods are goods and services “whose advantages cannot be exhausted for any additional consumer and are accessible to everyone, regardless of costs” (Andrijašević, 2004:46).

⁴ Sport-financing system in Croatia is based on European system.

etc.) (see Šugman, Bednarik and Kolarič, 2002:69-70). However, another very important source of revenue for sport financing is voluntary work. It is estimated that about 700,000 sport clubs in EU countries build on the work of roughly 10 million volunteers (see Arnaut, 2006:19). The value of the work of these volunteers cannot be ignored. On the other hand, public support in sport can take many different forms, such as (European Commission, 2007:27): direct subsidies from public budgets, subsidies from fully or partly state-owned gambling operators, or direct revenues resulting from a licence to provide gambling services, special tax rates, loans with low interest rates, guarantees with low commissions, public financing of sports facilities, acquisition of public municipal facilities by a private club or an institution at a low price, renting of sports facilities by public entities at a low price, payment for the construction or renovation of sports facilities by the local council, public works in private sports facilities, public acquisition of advertising spaces in sports facilities, land sales or donations or an exchange of land for sports facilities. However, some sports organizations have considerably better access to resources from business operators than others. Therefore, in amateur and mass-scale sports, equal opportunities and open access to sporting activities can only be guaranteed through strong public involvement. Moreover, public financial support is often vital for sport but must be provided within the limits imposed by Community law, i.e. the laws of the European Union⁵, that is, the various treaties that are the “founding acts of the EU and the European Communities”.

According to research conducted in 1990 and then again in the year 2000⁶ for the Committee for the Development of Sport, Council of Europe, public sources of sports financing ranged from 5.6% of all sources in Switzerland to 49.1% in France (see table 1).

Table 1 clearly shows that local government provided more money for sport than the central government in every country analysed except Hungary. Although not every country analysed in 1990 participated in the study conducted in the year 2005, it can be concluded that the latest indicators from the year 2005 imply that the structure of sport-financing in 13⁷ EU countries has not changed much in comparison to 1990.

Household spending still represents the most important source of financing since it encompasses almost half of all sports finances, the share of local governments was at the level of 24%, enterprises amounted to 14%, and central budget to 12% (Andreff, Dutoya and Montel, 2009:1). In the year 2005 local government provided more money for sport than the central government in 11 out of 13 analysed countries.

⁵ For more details concerning Community Law see Borchardt (2000).

⁶ In the year 2000 the research was repeated only for France and UK.

⁷ Although 27 countries were involved in the research, only 13 were able to provide all the necessary information concerning different sources of financing: household spending, local funds, enterprises and central government.

TABLE 1*The structure of sports finance in some European countries (in %)*

	Households	Enterprises	Central government	Local government	Private sector	Public sector	Overall finance/ GDP
1990							
Country	1	2	3	4	5	6	7
Czech R.	74.8	1.8	6.0	17.4	76.6	23.4	n.a.
Denmark	55.6	5.6	6.3	32.5	61.2	38.8	0.56
Finland	66.2	4.8	4.3	24.7	71.0	29.0	1.13
France	42.4	8.5	11.5	37.6	50.9	49.1	1.10
Germany	69.0	3.8	0.6	26.6	72.8	27.2	1.28
Hungary	47.5	5.7	30.2	16.6	53.2	46.8	0.60
Italy	72.9	7.9	8.2	11.0	80.8	19.2	1.04
Portugal	36.5	42.0	9.9	11.6	78.5	21.5	1.77
Sweden	60.2	17.1	2.2	20.4	77.4	22.6	0.80
Switzerland	91.6	2.8	0.4	5.2	94.4	5.6	3.47
UK	79.1	5.0	0.8	15.1	84.1	15.9	1.49
2000							
Country	1	2	3	4	5	6	7
France	50.4	7.0	11.1	31.5	57.4	42.6	1.70
UK	79.5	8.4	n.a.	12.1	87.9	12.1	1.50
2005							
Country	1	2	3	4	5	6	7
Germany	76.5	7.6	0.6	15.3	84.1	15.9	1.42
Bulgaria	19.4	3.2	34.7	42.7	22.6	77.4	0.21
Cyprus	78.9	1.2	19.8	0.1	80.1	19.9	1.56
Estonia	12.6	37.7	13.3	36.4	50.3	49.7	1.13
Finland	73.5	2.9	8.7	14.9	76.3	23.7	1.56
France	50.0	10.3	9.7	30.0	60.4	39.6	1.76
Lithuania	20.3	27.1	17.5	35.1	47.4	52.6	0.38
Netherlands	70.8	7.7	11.5	10.0	78.5	21.5	1.64
Portugal	63.2	3.3	6.5	27.0	66.5	33.5	0.96
UK	80.9	10.5	1.3	7.3	91.4	8.6	1.67
Slovakia	13.8	13.8	16.7	55.7	27.7	72.3	0.63
Slovenia	17.9	46.6	10.4	25.1	64.5	35.5	0.69
Sweden	70.6	12.1	4.3	13.0	82.7	17.3	0.52

*n.a. – (data) not available**Source: Andreff (2006); for the year 2005 authors calculations according to data in Amnyos (2008).*

So, if we limit⁸ our analysis only to public sources, the question of whether the same structure of sources also applies to Croatia comes to mind. Is it possible to confirm the hypothesis that local governments give several times as much money for sport as the state? This question reflects the main research problem of this pa-

⁸ Due to unavailability of the data. More concerning this problem later in the text.

per, and the basic aim is to analyse public sources of sports financing in order to answer this question.

3 SPORTS FINANCING IN CROATIA

Sport, being a complex social activity, encompasses several areas: physical and health education of children and young people in schools and extracurricular and school activities, competitive sports, physical recreation (“Sport for all”), kinesitherapy and sport for people with a disability (for more details see Bartoluci and Škorić, 2009:16-19). Each of the areas embodies activities that deal with individual as well as social interests, i.e. it meets certain needs of two interest levels: individual and social (Andrijašević, 2004). As mentioned earlier, this situation influences the way in which sporting activities are financed. The system of sports financing in Croatia does not differ from that in Europe. It is regulated by the Sports Act (NN 71/06, Art. 74) in the following way:

- “The basis of sport financing is the revenue which the legal and natural persons that perform sporting activities obtain by performing sporting activities, the membership fees obtained by sports associations, a part of the revenue from organizing games of luck, and the funds given by local and regional self-governing units⁹, the City of Zagreb and the State to help the performance of sporting activities.
- The Republic of Croatia, the local and regional self-governing units and the City of Zagreb shall determine the public needs in sports and ensure the funds for their achievement from their own budgets in accordance with this Act.”

The task of central government is to help the functioning of the entire sports system through determining the public needs in sport and providing the necessary funds to finance those needs. Public needs in sport at state and local level are determined by the Sports Act (NN 71/06, Art. 75 and 76) and are summarized in table 2.

It is evident that public needs in sport are very similarly defined in these two columns but, of course, on different levels. The definition of public needs is connected with the roles of the state in sport which are fulfilled either directly or by delegation to local government. The roles of the state in sport can be as follows (Nys, 2006:261):

- 1) it exercises a legal role by promulgating rules and imperative standards (laws, decrees, orders),
- 2) it provides expertise for the sports movement and for the public, through the evaluations that it makes, the accreditation that it grants, and the diplomas that it awards. This function also includes the information and the statistics that it produces,
- 3) it values and encourages universal sports participation, in particular for those who are discriminated against or disadvantaged, without neglecting the spor-

⁹ Municipalities, towns/cities and counties.

- ting elite. This is mostly done through physical education at school, but more and more in sports participation outside school as well,
- 4) it oversees the health of athletes by developing specialized medicines and by participating in the struggle against drug abuse,
 - 5) it ensures the development of the country's image through the organization of international competitions, the preservation of national teams at a high level of competitiveness and by the election of national leaders in international federations,
 - 6) it fosters international co-operation and grants subsidies to less-developed countries.

TABLE 2

Public needs in sport at state and local level according to Sports Act

State level	Local level
Promoting sports, especially sports among children, young people, students and persons with disabilities	Promoting sports; Implementing sporting activities for children, young people and students; Sporting recreational activities of citizens; Sporting activities of persons with developmental difficulties and persons with disabilities
Promoting the planning and construction of sports facilities	Planning, construction, maintenance and use of sports facilities important to local and regional self-governing units and the City of Zagreb
Looking after the welfare of top-level athletes	Sports preparations, Croatian and international competitions, as well as the general and special health protection of athletes
Activities of national sports federations, the Croatian Olympic Committee, the Croatian Paralympic Committee and the Croatian Deaf Sports Association	Activities of sports associations, sports communities and federations
Scientific and developmental programmes in sports	Performing and funding scientific and developmental projects, analysis and studies with the aim of developing sports
Functioning of the IT system in sports	Hiring persons to do professional work in sports
Work and the activities of the Agency; awarding the Franjo Bučar State Award for Sport and state awards for top-level achievements in sport	
International sports co-operation and international obligations of the Republic of Croatia in sports	

Source: Arranged by authors according to Sports Act, NN 71/06, Art. 75 and 76.

Therefore, it is clear that only some sporting activities are financed by public sources through public needs. All other activities are financed by income obtained from other sources, which is defined by Sports Act as was previously explained.

3.1 EXPENDITURE FOR SPORTS

It is not possible to identify the origins of funding in sport, i.e. the share of private and public sources. This is mostly due to the insufficiency of statistical data concerning sport¹⁰. Statistical data concerning sport are collected every 3 years through official standardized forms called ŠPORT¹¹-1 (sports associations), ŠPORT-2 (chess associations and bridge clubs), ŠPORT-3 (hunting associations) and ŠPORT-4 (sports and recreation centres). These forms contain questions concerning incomes and expenditure but, according to the Croatian Bureau of Statistics, this data is not published regularly due to the fact that it is unreliable and incomplete. According to the last known data, published in the year 2003, sports associations registered in the system of competition obtained 24.6% of their resources from various public budgets, and the remaining 75.4% came from private, market sources (Novak, 2006:476). However, in the structure of public funds, one cannot differentiate between funds coming from state or local budgets. Also, there are no additional continuous special reports concerning households' spending on sport. The Croatian Bureau of Statistics annual *Household Budget Survey* (HBS) contains some data on household spending on sport. According to the last available HBS data, in the year 2009 Croatian households spent about 6% of their annual budget on recreation and culture. However, only two categories in this group can be considered as expenditure for sport. Sixty four kuna was spent on equipment for sport, camping and open-air recreation (0.08% of their annual budget) and 295 kuna for sporting and recreational activities (0.39% of their annual budget) (CBS, 2010). These data concerning expenditure for sport and recreation alone are insufficient for a detailed analysis since they encompass just one narrow segment of possible expenditure for sport. According to the authors' knowledge, the only detailed research into this topic was done more than 10 years ago (in 1998) in the towns of Zagreb, Rijeka and Osijek. The results of that research showed that households spent on sport about 3,359 kuna per year, which was about 5.2% of their total income. The majority of that money was spent on clothes (34.4%) and footwear (27.1%), fees (12.9%), entrance tickets (10.5%), equipment (9.1%), and gambling (5.9%) (Sever, 1999). It can be seen that spending on equipment (9.1%) and fees (12.9%) is just one (smaller) part of the total household expenditure for sport.

This is why the analysis in this paper is limited to public sources of sports financing. Data needed for the analysis was obtained from the official documents con-

¹⁰ A problem that has been present for a while now, and that has already been discussed by some authors but not solved (see Bartoluci, 2003; Bartoluci and Škorić, 2009; Stipetić and Bartoluci, 1999).

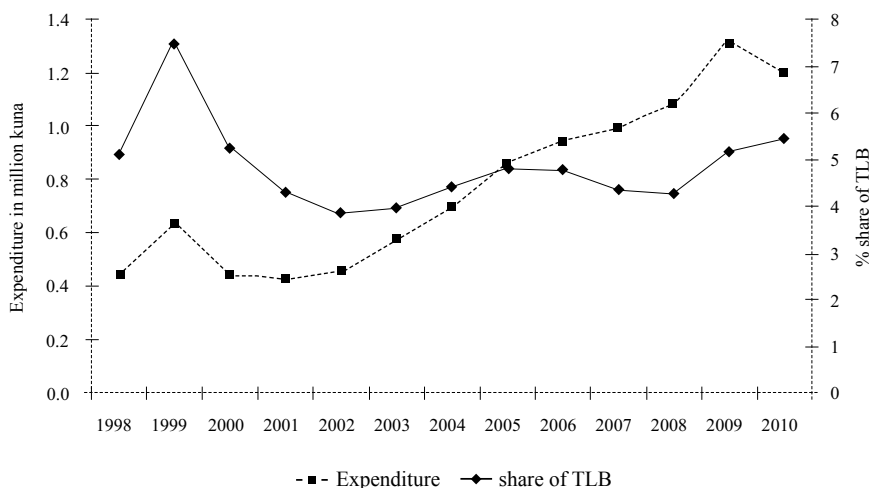
¹¹ *Šport* is a Croatian word for *Sport* used mostly in legal documents and laws. However in everyday life as well as scientific papers, more often the word *sport* is used. For more on the meaning of the two words see Omrčen, Andrijašević and Štefić (2007).

cerning state budget and budgets of local units (municipalities, towns/cities and counties). All budgets are public information and can be found on the internet sites of the Croatian Ministry of Finance. First, *local funds for sport*¹² will be analysed (see appendix 1 and 2).

If we sum up the amount of money coming from all local units in one year, then this figure is between 440 million (in 2001) and 1.320 billion kuna (in 2009). During the last 7 years these funds have slightly increased and amounted to between 4 and 5% of total local budgets¹³ (see graph 1). In other words, the absolute amount of money is increasing while the relative share is stagnating, which is a consequence of the increase in the total local budgets.

GRAPH 1

Total amount of local expenditure for sport and recreation and the share of expenditure in total local budget, 1998-2010



TLB – Total local budget.

Source: Authors' calculation based on the data of the Ministry of Finance (2009).

During the same period the *state budget* distributed from 37.6 to 328.5 million kuna for the development of sport, which was about 0.05 to 0.25% of the state budget. However, the data concerning the year 2008 should be analysed with a certain caution since it was in this year that a rather large amount of money (140 million kuna) was included in these funds for building the sports hall called “City Garden” in Osijek. The hall was built for the world handball championship and, due to the lack of money to finish the project, the state had to intervene; such a

¹² The total amount of money coming from municipality, town/city and county budgets for sport and recreation.

¹³ The exception being year 1999 when this percentage was higher than 7.

high amount of money for this purpose is not usual. In other words, it can be concluded that the expenditure for sport coming from the state budget amounts to about 0.1% of the state budget (see table 3).

TABLE 3*State expenditure for the development of sport, 1998-2010^a*

Year	Amount of expenditure (in million kuna)	% of the total budget
1998	37.6	0.08
1999	57.7	0.11
2000	54.8	0.09
2002	47.0	0.06
2003	52.1	0.05
2004	53.8	0.05
2005 ^b	70.8	0.07
2006	124.4	0.11
2007	154.9	0.13
2008 ^c	328.5	0.25
2009	198.7	0.15
2010	147.6	0.10

^a No official data were published for 2001 (for reasons unknown to the authors).

^b Until the year 2005 the amounts are planned and the rest is what actually happened.

^c As already mentioned, the strongest reason for such a big increase in the year 2008 is due to additional expenditure of 140 million kuna for the purpose of finishing the construction of the sports hall called "City Garden" in Osijek.

Source: Authors' calculations based on the data of the Ministry of Finance (2011a).

Although the way of presenting the data concerning expenditure for sport in official documents on state budgets has changed throughout the years in question, it has always been a part of the expenditure of the Ministry of Education and Sport, nowadays called Ministry of Science, Education and Sport¹⁴. In the year 2005 according to the "proposal to extract the heading P1254 *Development of Sport* from the larger heading 05 *Education and Sport* in order to follow the programmes and activities of the *Development of Sport* more easily, a new, independent heading was formed" (Ministry of Finance, 2004:63). The items included in this heading refer to the stimulation of sport in sport clubs, programmes of public needs in sport, programmes that encourage various form of sporting participation, financing of the Bjelolasica Olympic Centre, rewards to athletes for outstanding successes, restoration and building of sports facilities, various sport conferences and youth games, the drafting of the sports development study, programmes for

¹⁴ For a more detailed analysis of the differences in the way data was presented throughout the years see Budget for the year 2003:139-140; Budget for the year 2004:148-149.

standard development when building sports facilities, etc. (for more details see Budget for the year 2005:105-106).

However, it has to be emphasized that other ministries and departments indirectly provide for sports expenditure. For example, in the area of science, education and sport, certain common programmes exist that are directed towards all three areas. Besides that, the building of sport halls in schools and universities is treated as a part of elementary, secondary and university education. In some cases even the building of sports facilities for top-level sport is treated separately from the heading *Development of Sport*¹⁵. If we omit from mentioned items and consider only the state expenditure for sport under the official heading intended for sports purposes as explained earlier in the text, it is possible to compare the amount of funds allocated to sport by local and state budgets (see table 4).

TABLE 4

The comparison of funds for sport from state and local budgets (in million kuna)

Year	Total amount of local funds for sport and recreation	Total amount of state funds for development of sport
1998	449.3	37.6
1999	651.5	57.7
2000	453.7	54.8
2002	467.8	47.0
2003	583.5	52.1
2004	709.6	53.8
2005	865.1	70.8
2006	952.7	124.4
2007	1,002.3	154.9
2008	1,094.0	328.5
2009	1,320.2	198.7
2010	1,208.9	147.6

Source: Ministry of Finance (2011 and 2011a).

The table clearly shows that the amount of local funds is higher than the amount of funds coming from the state budget. This actually confirms the hypothesis that local funds prevail in the structure of public sources of sports financing. Two explanations can be offered for this situation. First, it can be explained by the fact that the state budget primarily finances top-level athletes and top-level sports results at national, European and world levels. Local budgets fund the same or similar needs but on a much wider basis, i.e. they encompass a greater number of

¹⁵ For example, in the year 2008 this was the case with 15 million kuna allocated for co-financing the Višnjik multipurpose sports facility in Zadar.

sports associations and clubs, athletes and events. Besides that, local governments manage significantly greater number of sport facilities, as well as professionals employed in sport. Also, this can be a reflection of the tendency towards decentralization¹⁶.

3.2 ALLOCATION CRITERIA

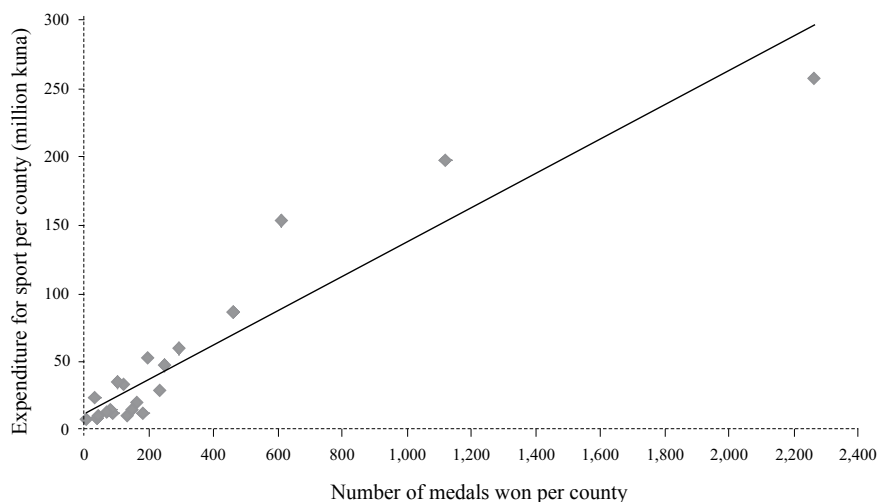
As explained earlier in the text, public needs as defined by the Sports Act are the guiding principles for determining towards which programmes the local units direct their money. But when deciding how much money they will allocate to each sports association or a club, and this is a major expenditure in local government budgets (Andreff, 2006:274), no clear criteria exist in the form of common guidelines or recommendations. Each town, district and even county makes these decisions individually based on set goals. The most commonly used criteria (see Bašić, 2005; City of Dubrovnik, 2010; Sport association of Pula, 1999; Sport Association of Split, 2010; Sport Association of Primorje-Gorski Kotar County, 2009; Sport Association of Koprivnica, 2002) refer to tradition, to the fact whether a sporting activity belongs to the set of Olympic sports or not, the number of participants and clubs, performance at international and domestic competitions, and popularity. Some of the mentioned criteria primarily encounter the issue of objectivity. For example, in the *Development Programme for the City of Zagreb* (Bašić, 2005:60), it is stated that popularity “can hardly be an objective criterion for sport evaluation. This is especially true if it is considered that media coverage of a certain sport is not proportional to its level of organization, activities, or even to the quality of achieved sport results”. On the other hand, criteria such as the number of participants and sports results are not in question due to their exact nature, objectivity and measurability.

Without going into any detail concerning which criteria should be applied when allocating local funds, in what way, and how to determine these criteria, we have to emphasize the need to justify the use of certain criteria. We have tested, with certain limitations, the validity of using the criterion of sports results (performance). The basic assumption is that sports and sporting clubs that achieve better performances at domestic and international competitions tend to attract higher financing. However, we had at our disposal only the data concerning the medals won at domestic competitions for seniors, juniors and cadets in 2008. In other words, the main constraint on this analysis is, again, the unavailability of data. Unavailability of data refers to the unavailability of data concerning sports results at international competitions, and the data regarding other sports results achieved (not only the medals won but other rankings as well), throughout all the years in question and not only the year 2008. So, having in mind the mentioned limitations of the study, the expenditure for sport was correlated with the medals won at domestic competitions, and the following results were obtained (see graph 2).

¹⁶ More on this topic see Barros (2006).

GRAPH 2

Correlation graph for variables expenditure for sport and medals won per county in 2008



The graph indicates that there is a positive correlation between the variables *total expenditure for sport* and *the number of medals won*. This was confirmed by calculating the Pearson product-moment correlation coefficient, which was 0.94.

This kind of analysis should also include other criteria used in the decision-making process, but the results are still indicative and show that it is possible, necessary even, to analyse the justification of the use of each proposed criterion in a similar way.

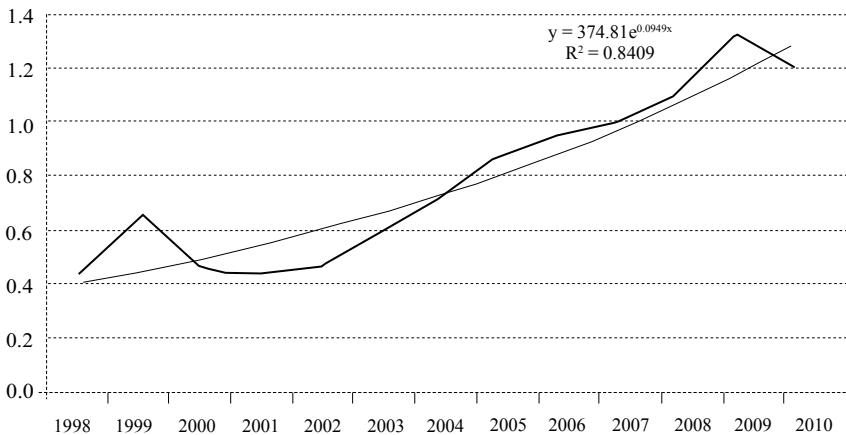
Finally, a question that could be of interest here is not merely the question of allocation criteria but also the further management of received funds in sport clubs. Although, this is quite a different topic and is not of a primary interest in this paper, let us just briefly refer to this matter. Competitive sports management could be classified as social and operational management (see Bartoluci and Škorić, 2009:73). The need for the so called social management is emphasized by the fact that certain segments of sport are considered public goods and therefore receive public funding. Spokesmen of social management are representatives of the public and are usually members of the assembly, boards of directors or supervisory boards. Their task should be control of allocated funds based on the activities of operational management in the club. Unfortunately, this is not always the case. However, since the topic of management is not the main research problem in this paper we refer readers to the sports management literature.

3.3 TREND ANALYSIS OF LOCAL EXPENDITURE FOR SPORT AND RECREATION

The main aim of this paper was to conduct a trend analysis of local expenditure for sport and recreation to see if a tendency of increase through time is displayed. For this purpose the official data of the Ministry of Finance (2011) published on their web page were collected (see appendix 1), systemized and then analysed. The presented secondary data correspond to the total amount of money allocated to sport and recreation from local budgets in each county of the Republic of Croatia, i.e. from municipality, town/city and county. The year 1999 was the year that created some problems, because in 1999 a significant increase in funds was present which could probably be attributed to the 2nd World Military Games. However, again, due to inadequate statistical monitoring, these funds were not shown as a separate item, so that we cannot state this with certainty although it affects the final results of trend analysis. The tendency of expenditure to increase through time was analysed based on the exponential and linear model. The exponential model proved the best fit¹⁷ especially if years 1998 and 1999 were excluded from the analysis¹⁸. However, since this type of event is tending to become regular, (almost every year there is at least one large sporting event), funds intended for these events can no longer be treated separately. At the same time the organizers of such events have to apply for these funds in advance, so that a better budget planning can be achieved. Therefore, the results of the exponential trend analysis that includes all years in question are presented further in the text (graph 3).

GRAPH 3

Exponential trend model for local expenditure for sport and recreation (in million kuna), 1998-2010



Exponential trend model equation with computed parameters for the local expenditure for sports was $\hat{y} = 374.8e^{0.094x}$, i.e. $\hat{y} = 374.8 \times 0.094^x$. The coefficient of

¹⁷ Linear model generated a higher coefficient of determination ($r^2 = 0.858$), however, the exponential model generated the lower variance of 2.34%, and the variance in linear model was 14.3%.

¹⁸ $r^2 = 0.95$; variance 1.3%.

determination equalled $r^2 = 0.84$ and showed that the model explained 84% of the total sums of squares. The estimated parameter $\hat{\beta}_1$ pointed to the average rate of change in expenditure in one year and was calculated to be 9.96%, which means that the amount of expenditure in the analysed period of time increased on average by almost 10% each year.

4 CONCLUSION

This paper pointed out that sport is a complex social activity that encompasses various areas. Some of these activities come within the category of public needs, which implies that sport is an activity of wider social interest and requires public intervention in its financing. These needs are determined by law and are an integral part of state and local budgets.

Based on European experiences, the assumption that the local sources prevail in the structure of public sources of sports financing in Croatia was tested and confirmed. This can be explained by the fact that local sources finance sporting activities on a much wider scale, e.g. a greater number of clubs, athletes, sports events, facilities, and experts in sport.

Due to their great significance in sports financing, local sources were analysed in greater detail. Although the funds coming from local sources varied in total amounts in different counties of Croatia and throughout the observed years, it was possible to confirm the existence of the exponential trend displayed in their yearly increase.

Finally, although the calculations were done with certain limitations, this paper also showed that the amount of money coming to sport and recreation from local budgets is positively highly correlated with the performance of local athletes and clubs.

However, we have to point to the fact that the main limitation in the conducted research was the unavailability of data. Official statistics on sports financing is very poor, especially when we are talking about private sources of financing. So, it becomes virtually impossible to conduct a detailed and accurate economic analysis, which represents a serious problem for scientific researches. Without a doubt, future research should strive to solve this problem.

TABLE A1

Local expenditure for sport and recreation (in million kuna)

Counties	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Bjelovar-Bilogora	4.4	3.9	3.8	4.1	7.7	9.1	11.5	7.9	8.9	10.8	11.8	14.2	12.8
Slavonski Brod-Posavina	7.7	5.5	4.1	6.4	9.2	9.4	8.7	8.3	10.1	12.7	14.6	16.5	16.4
Dubrovnik-Neretva	5.9	5.1	6.9	8.2	10.3	12.7	14.4	26.8	28.9	40.9	33.3	29.5	44.6
Istria	22.4	24.2	26.2	27.9	38.4	36.1	53.6	58.1	60.3	62.1	85.8	108.4	83.7
Karlovac	9.2	7.1	7.8	7.5	8.6	10.8	21.5	19.9	13.6	15.9	20.1	19.8	17.6
Koprivnica-Križevci	7.4	12.2	17.2	7.9	7.4	6.8	7.8	16.7	36.2	15.9	13.0	23.7	19.4
Krapina-Zagorje	2.8	2.6	2.9	3.7	2.6	3.1	3.8	9.2	6.6	8.6	10.0	9.6	10.2
Lika-Senj	2.9	2.9	3.3	7.3	2.8	4.0	4.4	6.5	5.3	6.5	7.5	8.2	7.1
Međimurje	6.6	5.0	7.9	8.8	7.9	9.8	9.8	10.1	9.4	14.1	14.5	14.4	14.7
Osijek-Baranja	22.4	27.2	17.7	23.9	27.9	28.5	37.7	37.7	60.9	47.8	59.3	62.6	57.9
Požega-Slavonia	2.9	5.0	4.2	3.8	3.6	5.2	3.4	6.7	8.6	11.0	8.2	9.9	10.3
Primorje-Gorski Kotar	43.3	47.7	52.9	48.0	66.2	84.9	72.6	102.7	135.9	191.9	152.7	114.5	218.1
Sisak-Moslavina	12.1	12.5	12.4	12.8	14.4	16.6	20.3	22.0	29.6	40.1	52.5	39.8	37.4
Split-Dalmatia	32.3	31.9	29.3	32.1	21.1	52.7	66.8	87.3	103.1	157.4	197.2	298.4	138.5
Varaždin	6.8	7.6	3.9	3.9	9.0	17.9	16.0	27.5	27.8	25.9	28.8	61.3	57.3
Virovitica-Podravina	3.2	3.2	3.6	4.1	3.9	4.5	5.1	5.4	6.4	8.9	10.4	7.9	6.6
Vukovar-Sirmium	5.3	4.9	6.6	5.0	12.1	12.8	9.9	11.6	12.2	18.9	23.4	42.2	40.9
Zadar	7.7	7.1	8.8	9.8	14.4	13.8	61.4	67.8	52.8	29.5	11.9	38.1	34.2
Zagreb	11.0	12.3	12.1	17.4	14.2	17.8	34.2	31.6	30.2	33.3	46.8	56.9	54.7
Šibenik-Knin	6.6	7.8	7.4	7.7	7.3	8.0	10.2	10.8	16.2	18.5	34.6	27.3	16.7
City of Zagreb	226.2	415.9	214.4	189.3	178.8	218.9	236.3	290.4	289.5	231.5	257.2	317.1	309.7
Total	449.3	651.5	453.7	439.7	467.8	583.5	709.6	865.1	952.7	1,002.3	1,094.0	1,320.2	1,208.9

Source: According to data of the Ministry of Finance (2011).

TABLE A2

Percentage of local expenditure for sport and recreation in total local budgets

Counties	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Bjelovar-Bilogora	2.67	2.93	3.04	2.68	3.49	3.47	4.12	2.48	2.70	3.28	2.64	2.98	3.27
Slavonski Brod-Posavina	5.00	3.73	2.73	3.74	3.67	3.13	2.84	2.73	2.14	3.12	2.88	3.00	3.50
Dubrovnik-Neretva	3.12	2.79	3.41	3.42	3.42	3.31	2.92	4.77	4.34	5.43	4.07	3.95	6.47
Istria	3.95	4.14	4.04	3.68	3.57	3.75	4.76	4.54	4.70	4.31	4.95	6.42	5.54
Karlovac	4.67	3.40	3.43	3.40	2.83	1.08	5.60	4.58	3.25	2.98	3.53	3.40	3.62
Koprivnica-Križevci	3.96	7.78	9.83	4.06	2.76	1.70	1.96	4.52	8.89	3.51	2.51	5.13	4.26
Krapina-Zagorje	1.76	1.58	2.05	2.39	1.25	1.17	1.30	2.50	1.87	1.90	2.10	1.98	2.53
Lika-Senj	3.13	3.53	3.87	6.46	2.08	2.19	1.93	2.66	1.98	2.27	2.21	2.59	2.53
Međimurje	5.52	4.04	7.11	5.70	4.15	4.00	3.92	3.97	3.15	4.04	3.70	3.61	4.12
Osijek-Baranja	5.83	7.64	4.34	5.48	4.66	3.94	4.78	4.28	6.42	4.50	4.74	5.00	5.10
Požega-Slavonia	3.53	6.73	5.27	3.99	2.55	2.78	1.92	3.57	4.90	5.82	3.74	3.82	4.05
Primorje-Gorski Kotar	5.19	5.67	5.87	4.51	5.75	6.07	4.80	6.17	7.16	6.91	6.59	5.20	10.40
Sisak-Moslavina	4.12	4.57	4.67	4.14	3.45	3.68	4.29	4.16	4.99	5.92	6.66	5.30	5.43
Split-Dalmatia	3.80	3.58	3.38	3.35	1.84	4.06	4.56	5.16	5.44	6.87	7.37	11.27	6.08
Varaždin	3.26	3.63	1.84	1.55	2.18	4.41	3.70	5.76	5.31	4.05	3.69	7.86	9.10
Virovitica-Podravina	3.82	3.88	3.98	4.55	2.81	2.20	2.84	2.54	2.56	3.25	3.31	2.50	1.98
Vukovar-Sirmium	2.64	2.25	3.19	2.28	4.09	3.29	2.70	2.82	2.51	3.28	3.23	6.28	6.63
Zadar	3.19	3.17	3.25	3.28	3.44	2.65	10.40	9.44	6.86	3.10	1.18	3.63	3.68
Zagreb	2.41	2.45	2.78	2.91	2.25	2.25	3.80	3.12	2.73	2.48	3.02	3.66	4.16
Šibenik-Knin	3.98	4.97	5.27	4.39	3.02	2.78	3.22	2.96	3.93	3.87	6.27	4.77	3.50
City of Zagreb	7.28	13.85	7.63	5.43	4.93	4.76	4.72	5.27	4.62	3.34	3.51	4.23	5.00

Source: Authors' calculations according to the data from the Ministry of Finance (2011).

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