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A comparative analysis of sport and economic success through the example of top- and mid-ranking Hungarian water polo clubs

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ABSTRACT

The biggest question of professional sports is how to compete successfully in the global economic framework, simultaneously in terms of the sport and in economic terms. As a result, in addition to indicators measuring sports-related effectiveness, the need for an economic analysis of sport has also emerged. Most academic research into the economic aspects of sports are related to the analysis of North American major league sports, as well as to European football. Water polo is also a spectator team sport, yet its economic analysis is almost entirely missing. In this article, we present an economic analysis of the operation of five men's water polo teams – the top four teams in terms of the sports results and one from the mid-range – competing in the highest-level national championship in Hungary. Our aim is to determine, on the basis of the analysis of the data, the relationship between effectiveness in sports and the economic background of the teams.

It can undoubtedly be concluded that, in addition to appropriate professional decisions, it is the economic situation of a club that has a clear impact on their effectiveness; in other words, up to a certain point, the more disposable funds and wider range of assets a sports company has, the more effectively it can prepare and the better results it will have in the various domestic and international championships and tournaments. CIT (corporate income tax benefits, “TAO” in Hungarian) support is fundamentally important in the field of youth sports development. While professional sports in Hungary are built on the development of junior players, there is still no clear link between the successfulness of the adult and the junior teams. The first-division teams of the clubs providing the best junior players are frequently in the mid-range or occasionally among the weakest teams in the national championship.

Our research has shown that apart from the fact that some teams are extremely successful in the water polo championship, the outcome of many matches becomes quite predictable. Based on these, the uncertainty of the outcome is compromised, and the championship becomes less exciting and also loses some of its audience.

KEYWORDS

business aspects in sport, economic success, sport success, water polo championship, predictable outcome

1. INTRODUCTION

The role of sport has increased and changed significantly in recent years. Originally a private, leisure-time pursuit of individuals based on movement, now such activities also count as sports that are already devoid of the original characteristics. One of the most important changes is that sport has gained an economic significance. The emergence of such business aspects is a phenomenon that is both sport and country-specific. It is linked, on the one hand, to the inherent characteristics of the given sport (the inner values, sets of rules, method of

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conduct, duration, location, as well as the resulting media capacity of the sport concerned), and to other characteristics (the economic system, level of development, cultural traditions of the given country, external social and economic changes) [1]. It is a phenomenon specific to sports disciplines that business aspects have mostly had an impact in professional and spectator sports. Spectator sports are pursued by professional athletes, and because of the nature of these sports, they have high entertainment value, they are visually spectacular, well-suited to broadcasting, and therefore easy to sell. For spectators, the subject of the exchange is the ability to watch others play sports, i.e. they pay to enjoy the spectacle of athletes pursuing the given sport [2]. These sports are primarily team sports, e.g. association football (soccer), basketball, handball, etc. [3]. The formation of sports-focused enterprises is particularly characteristic in case of these sports. According to András [4], sports companies are entities that provide the organisational frameworks for sports-related business activities. In terms of the form, they are typically business associations, while in terms of their size, they are mostly in the category of small enterprises. A characteristic feature of sports companies is that they operate with a dual, occasionally conflicting system of aims. The requirement of effectiveness in both the sport and in the area of economic operations is present in varying degrees, but simultaneously. Based on the decision of the owners, it is the responsibility of the management to find the balance between the two. This dual system of aims is also reflected in another aspect, as the phenomenon of dual value creation also appears in case of sports companies [5]. This means that it is necessary to create value for the customers and for the owners at the same time [1].

The biggest question of professional sports is how to compete successfully in the global economic framework, simultaneously in terms of the sport and in economic terms. As a result, in addition to indicators measuring sports-related effectiveness, the need for an economic analysis of sport has also emerged.

Most academic research into the economic aspects of sports are related to the analysis of North American major league sports, as well as to European football. Water polo is also a spectator team sport, yet its economic analysis is almost entirely missing. In this article, we present an economic analysis of the operation of five men's water polo teams – the top four teams in terms of the sports results and one from the mid-range – competing in the highest-level national championship in Hungary. Our aim is to determine, on the basis of the analysis of the data, the relationship between effectiveness in sports and the economic background of the teams.

2. REVIEW OF THE RELEVANT LITERATURE

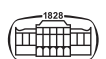
Examining the operation of the system of sports today globally, we can differentiate between state and business-funded systems. In Hungary, although the strengthening of business-type elements has been clearly recognisable in

recent decades, the role of the state is still crucial. After the political changes in 1989/1990, the state first withdrew from supporting sport almost entirely, partly because investments were needed in other fields at the time, and partly because – based on examples from Western countries – decision-makers believed in the spontaneous development of a self-financing system of sport [6]. However, this expectation has not been met and, in fact, many companies formerly supporting sports have either gone out of business or discontinued the support of sports organisations. Having recognized this problem, the state sought to grant certain subsidies to sport, mainly in the form of tax reliefs (e.g. 1% of the personal income tax) [7, 8]. A stronger role undertaken by the state in sports financing can be linked to the Sport XXI National Sport Strategy, for the implementation of which a major sport development action plan has been developed.

The next major form of state support was the introduction of the system of CIT (corporate income tax benefits, “TAO” in Hungarian) support [9, 10]. This was enacted by way of Act LXXXII of 2011, which has created an opportunity for taxpayers subject to corporate income tax (i.e. businesses) to support five spectator team sports (football, handball, basketball, ice hockey and water polo). This form of support can take two possible forms: companies can either deduct the amount of support they provide as an expense, thereby reducing their tax base and therefore the tax liability, or they can reduce the amount of the tax due by the amount of the support [11].

For sports other than the above five, the “Priority Sports Development” (KSF) system provided state resources for operations. Sixteen different sports have been included in this support category (table tennis, athletics, wrestling, rowing, judo, canoeing and kayaking, cycling, skating, boxing, pentathlon, volleyball, sports shooting, tennis, gymnastics, swimming, and fencing) [12, 13].

For the purposes of the present research, the presentation of support for spectator team sports is highlighted, as water polo falls into this category. A brief description of the Hungarian CIT (TAO) support system is also provided here, as this is a scheme that is unique to Hungary. The main revenue streams of commercial sports companies come from consumers (spectators), broadcasting royalties, sponsorship, merchandising products and player transfers. Each source of revenue can be understood as a market (consumer market, market of broadcasting rights, sponsorship market, merchandising market and players market). The functioning of these markets has been analysed in detail by many researchers [14, 15, 16, 17, 18]. In Hungary, however, spectator team sports also received another significant source of revenue through the introduction of the CIT (TAO) support system [19, 20, 21]. This support system is needed mostly because fully market-based sports system has not yet been established in Hungary [22, 23, 24]. At the same time, it should also be pointed out that the funding received through this revenue stream can only be used by the sport organisations supported for the development of specific areas, such as:



- the performance of youth sports development activities,
- covering expenses incurred in connection with competitions,
- personnel-type expenses,
- investments in and refurbishments of fixed assets, also including infrastructural developments to meet safety requirements,
- tasks related to education and training [25].

Between 2011 and 2019, the total approved amount of support received via the CIT (TAO) system was approximately HUF 913 billion. Different sports receive varying degrees of support (Fig. 1), with the highest amount given to football [26, 27, 28] and the lowest to volleyball; however, it should also be mentioned in this context that volleyball has been considered a spectator team sport only since 2017.

In terms of distribution of the support according to the above legal titles, the largest share was for youth sports development activities at 47%, followed by investments in fixed assets (also including real estate development projects), and only the remaining 10% was used for other purposes, such as personnel-type expenses (not including the wage costs of professionals working in youth sports development), competitions or the remuneration of contributors. These proportions clearly reflect that the main objective of the system is to support the development of the next generation of athletes. The proportion of holders of valid competition licences in the abovementioned sports is shown in Fig. 2.

On the basis of the above, it can be seen that the support provided meant immense help for sports organisations and youth development programmes; at the same time, the reasonable use of the support is strictly controlled by the competent national federations.

These significant amounts of state support also appeared in the reports of Hungarian water polo clubs, increasing the levels of their balance sheet assets and liabilities. In the present research project, we examined the economic management, the assets, financial and income positions of water polo clubs competing in the highest league of the Hungarian championship.

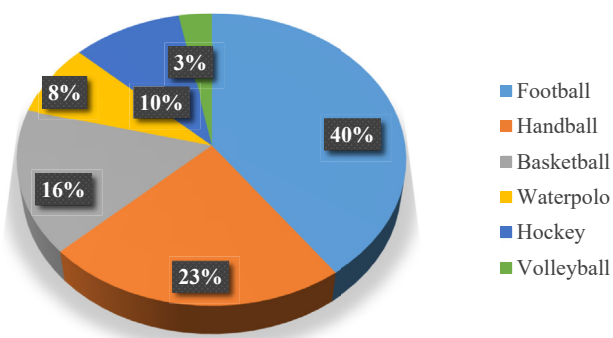


Fig. 1. The share of spectator team sports in the total amount of support granted between 2011 and 2019

Source: Based on the report by the Hungarian Football Federation [29]

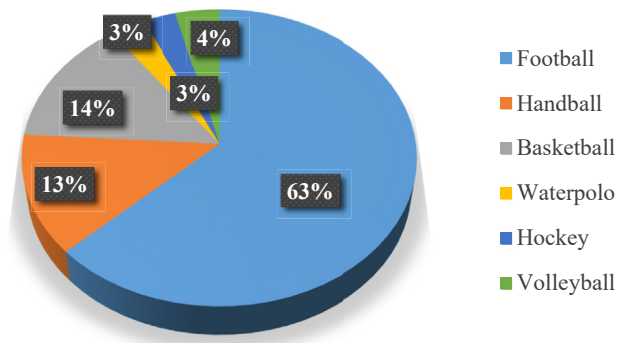


Fig. 2. The distribution of the issued competition licences among spectator sports

Source: Based on the report by the Hungarian Football Federation [29]

3. MATERIALS AND METHODS

In recent seasons, typically there were 16 teams competing in the highest-level water polo league in Hungary called “E.ON Men’s Nationwide Championship I” (commonly abbreviated “OB I”). If we examine the final results of the championship in the past six seasons, we can find that it was always the same four teams (Eger, FTC, OSC and Szolnok) that finished in the top four positions, although their order changed from year to year. Therefore, we focused our research on these top four clubs, and we also included in the sample a fifth one, examining the results of DVSE of Debrecen, which is a middle-ranking team in the championship. Each of the entities operating the teams examined are economic associations, specifically Hungarian limited liability companies (“kft.”).

In the course of our analysis, we examined the sport and economic results of the water polo clubs in Men’s Nationwide Championship I.

The sport results achieved by the teams can be found in the database available via the website of the Hungarian Water Polo Federation, back to the 2012/2013 season. The list of players in each club playing in the given championship and season is also available in the database, which can be used to further refine the team’s strength in the sport, in addition to its ranking achieved on the team level.

In addition to the sports results, to analyse also the economic management of the clubs, we used the data of the simplified annual reports of the sports companies available through the electronic report filing portal published by the Company Information and Electronic Company Proceedings Assistance Service of the Ministry of Justice. Via this website, one can access the general annual reports closing the business years, as well as the supplementary notes to those reports, for all sports companies included in the business register and operating in Hungary.

Using these data, we analysed sports performance, the assets, financial and income positions of the companies, and the interrelationships between these.

We have examined the composition of liabilities, which provides information on the company’s equity ratio, its

viability and dependence on outside capital. Indicators of the capital structure need to be examined with care, since the capital needs in different sectors (manufacturing, commerce or service) are very different [30].

$$\text{Capital structure} = \frac{D/E/F/G}{\sum \text{Equity and Liabilities}}$$

Liquidity indicators provide information on the company's short-term solvency and readiness to pay.

$$\text{General liquidity ratio} = \frac{\text{Current assets}}{\text{Short-term liabilities}}$$

The higher value indicates that the company is expected to be able to meet its short-term payment obligations in a timely manner and to finance its operating costs in the near future. By contrast, the low value of the indicator may suggest that the company has problems in meeting its short-term obligations, which may also cause operational difficulties. The ideal value of the indicator is between 1.3 and 1.7. In many cases, it is worth examining the quick liquidity ratio and the cash-level liquidity ratio as well to obtain a complete picture of the liquidity position of the enterprise, but the sporting organisations examined typically have receivables and liquid assets, and therefore the general liquidity ratio more or less includes the values of the additional indicators. Although payment difficulties are not expected in the case of a high value of the indicator, proper attention should be paid to the fact that an excessively high value of the liquidity indicators is not favourable for the enterprise either. This is due to the fact that although the risk is low, maintaining assets can be costly and the profitability level decreases without committing too much of the liquid assets [30].

$$\text{Net working capital} = \text{Current assets} - \text{Short-term liabilities}$$

In case of net working capital, the main criterion is compliance with the principle of matching, namely that the financing of long-term assets should be matched with long-term liabilities, while short-term assets with short-term liabilities. If the value is positive, the current value of short-term assets exceeds the liabilities, which means that a part of the short-term assets are financed from long-term liabilities. If the value of the indicator is negative, then the amount of short-term liabilities exceeds the value of short-term assets, which means that there are long-term assets financed from short-term liabilities.

Debt indicators provide information on the company's long-term solvency and willingness to pay. For debt, we examine the degree of indebtedness ($\text{Debt}/\Sigma \text{Equity and Liabilities}$), which shows the ratio of debt in case of which the lowest possible value is favourable [30].

$$\text{Equity ratio} = \frac{\text{Equity}}{\text{Debts} + \text{Equity}}$$

In the analysis of profitability, the profit categories are examined in relation to a projection basis. In case of loss after tax, the analysis of profitability is not relevant. Where

the analysis of profitability can be interpreted, we essentially took into account the values of three profitability indicators: ROA, ROE and ROS, i.e. the profitability relative to assets, equity and sales revenue [30].

The value of the squad of players can be only deducted on the basis of personnel-type expenses; however, due care should be exercised when relying on these data. There are no publicly available values of similar accuracy for sale revenues, and therefore, only the scale of these can be estimated and compared.

Once we learn about the economic management of each of the organisations, it is possible to make comparisons between them.

We started this process by comparing the structure of the clubs' economic management. Since the main activities of each of these businesses is sport-related activities, no significant differences were expected in their structures of economic management. In the next step, we examined the financial position of the enterprises concerned, looking for differences or similarities between the data.

The investigation also extended to comparisons between their revenues, the amounts of CIT (TAO) support and the personnel-type expenditures. In order to further analyse the differences and similarities, we examined how many permanent members their first-division squad consists of, and how many of them are of junior age.

We compared the values obtained against the results of the teams in the past six seasons of the OB I championships. As two of the organisations presented have been operating in their current form only since 2014, the examination of the previous seasons was not relevant, but six seasons are a sufficiently long period to identify certain trends in the results.

Last but not least, we examined whether the results of the first-division team and the junior teams are correlated.

In the course of the analysis of the data obtained, we were looking for the relationships between a team's sport successes and their economic background.

4. RESULTS

4.1. The economic analysis of the examined sport organisations

The company's equity ratio is increasing, as a result of the year-on-year increase in after-tax revenue. The company does not create provisions. Even though the proportion of liabilities varies in the capital structure, its value is kept at almost the same level, so that its proportion can decrease. As regards the capital structure, it can be observed that the value of deferred incomes and accrued expenses is significant (Table 1).

The liquidity ratio has varied quite significantly in recent business years. For 2019, the indicator is well above the ideal ceiling of 1.7. This leads to the conclusion that the company does not currently have and is not expected to have a liquidity problem. The increasing value of the liquidity ratios

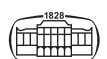


Table 1. Economic indicators of FTC Waterpolo Kft

	2014	2015	2016	2017	2018	2019
<i>Indicators of the capital structure</i>						
Equity ratio	22%	–13%	–4%	–1%	1%	11%
Ratio of provisions	0%	0%	0%	0%	0%	0%
Ratio of liabilities	32%	87%	30%	19%	18%	8%
Ratio of deferred income and accrued expenses	46%	27%	73%	82%	81%	81%
<i>Liquidity indicators</i>						
General liquidity ratio	2.42	0.73	2.91	1.11	1.64	7.37
Net working capital (eFt)	25,561	–19,031	170,978	7,274	41,742	370,207
<i>Debt stock</i>						
Debt ratio	32%	87%	30%	19%	18%	8%
<i>Profitability indicators</i>						
ROA	11%	–29%	0.1%	1%	2%	10%
ROS	41%	–68%	0.3%	4%	3%	87%

Source: Own editing (2021) based on the organisation's simplified annual accounts.

is related to the increase in net working capital, and it can be observed that in terms of changes in short-term assets and short-term liabilities, the value of short-term assets increases more than the value of short-term liabilities.

While payment difficulties are not expected, due care should be paid to the fact that an excessively high value of the liquidity indicators is not favourable for the enterprise either, since maintaining assets can be costly and the profitability level decreases without committing too much of the liquid assets. The level of indebtedness was extremely high in 2015, which was due not to the high level of liabilities but to the low level of assets. Since then, this indicator has decreased steadily, and has reached a low figure of 8% by 2019. The enterprise does not currently have to be concerned with the danger of over-indebtedness. In the six business years examined, FTC Waterpolo Kft. had a loss after taxes only once, in 2015. The amount of after-tax profits has since increased, including an eight-fold increase from 2018 to 2019. Accordingly, the return on assets (ROA) and the return on sales (ROS) indicators also increased.

The high proportion of liabilities can be clearly seen in the company's capital structure. In addition, the equity ratio of the company is low, as it only has low or negative after-tax results (Table 2).

In most business years, the liquidity indicators are below the ideal range of 1.3–1.7. Due to these low values, long-term liquidity problems may also arise. The negative net working capital also suggests a risk of liquidity problems. This value indicates that part of the fixed assets are financed by short-term loans.

The high level of indebtedness also reflects the above, namely that the company has a high level of debt relative to its equity. Based on the high amount of debt and negative taxed profit, the analysis of profitability indicators is not relevant.

In the economic analysis of Szolnok Waterpolo Sport Club Kft., it is important to bear in mind that in the case of this company, the adult and the junior teams are competing in the framework of the same enterprise (Table 3).

Although the company's economic management is good in terms of paying attention to low debt and ensuring that it has sufficient liquidity, the company's profitability is still low. The profitability indicators were close to 0, due to the low level of after-tax profits, but they are at least positive unlike in case of many other companies.

The Eger water polo club fundamentally keeps the level of its liabilities at a low level, and it does not have any significant outstanding amounts. The proportion of deferred

Table 2. Economic indicators of OSC Waterpolo Kft

	2014	2015	2016	2017	2018	2019
<i>Indicators of the capital structure</i>						
Equity ratio	5%	–1,150%	–4,261%	49%	–25%	4%
Ratio of provisions	0%	0%	0%	0%	0%	0%
Ratio of liabilities	24%	846%	4,361%	51%	125%	96%
Ratio of deferred income and accrued expenses	71%	404%	0%	0%	0%	0%
<i>Liquidity indicators</i>						
General liquidity ratio	4.16	0.11	0.01	1.09	0.46	0.48
Net working capital (eFt)	11,655	–8,719	–9,757	13,251	–22,505	–15,623
<i>Debt stock</i>						
Debt ratio	24%	846%	4,361%	51%	125%	96%

Source: Own editing (2021) based on the organisation's simplified annual accounts.



Table 3. Economic indicators of Szolnok Waterpolo Sport Club Kft

	2014	2015	2016	2017	2018	2019
<i>Indicators of the capital structure</i>						
Equity ratio	35%	36%	33%	32%	32%	33%
Ratio of provisions	0%	0%	0%	0%	0%	0%
Ratio of liabilities	3%	4%	9%	9%	10%	12%
Ratio of deferred income and accrued expenses	61%	59%	59%	59%	58%	55%
<i>Liquidity indicators</i>						
General liquidity ratio	5.35	3.90	1.87	1.88	2.29	1.92
Net working capital (eFt)	210,913	176,745	101,022	115,021	179,148	155,681
<i>Debt stock</i>						
Debt ratio	3%	4%	9%	9%	10%	12%
<i>Profitability indicators</i>						
ROA	18%	0.02%	−4%	0.06%	0.08%	0.07%
ROE	51%	0.06%	−13%	0.19%	0.25%	0.23%
ROS	53%	0.07%	−14%	0.25%	0.27%	0.26%

Source: Own editing (2021) based on the organisation's simplified annual accounts.

incomes and accrued expenses in the undertaking is significant. During the period examined, the liquidity of the company decreased from an extremely high value to well below the ideal value, while its net working capital turned from positive to negative (Table 4).

If this tendency also continues in the future, it may lead to long-term liquidity problems in the sports company. In accordance with the above, the level of indebtedness is also increasing, but it is not high except for 2019. The profitability indicators also show that the company had negative after-tax results in the past 3 business years, and therefore, the interpretation of the indicators is not relevant.

The examination of the capital strength of the Debrecen company demonstrates that it has long been significantly below the critical level 30%, and is in fact a negative value. This value results from the fact that the owner's equity is negative, which is generated by the continuous negative after-tax result. In addition, the proportion of liabilities is also high, so it can be concluded that the debt of the company is significant and constantly increasing, while it should also be noted that this debt is not owed to external partners, but to the parent organisation, Cívus Póló Waterpolo Sport Club.

The company does not create provisions. The amount of deferred incomes and accrued expenses is significant (Table 5).

The situation of the sports undertaking is also inadequate as regards its financial position. The overall liquidity ratio did not reach the ideal value of 1.3–1.7 in any year, and is even decreasing from year to year. On the basis of this, it is expected that the company will have liquidity problems. The persistently low negative value of the net working capital also shows that the company's financial leeway is rather limited, and it may even become insolvent.

The above is further supported by the debt ratio according to which the liabilities of the company are high. The analysis of profitability indicators is not relevant in the case of DVSE Kft., since the value of the after-tax profit is negative year after year.

4.2. Comparison of the economic characteristics of the sport organisations examined

On the basis of the asset and capital structure indicators examined separately for each sport organisation, first of all it

Table 4. Economic indicators of Eger Waterpolo Kft

	2014	2015	2016	2017	2018	2019
<i>Indicators of the capital structure</i>						
Equity ratio	14%	43%	42%	39%	4%	−12%
Ratio of provisions	0%	0%	0%	0%	0%	0%
Ratio of liabilities	4%	5%	7%	4%	10%	44%
Ratio of deferred income and accrued expenses	83%	52%	51%	57%	85%	68%
<i>Liquidity indicators</i>						
General liquidity ratio	26.71	13.79	5.74	9.88	2.00	0.28
Net working capital (eFt)	86,787	93,385	52,176	60,508	23,538	−68,162
<i>Debt stock</i>						
Debt ratio	4%	5%	7%	4%	10%	44%

Source: Own editing (2021) based on the organisation's simplified annual accounts.

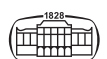


Table 5. Economic indicators of DVSE Waterpolo Kft

	2014	2015	2016	2017	2018	2019
<i>Indicators of the capital structure</i>						
Equity ratio	−64%	−149%	−305%	−668%	−732%	−290%
Ratio of provisions	0%	0%	0%	0%	0%	0%
Ratio of liabilities	84%	106%	301%	719%	758%	330%
Ratio of deferred income and accrued expenses	81%	142%	104%	49%	74%	60%
<i>Liquidity indicators</i>						
General liquidity ratio	1.19	0.94	0.22	0.08	0.08	0.22
Net working capital (eFt)	3,015	−827	−68,550	−153,840	−183,984	−188,793
<i>Debt stock</i>						
Debt ratio	84%	106%	301%	719%	758%	333%

Source: Own editing (2021) based on the organisation's simplified annual accounts.

can be concluded that the assets-related characteristics of the sports companies were similar in terms of proportions.

As can be expected in case of a sport-related activity, the fixed assets consisted predominantly – and quite often entirely – of tangible assets. The current assets of the sports companies examined consist of receivables and liquid assets, with the proportions of these showing differences only.

Similarities can also be found in terms of the companies' capital structures. One such similarity is that none of the companies creates provisions. This is due to the fact that there is fundamentally no activity or investment that would justify the creation of provisions. Another similarity is that the liabilities in each case are short-term liabilities, which means that the companies have no subordinated or long-term liabilities. Further, the high proportion of deferred incomes and accrued expenses is also apparent. This is because the financial year does not correspond to the championship season in case of any of the companies, and therefore the incomes have to be treated as deferred incomes as they are not used in full within the current year, in case of CIT (TAO) support either.

Another common characteristic feature is that the profitability indicators can only be interpreted in a few cases, as the after-tax result of the sport companies was often a negative value (loss). Even where the after-tax result was

positive, such profit was found to be relatively low in its proportions. This is due to the fact that even the maintenance of the majority of Hungarian sports companies is difficult, as they do not operate on a market basis, and therefore they hardly generate any profit or often none at all.

On the basis of Tables 1 and 2, it can be seen that FTC Waterpolo Kft. and Szolnok Waterpolo Sport Club Kft. have the largest volume of assets. Although the company in Szolnok has an outstanding high volume of fixed assets, the majority of this consists of real estate property. Further, it should also be kept in mind that in case of this club, the adult and the junior teams operate within the same organisation.

The average value (in thousand HUF) of the main assets components of the sports companies examined are shown in Table 6 for each the six financial years under review, in a breakdown according to balance sheet groups.

4.3. Analysis of the income positions

In order to analyse the income positions of the companies, we have examined the highlighted lines of the profit and loss statements: the average values of revenues, personnel-type expenses and after-tax results. In case of revenues, it can be observed that the revenue of Szolnok by far exceeds the

Table 6. Average balance sheet groups between 2014 and 2019 (in thousands of HUF)

	FTC Waterpolo Kft.	OSC Waterpolo Kft.	Szolnok Waterpolo Sport Club Kft.	Eger Waterpolo Kft.	DVSE Waterpolo Kft.	Sum.
<i>Assets</i>						
Fixed assets	146,450	11,170	1,083,813	102,056	7,416	1,350,905
Current assets	160,552	15,735	267,285	65,891	22,126	531,588
Deferred income and accrued expenses	448	306	31,926	415	975	34,070
<i>Equity and liabilities</i>						
Equity	10,966	−1,211	462,263	32,367	−113 461	390,923
Provisions	–	–	–	–	–	–
Obligations	61,097	25,827	110,863	24,519	120,956	343,261
Deferred income and accrued expenses	235,397	2,596	809,897	111,477	23,099	1,182,466

Source: Own editing (2021) based on the organisation's simplified annual accounts.



revenues of the other teams (although it should be noted that this revenue also includes HUF 100 to 130 million of CIT (TAO) support per year for the purpose of youth sports development). In addition, the revenues of FTC and Eger also stand out. Surprisingly, the revenues of OSC do not significantly exceed those of DVSE, but in recent financial years, their revenues have steadily increased.

Eger Waterpolo Kft. and FTC Waterpolo Kft. applied for the largest amount of CIT (TAO) support, but these included grants for tangible assets (real estate), for which 30% own resources were required, and these investments are carried out with ex-post funding, i.e. the organisations must have sufficient capital for them. In the case of Szolnok and Debrecen, these grants were typically pre-financed tangible assets investments in equipment, machinery and sports equipment. It is conspicuous that OSC did not make use of CIT (TAO) support until 2019, and submitted an application for a low amount of support only for the 2020/21 season.

After the examination of revenues, the next step is the comparison of personnel-type expenses. It is important to emphasise that, although the salary of professional athletes is included in this line, far-reaching conclusions cannot be drawn from these expenses. This category also includes the wages of other sports professionals, including in the case of Szolnok the wages of youth sports development professionals. The comparison can provide as an idea of the value of the squad of players, which is only a rough estimate, and not an accurate amount.

Table 7 clearly shows that FTC has the largest personnel-type expenditure, followed by Szolnok, and then by Eger, whose expenditure is less than half of the first two. The fourth one is DVSE, and then OSC with an almost identical amount.

Another interesting fact is that in 2018 FTC saw a large, almost HUF 130 million increase after the cooperation with Telekom, which increased by a further HUF 100 million in 2019. In 2019, the personnel-type expenditure of FTC Waterpolo Kft. was more than five times higher than that of DVSE in the same year. In the case of Szolnok, the amount of the expenditure was balanced in the financial years examined: it did not have any significant variation, but it somewhat continuously increased. Eger experienced a sharp increase from year to year, with a six-fold increase in the amount of staff personnel-type expenditure from 2014 to 2019. In the case of OSC, there was also a steady increase, but from 2017 to 2018, this increase was more steep, almost threefold. For DVSE, there was no outstanding increase

found, as their personnel-type expenditure was almost identical in the last four financial years, with by far the lowest value in 2019 compared to the teams examined.

At the same time, it should be noted that personnel-type expenses cover the salaries of several employees, and in order to get a more nuanced picture of the distribution of these amounts, we should also take into consideration the employee headcounts. For this purpose, I used the team data on the official websites of the clubs. This headcount is not the number of players in the tournament, but in the “permanent” squad of players. Based on the database of the Hungarian Water Polo Federation, it can be seen that the squad of Eger was the largest with 20 players, followed by DVSE which had 19 players. In the case of Eger, there were 5 players of junior age playing in the championship, while in case of DVSE there were 3. By contrast, the squads of FTC and OSC consisted of 15 players each, and Szolnok’s squad included 14 players, all of them adults. Overall, it can be concluded that, in the case of Eger and DVSE, the player’s salaries were distributed among more players.

4.4. The analysis of sport performance in case of the teams examined

Table 8 summarises the rankings achieved by the teams in recent seasons. It should be noted here that the 2019/20 season, due to the COVID-19 pandemic, was suspended in March 2020, after the first match of the middle-stage, and then closed without final results announced, and therefore, the data in the table show the points at the time of the suspension of the season.

The research was carried out before the end of the 2020/21 season, so the rankings for this season were determined on the basis of the points won in the 20th round of the regular season.

All in all, we can see that FTC finished consistently in the first place since 2017. It has an outstanding squad of players, which is indicated by the fact half of the Hungarian national team consists of players from FTC, and that the club also has excellent results in international tournaments. OSC has also had outstanding performance, with a number of players also included in the national team, but they have not been able to win the national championship recently. Another top team is Szolnok, in the seasons examined, this club of great history finished in first place most often. Szolnok has several players on the Hungarian national team, including the latter’s goalkeeper for years, as well as several players on the national

Table 7. Average revenues and personnel expenses between 2014 and 2019

	FTC Waterpolo Kft.	OSC Waterpolo Kft.	Szolnok Waterpolo Sport Club Kft.	Eger Waterpolo Kft.	DVSE Waterpolo Kft.	Sum.
Net sales	102,846	29,767	412,721	171,981	41,156	758,471
Other revenues	258,466	55,420	310,016	112,262	24,518	760,681
CIT (TAO) support	56,530	-	21,326	59,810	16,640	154,306
Personal expenses	269,435	69,217	246,550	109,719	82,531	777,452
Profit after tax	10,739	-7,647	33,668	-4,308	-35,783	-3,331

Source: Own editing (2021) based on the organisation’s simplified annual accounts.

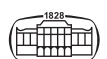


Table 8. Rankings achieved by teams

	FTC Waterpolo Kft.	OSC Waterpolo Kft.	Szolnok Waterpolo Sport Club Kft.	Eger Waterpolo Kft.	DVSE Waterpolo Kft.
2014/2015	4	2	1	3	10
2015/2016	4	3	1	2	9
2016/2017	4	3	1	2	11
2017/2018	1	4	2	3	8
2018/2019	1	2	3	4	8
2019/2020	1	2	3	4	15
2020/2021	3	2	1	7	14

Source: Own editing (2021) based on the results in the MVLSZ database (downloaded: 03/04/2021).

teams of other countries. Eger is also a team of significant history and traditions. In recent years, they always finished the championship in or near the top 3 positions. Eger also has several players on the Hungarian national team, and they are also proud of building heavily on their own junior players. DVSE is fundamentally a middle-ranking team in the championship, and it does not have players on the national team, but it builds heavily on its junior base of players and those developed by themselves. In this generally young team, junior players are also given an opportunity to make an appearance in the first division, but at the same time the team is not able to achieve outstanding results.

Ultimately, a comparison with the successes of the junior teams does not show a close link with the performance of the teams in the OB I championship. Several players on junior national teams of different age groups are playing in the teams of Eger and Debrecen, and among the teams outside of Budapest they have outstanding junior development programmes, on which they also build in the adult teams, but in the junior championships they usually finish in the middle ranks. In the case of Szolnok, we can see similar results: overall they have middle-ranking junior teams. The junior teams of OSC are lagging behind the other clubs: there were several seasons where they did not play in the championship or finished the season without any results. FTC is a club from Budapest where the teams are closest to the top 3 positions, also in the junior championships. Overall, however, we can conclude that the best junior teams are those of KSI, BVSC-Zugló and UVSE, whose adult teams mostly finish in the middle range of the championship, just like DVSE. In addition to the fact that there is no close correlation between the results of the first division and junior teams, we can also conclude that the CIT (TAO) supports are used according to their main purpose, namely for financing of youth sports development. For this purpose, the majority of the teams in the national championship receive HUF 200–300 million per season, which ensures their smooth operation and participation in the championships.

5. DISCUSSION

Based on the above, it is clear that there is a difference of scales between the top teams and the mid-ranking team, not only in terms of results, but also in their financial situations.

In addition to this striking difference, it can also be seen that none of the teams are profit-oriented, and with the exception of FTC their profitability is close to zero, and in many cases they in fact produce negative tax results. This allows us to conclude that, on the one hand, their fixed assets are of higher combined value, and they also have more liquid assets through their revenues; at the same time, they also use up these from year to year to the maximum extent. As result, the best teams are able to compete in better conditions, both in terms of infrastructure and financially. Teams are able to prepare, train, travel and participate in domestic matches more comfortably, or in case of injuries, they have the possibility for more expensive and more efficient treatments. Furthermore, what is also quite important, these teams also have the possibility to sign more experienced, but at the same time also more expensive players, as also reflected in the related cost items.

However, it can also be concluded that the financial management of the professional teams is not significantly affected by CIT (TAO) support. Although it helps in their operations, and the majority of organisations use this support for purchasing tangible assets, but it does not play a decisive role. Among the teams examined, the CIT (TAO) support received was used for immovable property investments in two cases; however, such transactions, also presuppose large amounts of own resources. Revenues from other sources are fundamentally predominant.

CIT (TAO) support is fundamentally important in the field of youth sports development. While professional sports in Hungary build on the development of junior players, there is still no clear link between the successfulness of the adult and the junior teams. The first-division teams of the clubs providing the best junior players are frequently mid-ranking or occasionally among the weakest teams in the national championship. At the same time, the best adult teams can easily sign young players, and the cost of their development also does not cause problems, and the young players can be integrated in to the professional team for further development.

On the basis of these factors, it can undoubtedly be concluded that, in addition to appropriate professional decisions, it is the economic situation of a club that has a clear impact on their effectiveness; in other words, up to a certain point, the more disposable funds and wider range of assets a sports company has, the more effectively it can prepare and



the better results it will have in the various domestic and international championships and tournaments.

As Hungarian sports financing also shows the elements of the European sport model, there is no salary cap in Hungary as opposed to the American model, so there is no limit on the remuneration of a player or a full club team. As a result, there are huge differences between the teams in a championship. This difference increases over time, as larger sponsors and supporters primarily invest in successful teams and are more willing to cooperate with these.

This trend is not beneficial in the long term, as the uncertain outcome is greatly compromised due to the fact that there are several matches in a championship where it is not a question which team will win even before the players jump into the water. Moreover, with the change in the organisation of the championship, namely that it only consists of the regular season and the play-off (each team playing a home and away match with each other team), the number of matches that do not hold any particular excitement in terms of their outcome further increases, in comparison with the earlier regular season – middle stage – play-offs format.

Although water polo is considered in Hungary as a national sport, since both the clubs and the national team are among the top of the world, the audience of the sport is still small. In general we can say that people almost only follow Hungarian water polo during the Olympic games and other international events of high media attention. If a part of the matches are fully one-sided and predictable, this will further decrease the attention of the audiences.

The professional staff of the Hungarian Water Polo Federation is continuously striving to make the sport interesting, exciting and faster with various changes to the rules – in line, of course, with the international rules – but the balance between the strengths of the teams is still greatly distorted. In addition to such modifications, it would be reasonable to introduce a set of rules on the squads of players, which idea has been suggested on multiple occasions, but was always discarded. Such rules could include setting a maximum number of foreign players allowed on each team, as well as limiting how many members of the national team each club can sign.

6. CONCLUSIONS

By way of summary, we can say that there are many similarities, but also a few major differences between the structures of the water polo clubs examined. It is a similarity that they all work as sports companies; at the same time, the assets at the disposal of a top team, and especially within that the size of the liquid assets, can be several times as much as a middle-ranking team has. The research also showed that CIT (TAO) support, on the basis of its main purpose, is indispensable for youth sports development; however, its role in case of professional clubs is not significant, since the majority of their revenues comes from sponsorship and other forms of support. It was also observed that there is no close correlation between the results of the junior and the

first-division teams, as the first-division teams of the clubs providing the best junior players are frequently in the mid-range or occasionally among the weakest teams in the national championship.

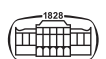
Therefore, we can conclude that there is a close link between the sport results of a team and its economic background; namely, the stronger the economic background is, the more successful the given team is in national and international championships and tournaments, provided that the appropriate professional decisions are also made. At the same time, this raises further questions about the potential for economic growth in the long term, since apart from the fact that some teams are extremely successful, the outcome of many matches becomes quite predictable. Based on these, the uncertainty of the outcome is compromised, and the championship becomes less exciting and also loses some of its audience.

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