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Value Creation of Knowledge-intensive Companies

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Ph.D. dissertation

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“A sötét hófehér, az érték mennyi ér?”
(dark is snow white, how much is value worth?)
Endre Paksi

Introduction

Knowledge-intensive companies and especially professional sport businesses are in the focus of my dissertation. Different roots contributed to the selection of this topic. I began my research career in the early 2000's with knowledge management, which was just emerging in Hungary with the slogans of information or knowledge-based society. The interest of the knowledge-based approach was born then. The viewpoint of my dissertation is basically the strategic researchers' viewpoint; I observe the enterprise with strategic orientation and the theoretical and practical concepts through the lenses of the strategic researcher. The roots in sport had a more personal motivation as I played in all relevant levels of the Hungarian championship as a sportsman. Actuality also contributed in the selection, as sports – as a forum of co-creation and value networks – are going to become more actual topic in the near future. Furthermore the Hungarian sport life began to raise from its crisis nowadays so the motivation and the actuality can support each other.

The concept of the knowledge-intensive economy began to evolve in the international literature in the early 1990's, which could not be blown even by the bursting of the dot.com bubble. The credit crunch and its following economic crises also could not hit mortal wounds to the knowledge-based economy and nowadays we are nearing a community-based experience economy, where co-creation can open new dimensions in the life of throng of companies.

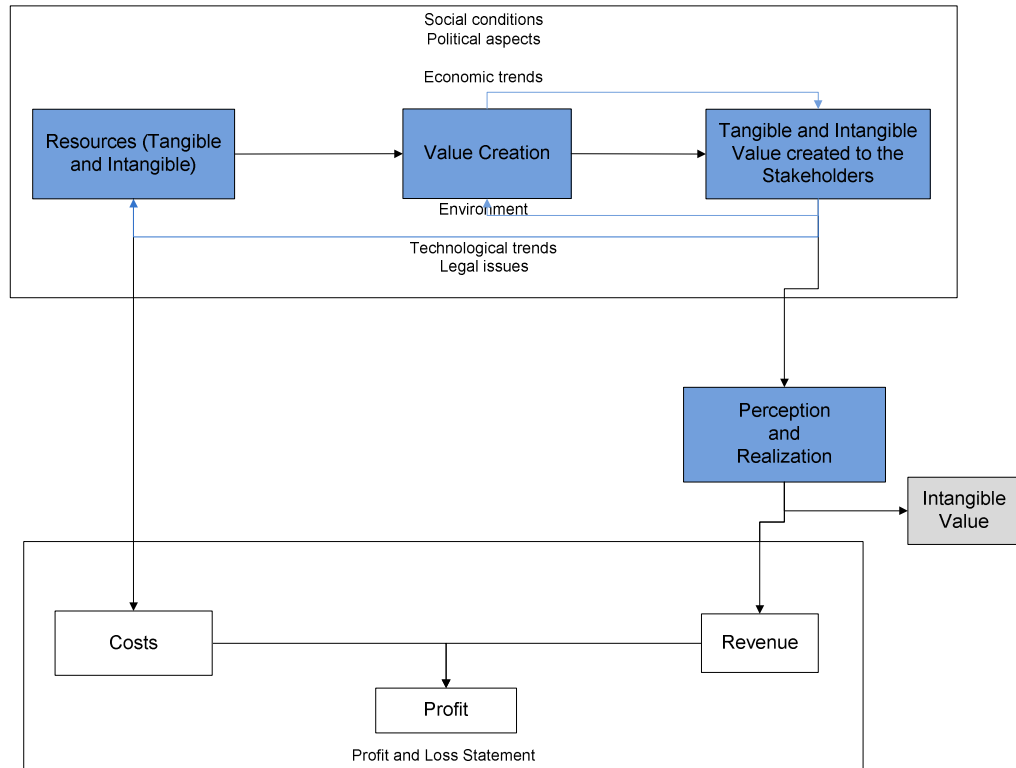
The knowledge-intensive economy raised the attention of the formerly neglected resources, like relationship capital resources, organizational capital resources and human capital resources, which will be called together as intangible resources in my dissertation. During my research in knowledge management I realized that professional sport companies are knowledge-intensive companies and so the scientific interest and the active hobby could be woven together amplified with value networks and co-creation.

From knowledge-intensive companies I narrow on to the professional sport businesses to examine their value creation process, how it works and within what nexus it could be explained the best. I examine the different kinds of value created by

these businesses to their stakeholders and the resources from which the value was created in their value creation process. I established a research model to the analysis and its simplified version (the so-called business model) can be seen in figure 1.

Figure 1.: The business model

source: own source



The business model will be analyzed in the designed scope of companies so in the beginning of the thesis I define the knowledge-intensive companies and from them I select the professional Hungarian sport businesses.

The logic of the thesis follows the logic of the business model, first I examine the sources of value creation, namely the tangible and intangible resources then I demonstrate the features of the created value and the types of the value creation process, which will be followed by the stakeholders who receive the value. After this I propose my exact research question and hypothesis.

The proposed business model is the simplified version of the research model and its sections will be developed in the given chapters of the thesis proposal to get completed to the empirical part of the research. The logic behind the model is the following: companies embedded into their environment are satisfying their

stakeholders' needs. Stakeholder is "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Freeman [1984] p.52). Knowledge-intensive companies and professional sport businesses are operating in the nexus of many stakeholders. Consciously or unconsciously these companies are satisfying the needs of some important stakeholders i.e.: creating value to them.

Value is the utility or desirability of something in conditions of given scarcity. In this meaning value can be money, product, service, experience, relationship, motivation etc. Value is created in the value creation process, which can have several configurations. The value configuration can be a value chain, which is usual for manufacturing companies, a value shop, which is usual for companies providing customized services, or a value network, which is usual for companies offering infrastructure to consumers satisfying their needs. Infrastructure can be understood literally and abstractly as well, as communication providers and banks are value networks, but social network providers or professional sport businesses as well. In the 21st century the customer needs and the economic performance shifted in the direction of the experience economy where the co-creation of experiences should pervade the value creation processes. In co-creation the consumers are creating their own experiences (Prahalad – Ramaswamy [2004]) thus the value is not created solely by the company rather it is created by the network of the company and its interacting stakeholders.

Tangible and *intangible resources* are the sources of the value creation processes. We will handle the intangible resources with emphasis as their role was significantly strengthened from the 1990s. Practically these intangible resources differentiate the knowledge-intensive companies from the non knowledge-intensive ones. As we can only name those companies knowledge-intensive which base their value creation processes onto relationship capital resources, organizational capital resources or human capital resources, like the professional sport businesses in focus.

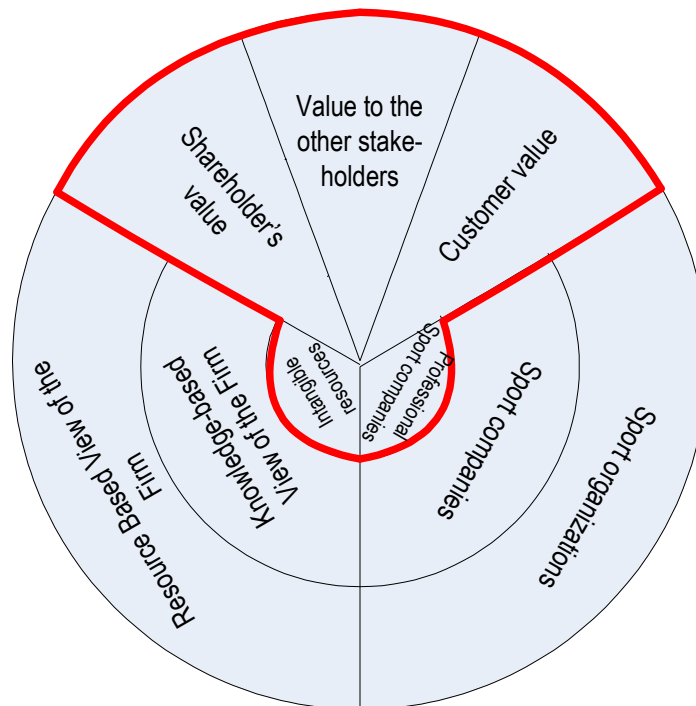
The logic of value creation should be extended with its *business valuation*. The created value should be perceived by the various stakeholders and its offset should be *realized and monetized* by the companies. The non-monetized value will flow into the environment as intangible value or can be the base of future revenue or cost

reduction. Revenues will be derived from the monetized value. In contrast with the revenues are the costs of the tangible and intangible resources deployed in the value creation processes. If we count the revenues and the costs we will get one of the categories of earnings. If the earnings of the company is positive in the long run the company is viable, but companies with losses in the long run will go either to bankruptcy or their equity providers will subtract their equity.

The *theoretical concepts of the dissertation* can be seen in figure 2. The focus of the thesis is the shape marked with red. The first dimension of the theoretical concepts is in connection with the activity of the organizations in focus. In Hungary there are several organizations with sport of their main activity. There is much less sport businesses and the professional sport businesses in focus are the narrowest category.

Figure 2.: Theoretical concepts of the dissertation

Source: Own source



The second dimension of the theoretical concepts is the target of value creation in focus. Most theories tackle value creation in the perspective of shareholder value, there are also significant literature where the shareholder value and the consumer value are equally important. In my dissertation beyond the shareholder and consumer value I target the value created for sportsmen and other relevant stakeholders as well.

Defining the relevant stakeholders in this logic is crucial and this restriction had to be integrated into my thesis as there could be abstract stakeholders as the next generations the handling of which is beyond my dissertation. According to this the empirical part's third research question is: who are the relevant stakeholders of professional Hungarian sport businesses? Although sport businesses could create value to almost the complete set of stakeholders, but in the empirical part I will focus on nowadays' practice.

The third dimension of theoretical concepts is connected with the resources applied by the companies. The resource based views of the firm is the starting point, but I will use its further developed version the knowledge based view with a strong emphasis on the intangible resources as these are the elements determining whether a business is knowledge-intensive or not and with the help of this resources are we able to better understand the knowledge-intensive professional sport businesses.

Naturally significant research is done in the aforementioned theoretical concepts by several authors, but because of the specialties of the chosen topics I will focus on the research approaches overlapping the concerned theoretical concepts in the summary of existing research. As there is not known research in the exact focus of my dissertation I have to dissolve some restrictions.

I. Former research covering the interconnection of stakeholder value and resources:

I.1 Neely, Andy – Adams, Chris – Kennerly, Mike [2003]: The Performance Prism, The Scorecard for Measuring and Managing Business Success. Pearson Education Limited, UK, 2003

II. Former researches covering the relationship of value creation and resources:

II.1 Amit, Raphael – Shoemaker, Paul J. [1993]: Strategic Assets and Organizational Rent. In: Strategic Management Journal, Vol. 14, 33-46, 1993

II.2 Riahi-Belkaoui, Ahmed [2003]: Intellectual capital and firm performance of US multinational firms In: Journal of Intellectual Capital, Vol. 4 2003 p. 215-226

II.3 Cuganesan Suresh [2005]: Intellectual capital-in-action and value creation. A case study of knowledge transformations in an innovation

project. In: Journal of Intellectual Capital, Vol 6. No.3, 2005 p. 357-373

II.4 Nazari, Jamal A. – Herremans, Irene M. [2007]: Extended VAIC model: measuring intellectual capital components firms. In: Journal of Intellectual Capital, Vol 8, p. 595-609

II.5 Allee, Verna [2008]: Value Network Analysis and value conversion of tangible and intangible assets. In: Journal of Intellectual Capital, Vol. 9, No. 1, 2008, p. 5-24

II.6 Laing, Gregory – Dunn, Jillian – Hughes-Lucas, Susan [2010]: Applying the VAIC model to Australian hotels. In: Journal of Intellectual Capital, Vol. 11 p. 269-283

II.7 Díez, Maria Jose – Ochoa, Magda Lizet – Prieto, M. Begona – Santidrián, Alicia [2010]: Intellectual capital and value creation in Spanish firms. In: Journal of Intellectual Capital, Vol. 11, 2010, p.348-367

III. Former researches covering the resource based view in the field of sport:

III.1 Amis, John – Pant, Narayan – Slack, Trevor [1997]: Achieving a sustainable competitive advantage a resource based view of sport sponsorship. In: Journal of Sport Management, 1997 p.80-96

III.2 Sparvero, Emily – Chalip, Laurence [2007]: Professional Teams as Leverageable Assets: Strategic Creation of Community Value. In: Sport Management Review, 2007, 10, p. 1–30

III.3 Woolf, Jules [2008]: Competitive Advantage in the Health and Fitness Industry: Developing Service Bundles. In: Sport Management Review, 2008, 11, 51–75

III.4 Ferkins, Lesley – Shilbury, David [2010]: Developing board strategic capability in sport organisations: The national–regional governing relationship. In: Sport Management Review 13 (2010) 235–254

III.5 Wicker, Pamela – Breuer, Christoph [2010]: Scarcity of resources in German non-profit sport clubs. In: Sport Management Review Article in press

IV. Former researches covering professional Hungarian sport businesses:

- IV.1 András Krisztina [2003]: Üzleti elemek a sportban, a labdarúgás példáján. Ph.D. értekezés, Budapesti Közgazdaságtudományi és Államigazgatási Egyetem Gazdálkodástani Doktori Iskola, Budapest (Business elements in sport with the example of football)
- IV.2 András Krisztina [2004]: A hivatásos labdarúgás piacai. 53. sz. műhelytanulmány, BKÁE, Vállalatgazdaságtan Intézet. (Markets of professional football)
- IV.3 Berkes, P. – Nyerges, M. [2004]: A labdarúgás menedzselésének főbb elvei a szponzorálás tükrében. Kalokagathia. 1-2: 180-188. p. (Main principles of managing football in the view of sponsorships)
- IV.4 Nyerges Mihály – Petróczi Andrea [2007]: Sportmenedzsment alapjai. SOTE TF, Budapest. (Introduction to sportmanagement)
- IV.5 Hoffmann Istvánné [2007]: Sport, marketing, szponzorálás. Akadémia kiadó, Budapest. (Sport, marketing, sponsorship)

In my dissertation the following *research questions* and *hypotheses* are addressed in the research:

1. What are the economic features of professional Hungarian sport businesses?
 - H1: Professional Hungarian sport businesses are homogeneous according to their most important business data.
 - H2: The long-term profitability of professional Hungarian sport businesses is possible.
 - H3: Professional Hungarian sport businesses create significant intangible value.
2. Is there significant correlation between sporting success and economic success of professional Hungarian sport businesses?
 - H4: There is strong, significant correlation between sport success and economic success of professional Hungarian sport businesses.
 - H5: There is strong, significant correlation between players' value and sport success of professional Hungarian sport businesses.

- H6: There is no relationship between sport success and subsidized revenues of professional Hungarian sport businesses.
 - H7: There is strong, significant correlation between sport success and the total revenues and the material and personnel expenses of professional Hungarian sport businesses.
3. Who are the relevant stakeholders of professional Hungarian sport businesses?
 4. What are the characteristics of the value creation process of professional Hungarian sport businesses?
 5. What kind of resources is deployed by professional Hungarian sport businesses?

In the empirical part of the dissertation I develop the research questions and answer them. According to the *first research question* I prove that the professional Hungarian sport businesses are homogenous according to their most important business data. In contrast with the beginning of the 2000's I prove that in the research period the long-term profitability is possible and I also prove that professional Hungarian sport businesses create significant intangible value.

In the case of the second research question I demonstrate the relationships between sport and economic success. The previous year's sport results are the strongest factor in correlation with sport results. The strong, significant relationship between sport success and economic success will be rejected, as well as the strong, significant relationship between players' value and sport success. I will prove that other revenues and extraordinary revenues are independent of sport success. And I can not prove nor falsify the seventh hypothesis (strong, significant correlation between sport success and the total revenues and the material and personnel expenses) because of the strong correlation of the explanatory variables.

According to the *third research question* I will prove that relevant stakeholders of the professional Hungarian sport businesses are sportsmen, players, owners, sponsors,

advertisers, media, local governments, federations, state, managers and other employees. However because of low functioning of the consumer market's local segment and the merchandising market, the involved consumer (who consumes on the location or buys branded products) is missing from the relevant stakeholders.

In the case of the *fourth research question* I could not find any objective proof that professional Hungarian sport businesses would operate as value networks, but interestingly the championship operated by the federation is a value network. Nevertheless by this research question I demonstrate the features of the professional sport businesses' value creation process.

According to the fifth research question I demonstrate the resources deployed by the professional Hungarian sport businesses. The tangible resources will be extensively examined with balance sheet data, while the amount of intangible resources will be estimated based on factual data. Last I will configure Sveiby's extended balance sheet from the average data of professional Hungarian sport businesses.

1. Firm, Knowledge-intensive Firm, Professional Sport Business

1.1 Firm

According to Chikán, “the business enterprise is a human activity with the main purpose to satisfy customer needs at profit. The firm is the organizational framework of a business enterprise: in modern societies, a structure, which is defined by law, where activities are performed to achieve the main purpose.” (Chikán [2003] p. 24)

My dissertation focuses only on firms with general characteristics. Unique features can only be discussed after achieving a full understanding of this 'classic' business model. In this paper, a business enterprise which is designed to meet the needs of both shareholders and customers and where the profit can be used freely (e.g. even to pay dividends or finance new investments, etc.) will be considered as a classic firm.

Non-profit organizations are not discussed in my thesis since they do not include profit realization or shareholders value in their main purpose thus profit expectation of shareholders are not prevailed. Non-profit organizations (e.g. state institutions, associations, foundations) are not included in my dissertation. Many sport organizations operate in the non-profit sector as sport associations, but our purpose does not include the examination of these firms since their shareholders' goal alignment is not in accordance with 'classic' corporate objectives.

There are several methodologies to classify firms in groups, which I will not demonstrate but I will focus on the business unit, i.e. the business enterprise and its competitive strategy. There are many big companies with several business units and however their corporate strategy plays a key role in their success, it is not discussed in this paper. Hence, the focus of examination are business enterprises with discrete customers, competitors and competitive strategy which are designed to use their profits freely and where the goal of profit realization is interpreted as return expectation of the firm's shareholders on their capital investments.

1.2 Knowledge-intensive Firm

According to Grant, “the resource-based view perceives the firm as a unique bundle of idiosyncratic resources and capabilities where the primary task of management is to maximize value through the optimal deployment of existing resources and capabilities, while developing the firm’s resource base for the future.” (Grant [1996] p. 110)

The most recent, dynamic approach of the resource-based view of the firm the knowledge-based view will be in the focus of my dissertation. Thinkers of the knowledge-based view of the firm tend to apply a knowledge-based approach to discuss resources which create competitive advantage, as follows:

“Since the origin of all tangible resources lies outside the firm, it follows that competitive advantage is more likely to arise from the intangible firm-specific knowledge which enables it to add value to the incoming factors of production in a relatively unique manner.” (Spender [1996] p. 46)

As the latest stream of the resource-based view of the firm shows, based on the knowledge-based theory, a firm’s underlying resources are primarily knowledge-based resources.

This trend has been developed as a result of globalization and the widespread use of the Internet. These aforesaid factors had created a new competitive environment for organizations; this dynamic competitive environment of 1980s became more turbulent by the 1990s. Companies, to address this turbulent competitive environment, endeavored to better satisfy customer needs and differentiated their products and services by integrating more embedded knowledge into their solutions. As products and services started to become increasingly knowledge intensive, i.e. knowledge intensive sectors emerged and expanded, such as business consulting, financial services, info communication, pharmaceuticals and other service industries. In addition to this, capital intensive industries started to apply more and more knowledge and emphasized organizational learning. Since then, this knowledge

intensive approach has been dominating – in spite of the dot-com bubble and the financial crisis.

Many definitions have been created about knowledge intensive organizations and businesses by several thinkers (Drucker [1988], Sveiby [1999], Zack [2003], Wu et al. [2008], Stocker [2010]). These definitions generally have something in common: only one characteristic of a knowledge intensive firm is emphasized.

According to the above authors, knowledge intensive firms are mission driven businesses and their value creation:

- is fundamentally based on intangible resources,
- mainly authorized specialists are involved in these processes
- who transform their own knowledge and other resources into intellectual assets
- in the rapidly changing competitive environment. (Drucker [1988], Sveiby [1999], Zack [2003], Wu et al. [2008], Stocker [2010])

In my opinion, this definition contains only one necessary and sufficient condition: the value creation of a knowledge intensive firm is fundamentally based on intangible resources (relationship capital resources, organizational capital resources and human capital resources), the rest of the definition are their characteristics.

Knowledge intensive firms can be divided along their knowledge management strategies into two groups: knowledge intensive firms with either personalization or codification strategy. Knowledge intensive firms with personalization strategy – in their value creation processes – personalize their solutions in accordance with individual needs of a customer, while solutions of knowledge intensive firms with codification strategy are highly standardized and repetitive. For national economies, of course, both types of knowledge intensive firms are equally important, however, companies with personalization strategy are pioneering in their sector due to their continuous innovative development.

1.3 From Sport Companies to Professional Sport Businesses

This paper focuses on professional sport businesses within the set of knowledge intensive firms. As András states, “sport companies are firms designed to satisfy customer needs at profit in the sports industry.” (András [2002] in András [2003] p. 14)

In accordance with the Act I of 2004 on Sports “Sport businesses shall refer to business companies the core activity of which is sports activity – under Act CXLV of 1997 on the Register of Companies, Public Company Information and Court Registration Proceedings – with the aim of organizing sports activities and establishing the conditions for sports activities in one or more branches of sport.” (Act I of 2004 on Sports)

Sport companies and sport businesses can be divided into two groups: leisure and professional sport businesses.

Leisure sport businesses are not discussed in this paper since they cannot be regarded as classic firms from our perspective. However, leisure sport activities have essential effects on economy through health benefits, although, members of leisure sport businesses – in the value creation process – usually do not do any sport activities, these organizations only establish the conditions for sport activities. At the same time, leisure sport businesses are service provider companies which are rather capital intensive than knowledge intensive firms (e.g. fitness centers, wellness centers, leisure sports centers, etc.). Although, trainers and coaches may do sport activities while providing services, but professional athletes or those who are involved directly in sports activities are only an insignificant part of internal stakeholders.

According to the Act on Sports, professional athletes are “competitors engaged in sports activities as an occupation, with a view to earning income.” (Act I of 2004 on Sports)

Thus, those business companies will be considered as **professional sport businesses** which **employ professional athletes, engaged in sports activities as an occupation, and are designed to satisfy customer needs at profit.** Employment of professional athletes is an important condition of making a comparison with classic firms since employees of these firms create values in exchange for their salary. In Hungary, however, professional sport businesses are in quite a specific situation. Many professional athletes are suppliers and not employees of the firm, and their private enterprise issues invoices on behalf of them. Although, the number of these cases has been significantly reduced by addressing fake contracts, but they are still present in Hungarian professional sport businesses. But even these athletes play the role of an employee thus – regardless of their legal status – they will be considered as employees, and during the analysis of the suppliers of professional sport businesses they will be taken into account in a different category.

Professional sport businesses are knowledge intensive firms; they meet all the necessary and sufficient conditions of the definition and have all the typical characteristics:

1. Professional sport businesses are *mission driven*: most companies articulate this fact explicitly, but even if it is not emphasized, their implicit mission is still the development of sport activities and pursuing sports;
2. *Value creation is fundamentally based on intangible resources*: athletes engage in direct value creation and they – in case of sufficient infrastructure – only need to use their tacit knowledge to perform sports achievements, often in teams;
3. *Mainly authorized specialists are involved in value creation processes*: it is obvious, that professional athletes are the specialists of their discipline. Furthermore, during their sports activities they have extensive authorization since they have to make decisions in every second of a competition or a match. However, there is the question to what extent are these organizations managed and coordinated by specialists, and, during their activities, to what extent are these specialists authorized;
4. *Transform their own knowledge and other resources into intellectual assets*: although, this condition is quite abstract, athletes transform their tacit knowledge into sports achievements and customer experience during their

sports performance, but, at the same time, other resources are required, such as sports ground, equipment, team performance or reputation.

5. *In a rapidly changing competitive environment:* if we examine professional sport businesses by proper means, we can conclude that customer needs are met in an environment where the competition is highly intensive and rapidly changing. Many other firms (other sports, cinemas, televisions, theatres, pubs, concerts, etc.) compete for the time of a sports fan (since sports fans have to participate in the consumption process) while other contents compete for the broadcasting time, and other organizations compete for the support of the state or sponsors, and these organizations' position changes rapidly, continuously and to a great extent.

Professional sport businesses have unique features. These firms apply a *dual goal system* and do their marketing activities in special markets. András demonstrates through the example of professional football that success is measured in two dimensions: sports achievements are measured by the results of competitions and business success is measured by financial results. (András [2004]) We can state the same for other professional sport businesses since the dual goal system is not dependent on the specific branch of sport or its successfulness but it depends on the attributes of the sport and the shareholders' profit requirements. One of the research questions of this paper intends to reveal whether there is a strong stochastic connection between sports achievements and business success of Hungarian professional sport businesses.

According to András, the following *markets* of professional football shall be examined: consumer market, player market, broadcasting rights market, sports sponsor market and merchandising market. Sport consumers are present – personally or via mass media – on the consumer market, teams 'purchase' their players on the player market, broadcasters buy their rights on the broadcasting rights market, and sponsors¹ appear on the sports sponsor market and other consumers on the merchandising market. Intermediaries may be present between sports organizations and their consumers – but it is not general. (András [2004]) These market concepts

¹ mainly companies with marketing purposes and local governments

can be applied to other professional sports, although, in the Hungarian player market no fee has to be paid when acquiring a player, the free player transfer model dominates. But, of course, there are some exceptions.

We can think of professional sport businesses as they take place in two dimensions that we have discussed in the previous two sections, as Figure 3 shows.

Figure 3.: Companies in the focus of this study

Source: Own figure

Activity of the firm		Firm		
		Not sport related	Leisure sport business	Professional sport business
Knowledge-intensity				
Not knowledge-intensive firm				
Knowledge-intensive firm	Codification strategy			
	Personalization strategy			

We can conclude – based on the above definition – that each professional sport business is a knowledge intensive firm, i.e. the set of non-knowledge-intensive professional sport businesses is a null set. It is, however, an interesting fact that it is hard to make a distinction on the basis of the firm's knowledge management strategy; since all professional sport businesses apply several repetitive, codified elements (such as trainings or basic tactics) which are complemented by many essential, innovative and personalized elements (such as matches or outstanding individual performance during matches). Moreover, it is common in team sports that the individual performance of a world class player, who delivers innovative solutions, is complemented by the support of the team. Probably, rather personalization is the dominant strategy.

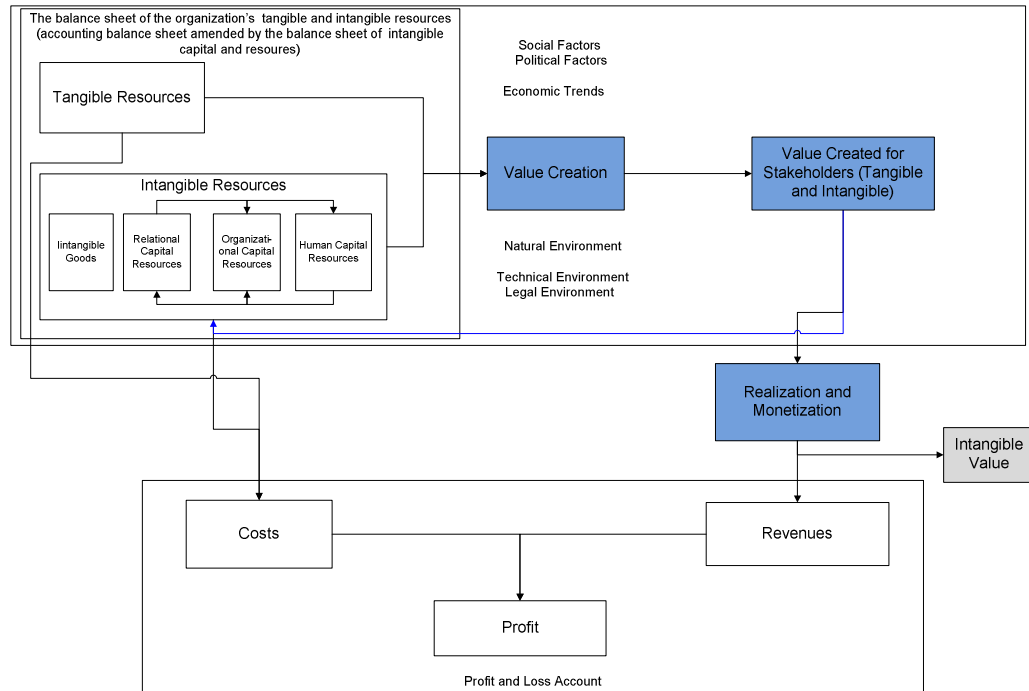
As we have specified the type of firms we are to study in this research, we will examine tangible and intangible resources which are deployed during their operations.

2. Tangible and Intangible Resources

In this chapter, tangible and intangible resources in the business model will be discussed which are deployed during value creation (see Figure 4).

Figure 4.: Resources in the business model

Source: Own figure



2.1 Resource-Based View of the Firm

Resource-based view of the firm is fundamentally based on Penrose's work „The theory of the Growth of the Firm” [1959], although, Wernerfelt [1984] and Barney [1991] had to rediscover this topic to start arguments among other theorists (Rumelt, Grant, Spender, Kogut, Kogut-Zander, Priem-Butler, Helfat-Peteraf, Collis-Montgomery, Teece, Teece-Pisano-Shuen, Miller-Shamsie, Hunt, Bush-Artz, Mesquita-Anand-Brush, Bowman-Ambrosini and many others) who had criticized, matured and developed new directions of this theory.

2.1.1 Definition of Firm Resources

The resource-based view of the firm is, obviously, based on the concept of firm resources, which have been widely defined by the scientific literature.

According to Wernerfelt, “for the firm, resources and products are two sides of the same coin.” (Wernerfelt [1984] p. 171) “By a resource is meant anything which could be thought of as a strength or a weakness of a given firm. More formally, a firm's resources at a given time could be defined as those (tangible and intangible) assets which are tied semipermanently to the firm.” (Caves [1980] in Wernerfelt [1984] p. 172)

“Examples of resource are: brand names, in-house knowledge of technology, employment of skilled personnel, trade contacts, machinery, efficient procedures, capital, etc.” (Wernerfelt [1984] p. 172).

Based on Daft, Barney defines firm resources as “all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc., controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness.” (Daft [1983] in Barney [1991] p. 101)

Barney claims – based on the achievements of Learned, Christensen, Andrews and Guth (members of the well-known Harvard Business School Research Group) and Porter – that “in the language of traditional strategic analysis, firm resources are strengths that firms can use to conceive of and implement their strategies.” (Learned, Christensen, Andrews & Guth, 1969; Porter 1981 in Barney [1991] p.101)

Grant states that “resources are inputs into the production process – they are the basic units of analysis. The individual resources of the firm include items of capital equipment, skills of individual employees, patents, brand names, finance, and so on.” (Grant [1991] p.118 and Grant [2008] p.15)

Helfat and Peteraf claims that “a resource refers to an asset or input to production (tangible or intangible) that an organization owns, controls, or has access to on a semi-permanent basis.” (Helfat-Peteraf [2003] p. 999)

According to Teece and colleagues “resources are firm-specific assets that are difficult if not impossible to imitate.” (Teece et al. [1997] p. 516)

An interesting fact, that several authors (including Collis-Montgomery [1995] and Bowman-Ambrosini [2003]) have not made an effort to define resources. They seem to be satisfied with that resources define themselves or they may think that there is no importance of defining resources at all.

In this paper, Daft's definition – applied by Barney – will be used to define firm resources.

2.1.2 Classification of Resources

Figure 5 shows the different classifications of firm resources from different authors.

Figure 5.: Classification of resources

Source: own figure

Researchers	Resources of the Firm					
Penrose [1959]	Physical resources			Human capital resources		
Barney [1991]	Physical capital resources		Organizational capital resources		Human capital resources	
Balaton - Tari [2007]	Tangible assets		Organizational capital		Human capital	
Bartek-Lesi - Gáspár [2007]	Physical assets	Financial assets	Immaterial assets		Organizational capital	Human resources
Hofer - Schendel [1978], Grant [1991]	Physical resources	Financial resources	Technological resources	Reputation	Organizational resources	Human resources

Physical capital resources include corporate property, factories, buildings, machinery, equipment, raw materials, inventories, financial assets, geographical location of the firm and its access to raw material. *Human capital resources* include qualification, expertise, experience, judgment, intelligence, motivation, connections, cooperative and communication skills, flexibility and sense of employees and management. *Organizational capital resources* include formal reporting system, hierarchical structure, reputation, formal and informal planning, task allocation, controlling and coordination systems, technology, processes, procedures, patents, team and partner relationships, brand names and customer databases of the firm. (Barney [1991], Balaton-Tari [2007], Bartek-Lesi - Gáspár [2007])

According to Collis - Montgomery, “the resource-based view of the firm sees companies as very different collections of physical and intangible assets and capabilities. No two companies are alike because no two companies have had the same set of experiences, acquired the same assets and skills, or built the same organizational cultures.” (Collis – Montgomery [1995] p.119)

Although, different classifications have several similar attributes, but there is a basic common assumption that relies on the boundaries of resources. If we take into consideration any of these classifications, firms' resource base clearly seems to consist of disjoint elements. Researchers (such as Cuganeshan [2005], Boda-Lorincz-Szlavik [2008], Juhász [2010]) have recently tended to think that this assumption of disjoint resources is incorrect, there are rather overlaps and interrelations between resources, as it will be presented in the section of intangible resources.

2.1.3 Core or Distinctive Capabilities or Competences

According to Leonard-Barton, "Capabilities are considered core if they differentiate a company strategically." (Leonard-Barton [1992] p.111)

There are many widespread idioms to express core capabilities, such as distinctive competences, core and corporate competences, organization-specific competences, resource deployment, or invisible assets. (Snow - Hrebiniak [1980], Hitt - Ireland [1985], Prahalad - Hamel [1990], Hayes - Wheelwright - Clark [1988], Pavitt [1991], Hofer - Schendel [1978], Itami - Roehl [1987] in Leonard-Barton [1992])

Leonard-Barton defines "core capability as the knowledge set that distinguishes and provides a competitive advantage. There are four dimensions to this knowledge set. Its content is embodied in *employee knowledge and skills* and embedded in *technical systems*. The processes of knowledge creation and control are guided by *managerial systems*. The fourth dimension is the *values and norms* associated with the various types of embodied and embedded knowledge and with the processes of knowledge creation and control." (Leonard-Barton [1992] p.113)

The value of core capabilities can be increased by means of complementary assets. To analyze core capabilities, it is not enough to analyze internal operations of the firm since distinctive competences are dependent on the extent to which a firm is able to exploit these resources compared to its competitors and how complicated is to imitate these resources by competitors. (Teece et al. [1997], Collis – Montgomery [1995])

Eventually, based on different definitions of different authors, we can state that core or distinctive capabilities or competences are those capabilities at which a firm is outstandingly good (Andrews [1987] in Teece et al. [1997]), which differentiate a company strategically and provide competitive advantage (Leonard-Barton [1992]), determine the core business and are key factors of business success (Teece et al. [1997]). Hence, based on Barney's definition, these competences can be regarded as resources, thus, core or distinctive capabilities or competences will be considered as firm resources. This definition is in accordance with the definition of Teece et al. when they state that “competences and capabilities are intriguing assets as they typically must be built because they cannot be bought.” (Teece et al [1997] p. 518)

Their distinctive nature relies on the fact that these resources cannot be purchased – if these competences could be bought on the market they were basic requirements or qualifying criteria to enter the competition. However, it is possible that components of these capabilities might be purchased at the market, but, in this case, the source of the distinctive capability derives from a dynamic capability that reconfigures competences.

2.1.4 Dynamic Capabilities

Teece et al. define “dynamic capabilities as the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments.” (Teece et al [1997] p. 516)

Dynamic capabilities – such as product development, establishment of strategic alliances and strategic decision making – create value for a firm by reconfiguring its competences. However, these capabilities have significant commonalities in successful companies and can be interpreted as best practices thus they are less rare than researchers considered earlier. (Eisenhardt – Martin [2000])

Dynamic capabilities can be classified as follows:

- *Resource integrating* dynamic capabilities:
 - *Product development routines,*
 - *Strategic decision making,*

- *Knowledge leverage* through the synergy among the firm's knowledge elements.
- Dynamic capabilities focusing on *reconfiguration of internal resources*:
 - *Transfer processes*, primarily knowledge brokering,
 - *Resource allocation routines* which allocate scarce resources,
 - *Coevolving*, which includes the routines by which managers reconnect webs of collaborations among various parts of the firm to generate new and synergistic resource combinations among businesses,
 - *Patching*, a strategic process which realigns the structure of businesses and their resources to changing market opportunities.
- Dynamic capabilities related to *gain* and *release* of resources:
 - *Knowledge creation routines*,
 - *Alliance* and *acquisition routines* that bring new resources into the firm from external sources,
 - *Exit routines* that jettison resource combinations that no longer provide competitive advantage as markets undergo change (Eisenhardt – Martin [2000], Bowman – Ambrosini [2003]).

One of the most important attributes of dynamic competences is the *path dependency*. “At any given point in time, firms must follow a certain trajectory or path of competence development. This *path* not only defines what choices are open to the firm today, but it also puts bounds around what its internal repertoire is likely to be in the future. Thus, firms, at various points in time, make long-term, quasi-irreversible commitments to certain domains of competence.” (Teece et al. [1997] p. 515)

While experiences which derive from organizational embeddedness or gained during the evolution path make dynamic capabilities inimitable (Bowman – Ambrosini [2003], Collis – Montgomery [1995]), at the same time, competitors are likely to be able to begin the development of similar dynamic capabilities from different starting points of evolution paths. (Eisenhardt – Martin [2000])

This difference between the view of Eisenhardt – Martin and other theorists (Teece et al. and Bowman – Ambrosini) is, whether there is only one path or are there several

paths to develop a dynamic capability? In my opinion, there are more than one possible evolution paths, however, it is not the number of the paths that determines the uniqueness but the gained experience during a certain path. From this approach, we can distinguish slow or rapid evolution paths of dynamic capabilities, but the gained experience can be measured by the learning curve or the life cycle of the capability.

The effectiveness or efficiency of certain capabilities of the firms may differ. To say that an organization has a capability means only that it has reached some minimum level of functionality that permits repeated and reliable performance of an activity. The life cycle of operational and dynamic capabilities depicts a general pattern: *founding*, *development* and *maturity stages* and then *branching* into one of the additional stages. (Helfat-Peteraf [2003])

In spite of the fact that theorists (such as Teece et al.) intended to evolve the dynamic capabilities approach into a theory, we can see that dynamic capabilities can be included in the definition of resources as these capabilities enable firms to understand and implement a strategy which enhances its effectiveness or efficiency.

Teece et al. suggests that the key difference between resource-based view and dynamic capabilities approach derives from the nature of rent as the first view is based on Ricardo's while the second on Schumpeter's rent theory. When we deploy these unique resources, which enable companies to develop a strategy that enhances its effectiveness or efficiency, the Schumpeterian and Ricardian rent will be the same. Schumpeterian rent exists until the innovation had spread widely (after that it equals zero) which means that competitors have already imitated the specific product or technology and, consequently, there will be no difference in effectiveness thus Ricardian rent will be zero as well. Furthermore, we have to note that a strategy based on unique resources which enhances effectiveness or efficiency is actually an innovation and, therefore, both Schumpeterian and Ricardian rent describes the same phenomenon.

In addition to this, Teece et al. and Eisenhardt – Martin apply the VRIN/VRIO² criteria (discussed later) to analyze dynamic capabilities, but there is a difference in their opinion about substitutability.

The differences between dynamic capabilities and resources can be explained as: while SBUs³ can have their own dynamic capabilities, corporate centers can only contribute to corporate performance through dynamic corporate capabilities which enhance the performance of SBUs. (Bowman – Ambrosini [2003])

In my dissertation, I will focus on the business unit (particularly private enterprise) level, which means if the dynamic capabilities are regarded as resources we can use them as same concepts.

Therefore we can conclude that dynamic capabilities should be considered as the most important firm resources since these factors are the (re)sources of competitive advantages whether or not the firm has any distinctive capabilities.

2.1.5 The Goal of the Resource-Based View of the Firm: the Competitive Advantage

If we consider the earlier studies on resource-based view of the firm, such as Penrose's or Wernerfelt's work, main topics include the role of resources in diversified firms and, of course, profitability as well. Later, in Barney's and Grant's works, competitive advantage as the antecedent of profitability has moved into the focus.

Grant states that "business strategy should be viewed less as a quest for monopoly rents (the returns to market power) and more as a quest for Ricardian rents (the returns to the resources which confer competitive advantage over and above the real costs of these resources). Once these resources depreciate, become obsolescent, or

² V – valuability, R – rarity, I – imperfectly imitability, N – non-substitutability / O – exploited by the organization (Barney [1991], Barney [1997] and Barney-Hesterly [2010])

³ An SBU=Strategic Business Unit is "the most important basic unit of strategy formulation. An organizational or planning unit includes a group of products and services which are marketed for a certain consumer group and in a specific market field where the firm competes with its rivals." (Bartók [2007] p. 75)

are replicated by other firms, so the rents they generate tend to disappear.” (Grant [2008] p. 13)

Priem – Butler claims that “the conceptual work in this stream [the resource based view] generally has focused on the characteristics of firm resources that can contribute to a sustainable competitive advantage.” (Priem – Butler [2001] p. 23)

According to Barney “firms that generate higher return than were expected by stockholders (at constant levels of risk) have a *competitive advantage*. This definition of competitive advantage is often called an economic rent.” (Barney [1986] in Barney [2001] p. 48) Barney also applies a different definition: “a firm is said to have a competitive advantage when it is engaging in activities that increase its efficiency or effectiveness in ways that competing firms are not, regardless of whether those other firms are in a particular firm’s industry.” (Barney [2001] p. 48)

Hofer – Schendel defines *competitive advantage* as “the unique position an organisation develops vis-a-vis its competitors through its patterns of resource deployment”. (Hofer – Schendel [1978] in Armistead and Clark [1993] p. 221-222)

Importance of the competitive advantage is underpinned by the fact that in the contrary of former researches, instead of industrial effects of external environment, competitive advantage is considered primary source of profit differences between firms. (Grant [1991], Rumelt [1991])

Moreover, goals of the firm must include not only competitive advantage but sustainable or sustained competitive advantage. According to Barney, “a firm is said to have a *sustained competitive advantage* when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and these other firms are unable to duplicate the benefits of its strategy.” (Barney [1991] p. 102)

Barney states that “not all firm resources hold the potential of sustained competitive advantages. To have this potential, a firm resource must have four attributes: (a) it must be *valuable*, in the sense that it exploit opportunities and/or neutralizes threats

in a firm's environment, (b) it must be *rare* among a firm's current and potential competition, (c) it must be *imperfectly imitable* and (d) there *cannot be strategically equivalent substitutes for this resource*." (Barney [1991] p. 105-106) Based on his more recent researches, Barney had changed the non-substitutability condition to whether the resource is *exploited by the organization*. (Barney [1997])

Valuable resources must contribute to the delivery of products or services for which customers are able to and willing to pay a price and, thus, the firm is able to gain rents (i.e. the returns on the resources must be over and above the real costs of acquiring or development). Resources can be valuable as well if those reduce the costs of the firm, and in this case, eventually, resources have to be related to marketable products or services. The valuability of a resource is dependent on the market context where it is deployed; while a resource is valuable in a certain industrial sector the same resource might lose its value in a different period of time or in a different industrial sector. (Barney [2001], Bowman – Ambrosini [2000], Bowman – Ambrosini [2003], Collis – Montgomery [1995])

Rareness criteria of a resource can be explained as the firm is able to earn rent as it implements a strategy based on a rare resource. If many firms had that certain valuable resource then all those companies would have the capability to deploy that resource in a specific way and would be able to formulate similar strategy which eventually would not mean competitive advantage for any of them anymore and, thus, this resource would be likely to become a barrier to entry. (Barney [1991], Bowman – Ambrosini [2003])

While valuability and rareness are related to competitive advantage, imitability and substitutability/organization are related to the sustainability⁴ of competitive advantage (which will be discussed in the next chapter).

The harder to imitate a resource for the rival firms, the longer life the rent, which have been gained from the resource, will have. Possible causes of *imperfect imitability*: complex or ambiguous relation between the resource and the competitive

⁴ In my dissertation, under sustainability we mean the ability to maintain a competitive advantage permanently and not the ability to maintain sustainable development.

advantage, barriers around the resource, unique historical conditions of acquiring a resource, lack of geographical mobility, path dependency of the resource, economic deterrence (a firm tries to deter competitors through the size of the investment). This criterion is in accordance with Grant's transparency and transferability criteria. (Bowman – Ambrosini [2003], Collis – Montgomery [1995], Dierickx & Cool [1989] in Barney [1991], Grant [1991], Wernerfelt [1984])

Non-substitutability of a resource means that there are no strategically equivalent valuable substitutes which are not rare or imitable. (Barney [1991]) The concept of *organization* is related to the extent that the organization is able to exploit its resources. (Barney [1997])

Further criteria, such as durability and transferability, have been added to Barney's requirements by other theorists. *Durability* means the longevity of a firm's competitive advantage, e.g. the extent to which underlying resources depreciate or become obsolete. (Collis – Montgomery [1995], Grant [1991])

A resource or competency is considered durable if it becomes obsolete slowly. Simple resources are likely to become obsolete rapidly or be substituted as a result of the turbulent environment. But those capabilities (e.g. dynamic capabilities) which are able to integrate internal or external competences are able to meet durability requirements since their continuous reconfiguration.

2.1.6 Appropriability

The main difference between Barney's and Grant's work is that Grant introduces a new requirement, the *appropriability*, into the rent-earning potential evaluation methodology. Although, Barney's value criteria contain this condition, however, the issue of appropriability has to be highlighted since its importance.

According to Grant, "the returns to a firm from its resources and capabilities depend not only on sustaining its competitive position over time, but also on the firm's ability to appropriate these returns. The issue of appropriability concerns the allocation of rents where property rights are not fully defined." (Grant [1991] p. 128)

“In fact, the value is always subject to bargaining among a host of players, including customers, distributors, suppliers, and employees.” (Collis – Montgomery [1995] p.122)

Raising this issue is an essential contribution. Especially, appropriation of intangible human capital can lead to serious consequences (e.g. significant drop in motivation of employees, if they feel that they are treated unfairly since the value they created is appropriated by the company without proper compensation).

However, this result highlights that – possibly without the awareness or willingness of the company – the value is appropriated by the demand side. Since its negative connotation, monetization and realization expressions are used in my thesis instead of appropriation.

2.1.7 Critiques and Responses of the Resource-Based View of the Firm

As every other theory, resource-based view of the firm has several critiques. The most important criticism derives from Priem – Butler but their critique addresses primarily the view’s recognition as an independent theory, not its content.

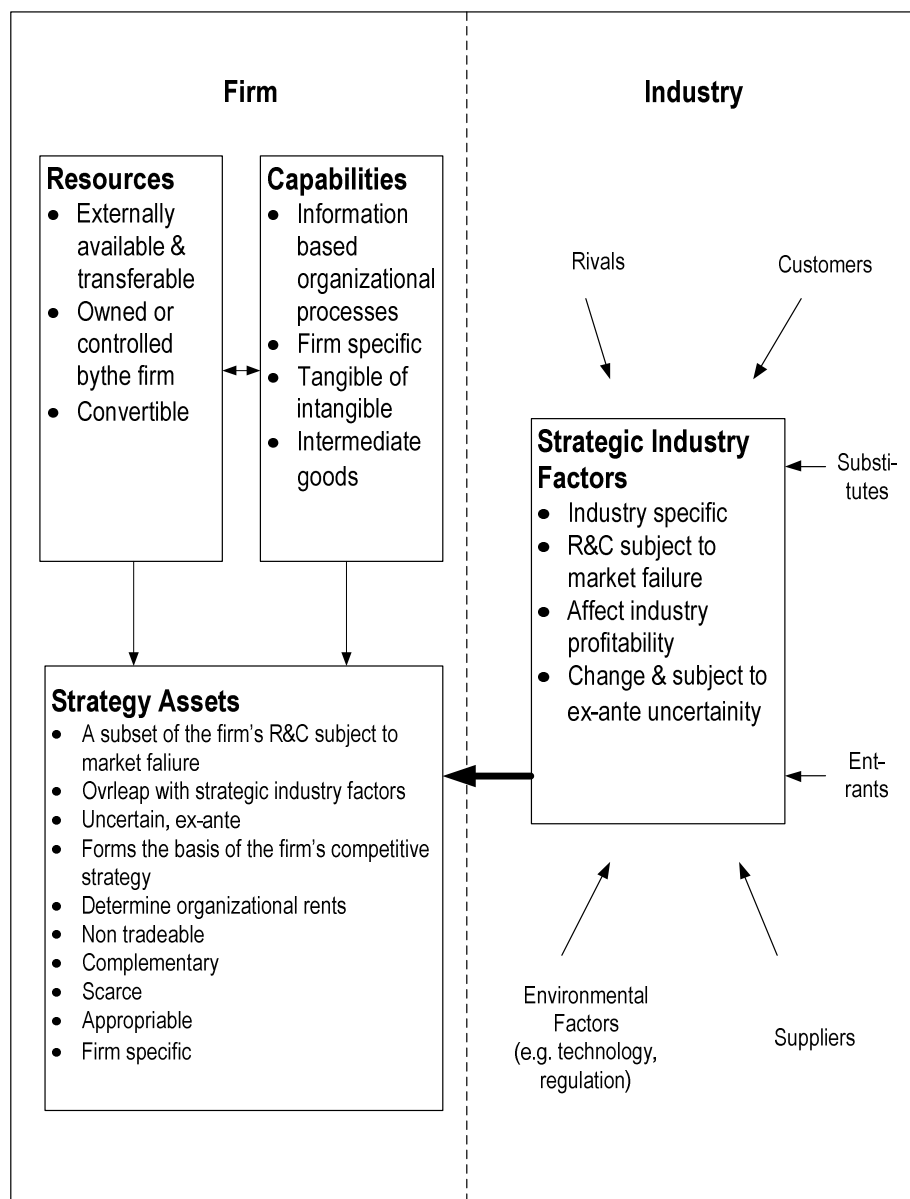
Priem – Butler argues that the definitions of the resource-based view are tautological, the forecasting power of the model is questionable, the internal focus is unreasonably high, processes are considered as black boxes, the applied model for analysis is rather static, and too many factors are regarded as resources. (Priem – Butler [2001])

The criticism, however, leads to a deeper understanding and improvement of this approach, the view itself was not intended to be disproved. Definitions of the resource-based view are as tautological as definitions of other theories, its forecasting power have been proofed by several researches and case studies, and processes can also be interpreted as resources. Important developments of the view are that it has been dynamized (through dynamic capabilities by Teece et. al, Helfat-Peteraf, Eisenhardt – Martin, and other theorists) and the internal focus has been clarified.

To disprove the unreasonably high internal focus, market conditions are taken into account to determine the value of a resource, and the firm is compared to its rivals to define rareness. (Barney [2001], Bowman – Ambrosini [2003], Collis – Montgomery [1995])

The relations between resources and capabilities and the industrial sectors had been formerly highlighted by Amit – Shoemaker (see Figure 6).

Figure 6.: Relation between Strategic Industry Factors (SIF) and Organization's Resources and Capabilities and Strategic Assets (SA) Source: Amit-Shoemaker [1993] p.36



Amit – Shoemaker states that “the challenge facing a firm’s managers is to identify, ex ante, a set of *Strategic Assets* (SA) as grounds for establishing the firm’s sustainable competitive advantage, and thereby generate Organizational Rents. These are economic rents that stem from the organization’s *Resources and Capabilities*, and that can be appropriated by the organization (rather than any single factor). This requires managers to identify the present set of *Strategic Industry Factors* (SIF) as well as to assess the possible sets of SIF that may prevail in the future. Also, decisions on the further development of existing and new *Strategic Assets*—those that are most likely to contribute to the creation and protection of economic rents—need to be made. Not every firm will succeed with its targeted set of SA as their applicability and relevance ultimately hinges on the complex interaction referred to above. Examples of possible SA include: Technological capability; fast product development cycles; brand management; control of, or superior access to, distribution channels; a favorable cost structure; buyer-seller relationships; the firm’s installed user base; its R&D capability; the firm’s service organization; its reputation and so forth.” (Amit – Shoemaker [1993] p. 36-37)

The relation to the market has been explicitly articulated by Collis – Montgomery prior to Priem – Butler: “to build a unique set of resources and capabilities. However, this must be done with a sharp eye on the dynamic industry context and competitive situation, rigorously applying market tests to those resources.” (Collis – Montgomery [1995] p.122) 128)

2.1.8 Summary of the Resource-Based View of the Firm

To summarise this approach, we can claim that resource-based view of the firm examines the drivers of the firm’s sustainable competitive advantage and identifies those as resources. A resource can become the source of competitive advantage if it is valuable, rare, hard to imitate, can be exploited by the organization and durable, and as well as its output can be appropriated by the firm. Resources include tangible and intangible assets, distinctive and core capabilities and dynamic capabilities. It is important, however, to note that resources and firms built up from those must be examined in their market environment since that may influence firms and determine the characteristics of resources.

In the following chapter, we will examine an improved approach of the resource-based view of the firm, i.e. the knowledge-based theory of the firm, to achieve a better understanding of different categories of intangible resources.

2.2 The Knowledge-Based Theory of the Firm – Intangible

Resources in the Focus

Grant claims that the emerging knowledge-based theory of the firm “focuses upon knowledge as the most strategically important of the firm's resources.” (Grant [1996] p. 110)

The knowledge-based theory of the firm brings knowledge into the focus of attention. We analyze the knowledge elements of the firm, the processes how these elements interact with each other and with those outputs through which the firm is able to achieve its goals. The method how these knowledge elements – or their bearers – can be managed to achieve the optimal level of value creation is also important for us.

Of course, tangible assets are not ignored by the knowledge-based theory of the firm, but the emphasis is on the knowledge-based and intellectual capital elements or intangible resources⁵. The important role of intellectual capital elements basically derives from that intangible resources generate several times more value in the firm than tangible resources in knowledge intensive industries – based on empirical observations.

In the followings, significant classes of intangible resources and their content will be presented through intellectual capital classifications, but the method how and the reason why these classifications have been worked out will not be discussed. It is not the purpose of my dissertation to articulate the value of each asset separately above

⁵ Hereinafter, intellectual capital, immaterial capital and intangible resources will be used as synonyms since – based on our theoretical framework – we regard all of them as resources; and these elements – owing to their immaterial nature – can be identified as intangible resources.

the book value of the firm, thus theories presented below will not have a methodological focus.

In the RICARDIS⁶ report, Koch compares different classifications of the mainstream intangible capital reporting models (see Figure 7).

Figure 7.: Comparison of different concepts of intellectual capital

Source: RICARDIS [2006] p.73

ARC (Koch, Schneider, Leitner)	Human Capital	Relational Capital		Structural Capital			
Skandia Navigator (Edvinsson, Malone)	Human Capital	Customer Capital		Structural Capital			
Intangible Asset Monitor (Sveiby)	Human Capital	External Structure		Internal Structure			
Calculated Intangible Value (Stewart)	Human Capital	Customer Capital		Structural Capital			
Intellectual Capital Audit (Brooking)	Human Capital	Market Assets		Infra-structure Assets	Intellectual Property Assets		
German Wissensbilanz-Model (←ARC)	Human Capital	Relational Capital		Structural Capital			
German Draft Accounting Model	Human Capital	Customer Capital	Supplier Capital	Process Capital	Innovation Capital	Location Cap.	Investor Capital

Besides them, other theorists (e.g. Bontis et al. [1999] or Petty – Guthrie [2000]) suggest balanced scorecard to be considered as included in intellectual capital researches. It is not a goal of this paper to discuss the balanced scorecard since there are essential differences between balanced scorecard and intellectual capital researches – according to Mouritsen et. al – “in terms of their involvement with organizational strategy, organization and management that create radically different version of how it is possible to prescribe management decision-making.” (Mouritsen et al. [2005] p. 20)

In theories to be discussed in the followings, different words will be used to designate the same concept: capital, resource and asset. Based on the above

⁶ The RICARDIS report have been prepared for the European Commission by European experts: Tim Hoad, Daniel Andriessen, Leif Edvinsson, Jacob Z. Ben-Simchon, Ahmed Bonfour, Viktória Bodnár, Mart Kivikas, Günther Koch, Karl-Heinz Leitner, Jan Mouritsen, Ludo Pyis, M. Paloma Sánchez, Carmen Vela Olmo, Campbell Warden and Stefano Zambon

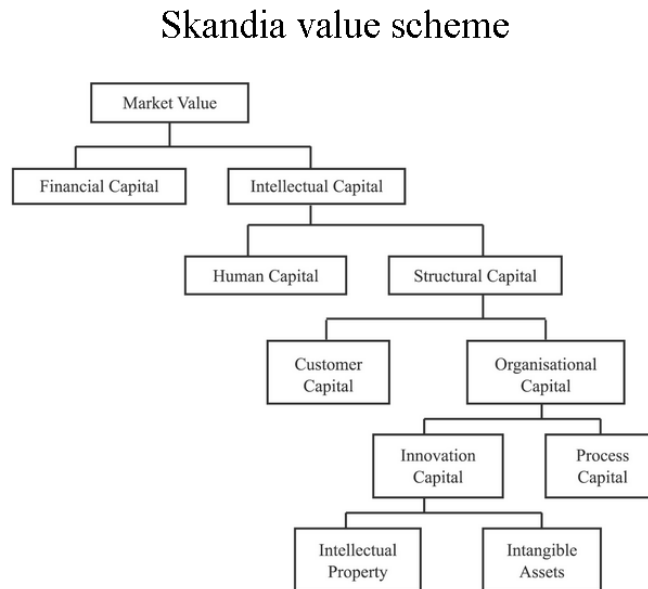
definitions provided by the theoretical framework of my dissertation, and since we regard a firm as a bundle of resources, all the tangible and intangible assets, capital and resources will be recognized as resources, although, only those will be considered as a source of competitive advantage which meet the aforementioned requirements (valuability, rareness, imperfect imitability, exploited by the organization, durability and appropriability).

2.2.1 Edvinsson's and Malone's classification - the Skandia Model

Edvinsson, as the intellectual capital manager of Skandia, an insurance company, started to map underlying capital behind the firm's operations in 1992. As a result of his research, he has created the Skandia model and the Skandia Business Navigator intellectual capital reporting system. Figure 8 shows the different forms of capital in the Skandia model.

Figure 8.: The Skandia model

Source: Edvinsson [1997]



According to Edvinsson, “the simplified definition of intellectual capital: Human capital + Structural capital = Intellectual capital.” (Edvinsson [1997] p. 368) Human capital is transformed into structural capital what is left in the company, when the

human capital have gone home, such as customer database, concessions, IT system, etc. (Edvinsson [1997])

About the ownership of capital elements, Edvinsson states: “the human capital cannot be owned, it can only be rented. The structural capital can, from a shareholder’s point of view, be owned and traded.” (Edvinsson [1997] p. 369)

2.2.2 *Intellectual Capital Concepts of the RICARDIS Report*

The RICARDIS Report applies the conceptual framework of Edvinsson – Richtner. Different forms of intellectual capital are defined as follows:

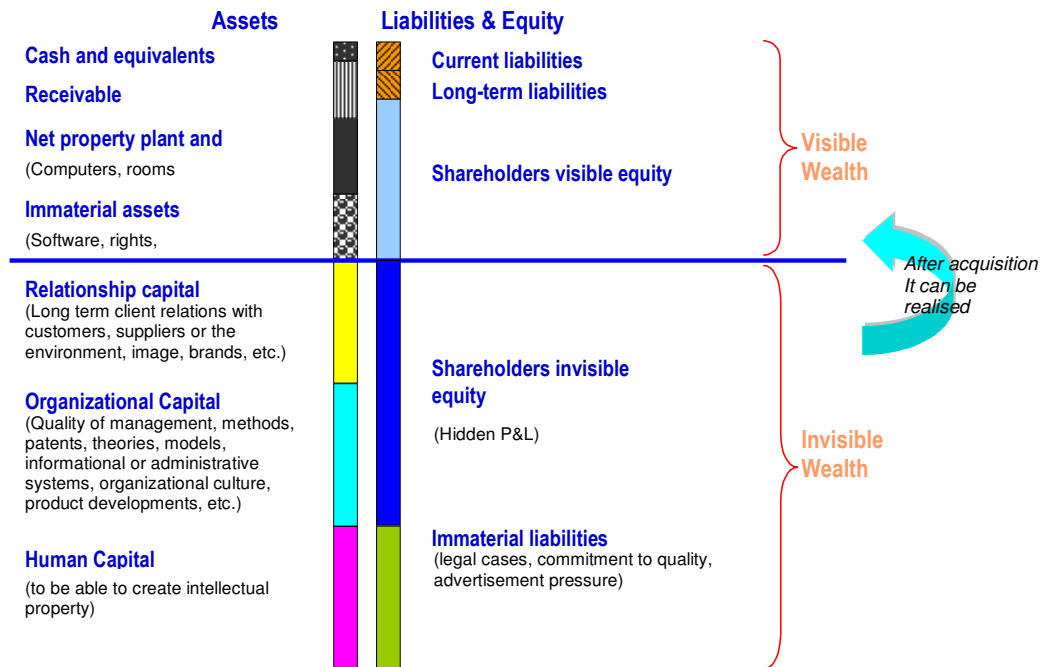
- “*Intellectual capital* is the combination of the human, organizational and relational resources and the activities of the organization. It includes the knowledge, skills, experiences and abilities of the employees; the R&D activities, the organizational routines, procedures, systems, databases and intellectual property rights of the company; and all resources linked to the external relationships of the firm, with customers, suppliers, R&D partners, etc.
- *Customer capital* is the value of customer base, customer relationships and customer potential. Component of structural capital.
- *Human capital* can be described as the employees’ competence, relationship ability and values.
- *Organizational capital* is a systematized and packaged knowledge, plus systems for leveraging the company’s innovative strength and value-creating organizational capability.
- *Structural capital* is customer capital plus organizational capital, what is left in the company, when the human capital, the employees, have gone home.” (Edvinsson – Richtner [1999] in RICARDIS [2006])

2.2.3 *Sveiby - The Invisible Balance Sheet*

Based on Sveiby’s interpretation, a firm can be perceived as *tangible assets, external structure, internal structure and individual competence*. Figure 9 shows the interpretation of Boda and Szlávík of the firm’s balance sheet which contains visible

and invisible components - based on Stewart and Sveiby. (Boda – Szlávik [2005]; Boda [2008])

Figure 9.: The invisible balance sheet of the firm Source: Boda-Szlávik [2005] p. 71
Boda [2008] p. 68, Stocker [2008] p. 697, based on Sveiby [2001]



Sveiby – in accordance with Edvinsson – considers external and internal structure as structural capital and, as a consequence, organizational capital and customer capital is regarded as explicit manifestation of knowledge of the firm's employees (e.g. routines, procedures, brand names, etc.) most of which left in the organization after these employees have left the company. Individual competences and human capital tend to mean rather tacit knowledge of employees thus this knowledge is likely to leave the firm with employees.

External structure/*relationship capital resources/customer assets* include relationships with customers and suppliers, brand names, trademarks and reputation or image of the firm. (Boda [2008], Sveiby [2001]).

Internal structure/*organizational capital resources/organizational assets* consist of patents, concepts, models, and computer and administrative systems, standardized or

routine processes and organizational culture. (Boda [2008] p. 69, Sveiby [2001] p. 65)

According to Stewart, “a company’s human capital is embodied in the people whose talent and experience create the products and services that are the reason customers come to it and not to a competitor.” (Stewart [1997] p. 91)

Sveiby states that individual competences/*human capital resources* are people’s competences to create tangible and intangible assets. “An individual’s competence can be regarded as consisting of five mutually dependent elements:

1. Explicit knowledge. Explicit knowledge involves knowing facts. It is acquired mainly thorough information, often through formal education.
2. Skill: This art of “knowing how” involves a practical proficiency – physical and mental – and is acquired mainly through training and practice. It includes knowledge of rules of procedure and communication skills.
3. Experience. Experience is acquired mainly by reflecting on past mistakes and successes.
4. Value judgments. Value judgments are perceptions of what the individual believes to be right. They act like conscious and unconscious filters for each individual’s process-of-knowing.
5. Social network. The social network is made up of individual’s relationships with other human beings in an environment and a culture that is transferred through tradition.” (Sveiby [2001] p. 93)

2.2.4 The 4-Leaf Model

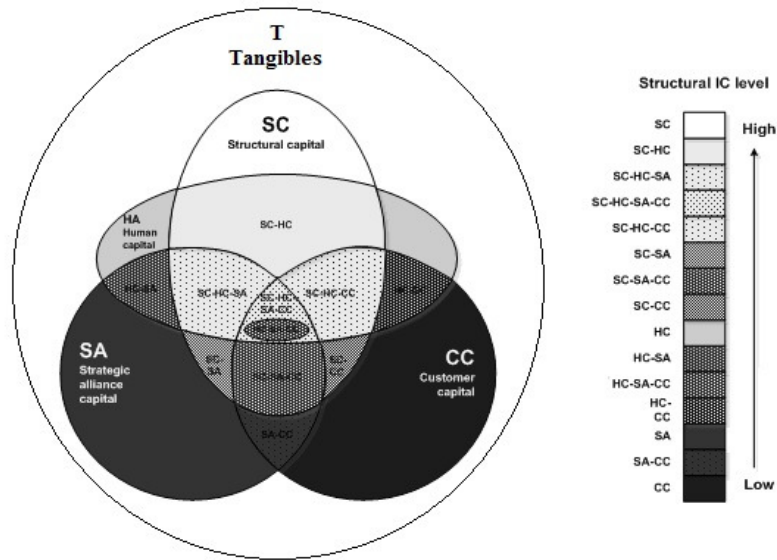
As Figure 10 shows, Boda has made further improvements on AREOPA’s 4-leaf model.

The 4-leaf model identifies strategic alliance as a new intellectual capital resource. In this model, intangible resources are closely interrelated and are not separated sharply from other resources. Tangible resources are the complementary of intangible resources and this model shows the sets of identified resources and the intersections of these sets. In the intersections, the ability to own a certain intangible capital

element is higher thus the risk of that investment is lower. It articulates a clear message: resources which are interrelated on knowledge-base and the own equity ratio of which is fairly high can bring higher efficiency and effectiveness for the firm. (Boda [2008], Boda-Lőrincz-Szlávik [2008])

Figure 10.: The 4-Leaf Model

Source: Boda [2008] p. 73



Intersections of the sets in the 4-leaf model can bear further benefits; according to Juhász, “if leaves are considered as different assets then intersections mean the synergy among them and those shall be regarded as high added value creating hills on the plain.” (Juhász [2010] p. 311)

2.2.5 Chosen concept

Several models of intangible resources and their attributes have been presented above. At this point, we must specify concepts which will be used hereinafter to ensure the consistency of this paper. Hereinafter, a firm will be considered as a bundle of *tangible resources*, *relationship capital resources*, *organizational capital resources* and *human capital resources*. Different theorists’ similar concept definitions will be included in the above concepts, as an addition to Koch’s conceptual diagram of intellectual capital.

Strategic alliances are not included in Koch's classification thus those will be regarded as relationship capital resources. Our chosen concepts will be defined as follows:

- *Tangible resources* include corporate property, factories, buildings, devices, equipment, raw material, inventories, financial assets, geographical location of the firm and its access to raw material.
- *Human capital resources* include qualification, expertise, experience, socialization, judgment, intelligence, flexibility, motivation, connection, collaboration and communication skills and sense of employees and management (or even owners).
- *Relationship capital resources* include inter team relationships, relationships with customers, suppliers and strategic partners, brand names, trademarks, customer databases, social groups, reputation and image of the firm.
- *Organizational capital resources* include formal reporting system, hierarchical structure, formal and informal planning, task allocation, administrative, coordination and controlling systems, technology, standardized or routine processes, procedures, patents, team level tacit knowledge, and the value system of the organizational culture. (Barney [1991], Balaton-Tari [2007], Bartek-Lesi – Gáspár [2007], Boda [2008], Sveiby [2001]).

2.2.6 *The Ability to Own Intangible Resources*

To examine the asset side of the firm is an essential and important issue from the aspect of company management since – according to our understanding – resources which can be used to generate value for the firm are included in its assets. In addition to this, to analyze *equities of the firm* can be equally important to answer the question by whom and to what extent can a source of value creation be owned?

Human capital resources, basically, cannot be owned by a firm. A firm is only able to rent the knowledge of its employees and pay wages in return. This issue leads to an interesting anomaly: in the knowledge-based theory of the firm, employees' competences are treated as human capital. But if we consider these competences as capital, then rent – instead of wage – should be paid in return from an economic

point of view. Firms, whereas, generally pay wages instead of economic rent. If a firm, however, paid economic rent for all of its employees then a need for an organization would exist only if synergy could be realized from organizational capital, if not, there would be only market coordination mechanisms between “employees” and “owners”⁷.

A solution for this problem is that a firm pays economic rent for certain employees and wages for the others. Economic rent should be paid for key employees, who have an outstanding ability to create value for the firm, while wages should be paid for the rest of the employees. It is important to highlight that knowledge accumulation is not a sufficient condition of treating a person as capital since this knowledge must be able to be deployed to create value. However, this is the point where those who try to force the knowledge-power paradigm tend to make a mistake since – in a corporate context – knowledge itself seems not to be enough to become a resource (or power according to the paradigm). It can only be transformed into a resource if this knowledge can be deployed to create value. Furthermore, it is really important to focus on the synergy between intangible resources if employees are treated as capital since this synergy can be appropriated entirely by the firm. If the firm appropriates the value creation of its employees to a great extent then it can lead to a significant drop in their motivation as a negative feedback to human capital resources.

Organizational capital resources are basically owned by the firm even if human capital is needed to operate these resources. Organizational capital, however, primarily includes team level tacit knowledge and explicit knowledge which derived from tacit knowledge externalized into routines and procedures. Although, routines, procedures and customs have a high level of explicit knowledge but generally include tacit elements as well. Moreover, we have to consider employees’ contribution to process innovation, i.e. continuous development and improvement of organizational capital by the employees.

Relationship capital resources are mainly owned by the firm as well. It is obvious that brands, trademarks and the company image are owned by the firm. Relationships

⁷ There is an interesting interrelation with transaction cost theory as well, moreover, the issue of necessity entrepreneur athletes is very similar

with customers and suppliers are basically owned by the firm, although, employees are also needed to operate these resources. At the other end of the spectrum of customer capital, customer relationships can also be owned by sales representatives. These relationships can be considered as relationship capital of the firm but, fundamentally, these are at the disposal of employees. In addition, firm's relationship capital includes those customer and supplier competences which can be deployed to create value. But these elements cannot be owned by a firm hardly at all, although, long-term contracts may seem as if so.

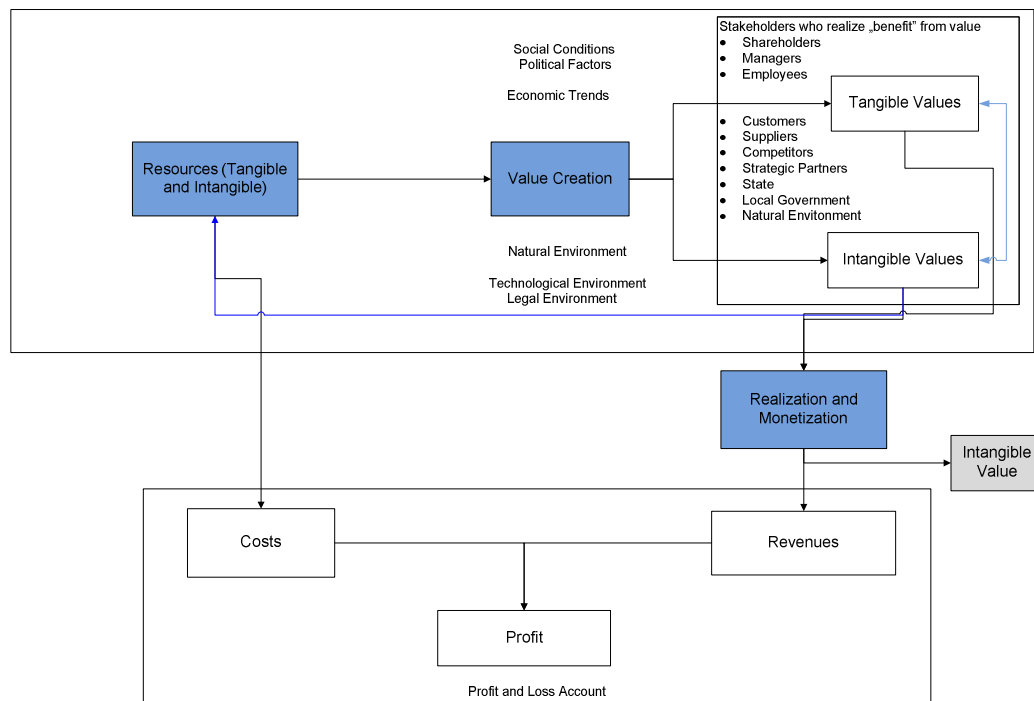
3. Value Creation

3.1 Value Creation and the Value

In this chapter, we will discuss the created value side of the business model, as Figure 11 shows.

Figure 11.: Created value side of the business model

Source: own figure



“Value is defined as the degree of usefulness or desirability of something, especially in comparison with other things.” (Trompenaars – Hampden-Turner [1997] in Andriessen [2004] p. 237). Usefulness highlights the importance of utilitarianism in valuation while desirability refers to that there is a demand for it. These concepts can be examined separately and together as well. There are things which are useful and desirable, which are not useful but desirable, or which are useful but not desirable, but all these things only bear value at a certain level of scarcity. The value concept is used to differentiate between options; value can be interpreted as money, product, service, experience, relationship, motivation, etc.

The most common measure of value is money; owing to its homogeneity and divisibility, money is a good measuring tool. We must, however, note that money is only a measuring instrument; since the collapse of the gold standard system, money

have not had any internal value – its value only derives from a generally accepted consensus among people.

Furthermore, we have to highlight those values which are hard to be measured by money owing to their subjective nature. In professional sport businesses, which are in the focus of this research, created value is generally really subjective. In spite of these, value, determined by free price mechanism, will be measured by money wherever it is possible.⁸

It is a complex task to integrate it into the historical perspective of value theory. However, it would be also an interesting task to integrate my approach into this theory but it will not be discussed in my dissertation but, however, I can imagine as a goal of a new research.

Based on the logic of *value creation*, we can state that the value of outputs of the value creating activities is higher than the value of their inputs.

Dual value creation, which derives from our definition of the firm, means that it is equally important for the firm to create value for both consumers and shareholders. Value created for consumers embodies in products and services while value created for shareholders embodies in profit or dividend. (Chikán [2008])

We must, however, take into consideration in consumer value which derives from dual value creation that consumers basically intend to solve a problem or to satisfy a need, and they are not looking for certain products and services or their combinations. From consumers' point of view, the value of products and services can be determined by their problem solving efficiency which is subjective and likely to mean different values for each customer and related to customer expectation. (Demeter et al. [2010])

⁸ We have to note that 'value' have different meanings in different contexts, such as organizational behaviour, psychology and sociology. According to Rokeach: "values are beliefs concerning desirable end-states of existence (a sense of accomplishment, freedom, salvation, equality) or the desirable modes of conduct (honesty, friendship, morality, courage) reflecting our choices and preferences." (Rokeach [1968] In: Bakacsi [2006] p. 41) In my dissertation, this value concept will be included as well regarding organizational capital resources and organizational culture.

Under *shareholder value* we mean the return on capital – which is exposed to risks – over and above shareholders' cost of capital⁹. Shareholder value equals enterprise value minus debts, where the enterprise value consists of the present value of cash flow from operations in the forecast period, and the sum of the residual value and the current value of marketable securities. (Rappaport [2002])

Values are classified on the basis of that for whom a value has been created, since the value judgment is really subjective and dependent on the unique characteristics of the individual or organization. Thus, it is not a surprising fact that attributes of values may be different from different perceivers' perspective.

The consumer value is consumer-specific, variable, is under continuous control and influences the present and future demand for products or services. Inasmuch as a consumer looks for a solution (a product, a service or their combination) to solve his individual problem, which can also alter in time, thus we can state that subjectivity and variability of the consumer value derives from the consumer's subjective judgment. Moreover, consumers with their current subjectivity regularly confront the product or service with their expectations, therefore, consumer value is revaluated continuously and the current and future demand for products or services are influenced by such experiences of consumers. The utility of certain goods or services can be measured in four dimensions by the customers:

1. form/functional utility: are certain products and services able to satisfy a customer need?
2. place utility: are certain products and services available at the geographical location where the need is to be satisfied?
3. time utility: are certain goods and services available at a certain period of time when the need is to be satisfied?
4. ownership utility: does the pure ownership of certain goods and services create value for the customer? (Demeter et al. [2010], Ebert – Griffin [2009])

⁹ The cost of capital concept is interpreted as the cost of the availability of capital; it is usually considered equivalent with opportunity cost (value of the next best alternative foregone) or the yields on treasury securities (government bonds), and since financial approach is not the primary approach of my dissertation thus the comprehensive definition and the methodology of cost of capital will not be discussed.

It is a really complex issue to examine the consumer value of Hungarian professional sport businesses. Although, professional sport businesses have several markets but their consumer gain value primarily at sport events attended personally or via mass media or at the merchandising market. According to the current situation in Hungary, however, consumer participation in such sport events is minimal.

Shareholder value is a more objective concept, thus, it is to be measured by money. Shareholders expect return on their financial investment provided for a firm. In addition, it is an obvious requirement that this return must be greater than the risk-free return since risk is compensated by the risk premium. While defining shareholder value, we have to take into consideration the concept of discounting and determine a discount factor which leads back to the cost of capital issue. Several factors can be chosen as a discount factor – depending on the purpose of the valuation – but when we evaluate an entire corporation from internal aspect, the optimal factor for discounting seems to be the weighted average cost of capital, which is the weighted average of the return expectation on the provided capital. (Rappaport [2002])

From the above value aspects, we can conclude that the value consists of a *tangible (material) value* component (physical products created or consumed during a need is satisfied) which generally can be measured by money owing to its objective nature, and an *intangible (immaterial) value* component which is hard to be measured by money, as it is created in the individual's mind who participates in the value creation process.

Created value can be viewed from a different perspective: is it included in the contract for the transaction or not? Accordingly, if a value is included in the contract, it is considered as a *tangible value*, if not, then, consequently, as an *intangible value*. It is an interesting issue, when contracting parties expect immaterial values which are not included in the contract, and in most cases, these advantages or favors are the real underlying motivation behind the contracts. (Allee [2008])

Both aspects are likely to comply with the other, thus, values which are included in the contract¹⁰ or have a tangible nature are regarded as tangible values while values which are not included in the contract are regarded as intangible values, as Figure 12 shows.

Figure 12.: Value categories

Source: Own figure

Categories	Value		
	Materialized	Immaterialized	
		Included in Contract	Not Included in Contract
	Tangible Value		Intangible Value
Example	Product	Knowledge Increase	Reputation, good relationship
Example from Sports	Merchandise Products	Cheering Experience	Sense of Victory, Glory, Community

Moreover, the question is still ambiguous whether the price of a ticket for a sport event contains the consumer experience of cheering, sense of community and, perhaps even victory? This value is to be considered tangible if the contracting parties (i.e. the company and its customers) include this value into the contract, which is represented by the ticket and its price. Thus, we must reword our original question. Is the consumers' internal experience included in the price of the ticket or is it only a positive externality which is realized by customers gladly, perhaps, without their knowledge? Assume, for example, that the victory experience is included in the ticket price; then the sport business should sell the tickets at a higher price, and if the game is drawn or the team is defeated, then the additional fee should be returned.

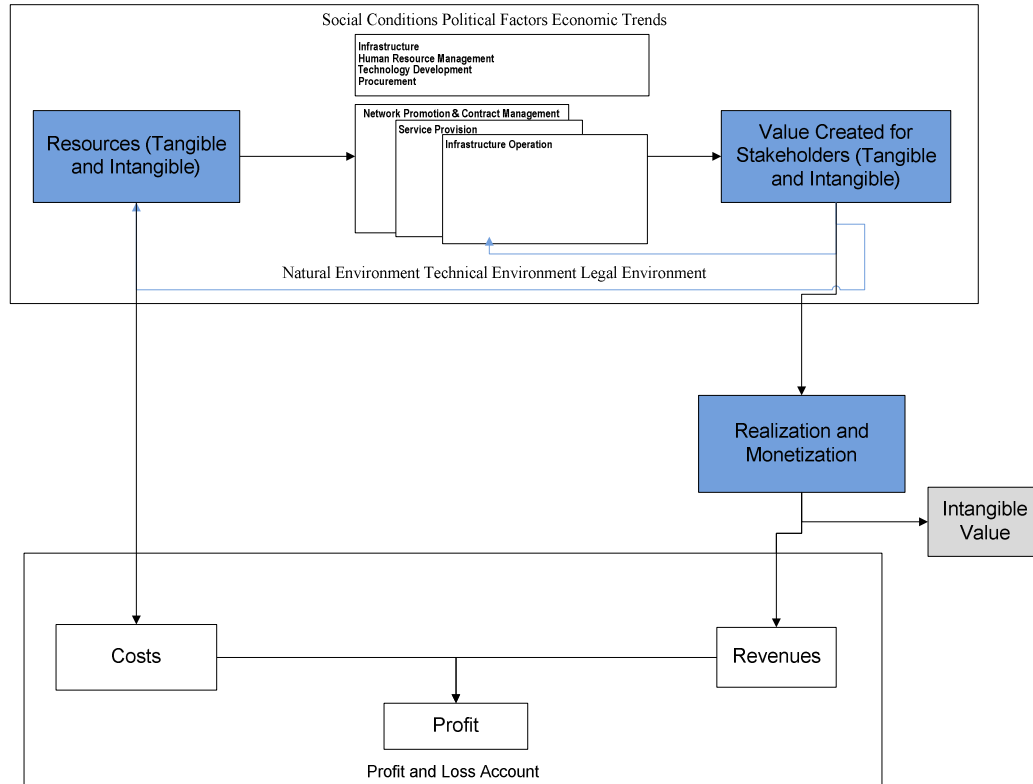
¹⁰ The contract can be formal or informal. If the contract is informal, tangible values are those which are included in the agreement

3.2 The Value Creation Process and its Configurations

In this section, the value creation side of the business model will be discussed, as Figure 13 shows.

Figure 13.: Value creation side of the business model

Source: own figure



“Value creation processes convert firm resources into consumer value.” (Chikán [2008] p. 331) To generalize the value creation process, we must enable conditions, such as opportunity for continuous feedback between different activities, the service or experience focus of processes and the deeper participation of consumers.

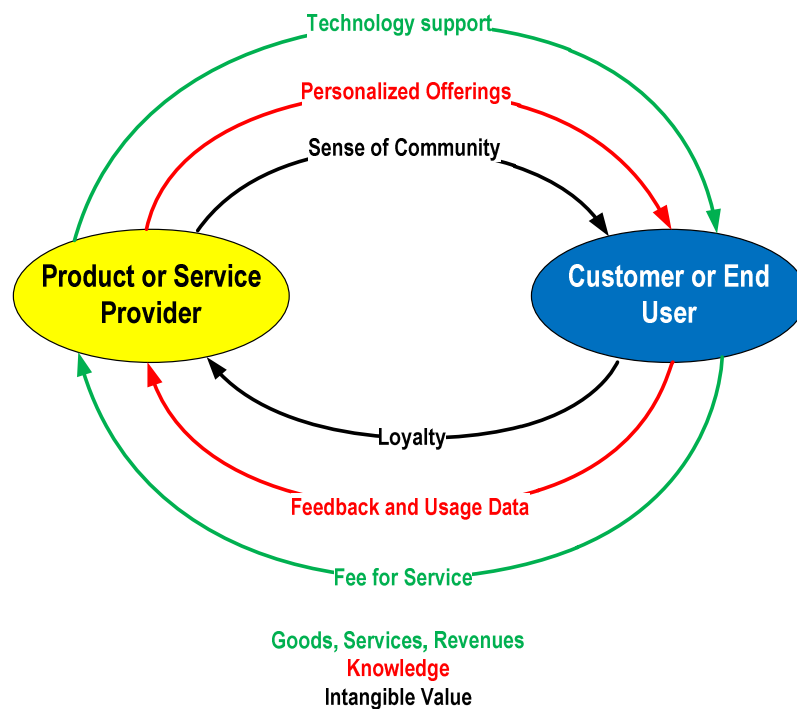
This can be achieved by focusing on the basic unit of the value creation process, the *value exchange*. Value exchange transactions take place between two or more groups or individual actors, i.e. a company can act as a customer, a supplier or a strategic partner, etc, while individuals or groups in the company can be the deliverers or the recipients of the output of an activity. From this perspective, interactions can take place in consumer-to-consumer relation or between other roles.

Basically, any roles can initiate a potential deliverable exchange, although, to enable the transaction to take place, another actor of the value exchange network have to

receive it. The decision whether a value offered for a recipient is accepted or not depends on the entire value network context, i.e. value is subjective, thus, to understand a value exchange we have to understand the entire value network. There are 3 categories of the value exchange: *exchange of goods and services, knowledge, or intangible values* (see Figure 14). If the value exchange takes place between two or more individuals or groups, all of the above categories have to be taken into account and the aggregation of these value exchanges means the generalization of value creation process. (Allee [2000], Allee [2008])

Figure 14.: Value exchange as the basis of value creation

Source: Allee [2000] p. 3



The value exchange network helps to understand the attributes of intangible values. First of all, intangible values can become intangible resources and, vice versa, certain intangible resources can become intangible values. Loyalty, as an intangible value – which flows from a consumer to the firm – can increase relationship capital resources and also enhance future performance, while certain human capital resources (e.g. knowledge of an employee) can be realized by the consumer as intangible values (e.g. an advice on how to use a product).

We can also examine how intangible values get onto the market. Inasmuch as intangible values can be transformed into deliverables or business offers then those can be materialized and measured by money easily. In addition to tangible deliverables, further intangible values can be provided and the firm's intangible resources can be increased by these values (see favors and relationship capital). Moreover, intangible values themselves can be exchanged for other intangible values or benefits as well. (Allee [2008])

The price mechanism of intangible resources has some systemic criteria since there is a *price system* to determine the value of knowledge and thus the value of both intangible resources and intangible values. There are, obviously, such cases when money is paid in exchange for an intangible resource and, therefore, we can materialize and monetize the value embodied in this resource, however, in certain cases, the reward of the transaction cannot be monetized. Davenport – Prusak identified three factors which can be motivators of intangible transactions: reciprocity, *repute* and altruism.

1. Under *reciprocity* (or reciprocalness) we mean that the knowledge seller will spend the time and effort needed to share knowledge if he expects the buyers to be willing sellers when he is in the market for their knowledge. We have to note, however, if the seller believes that the knowledge buyer does not have the knowledge which may be useful for the seller in the future, then the transaction is not likely to take place. A more indirect method of reciprocity, if the knowledge seller wants to earn other's trust by his cooperation and strengthen his *repute* as a 'knowledge sharer' to whom it is worth to sell their knowledge since he returns the favor.
2. *Repute* as a motivator derives from that most people want others to know him as a knowledgeable person with valuable expertise. *Repute* has further dimensions, it may enhance reciprocity and as well as contribute to promotions and bonuses. At consulting companies, it is a best practice to link bonuses to knowledge generation or knowledge transfer.

3. *Altruism* can also be a motivator for intangible transactions. It is possible, of course, that there are people who share their knowledge just because others need that knowledge. A knowledge sharer may be simply a nice person who wants to help. (Davenport – Prusak [2000])

Davenport – Prusak implied these motivators primarily on intercompany transactions, but we have to note that this interpretation can be extended. In the concept of co-creation of value, such as in consumer-to-consumer interactions, any of these motivators can be obvious.

In the scientific literature, there are three basic value creation configurations of the value creation processes: Porter's value chain has been supplemented with the value shop and the value network concept by Stabell and Fjeldstad and, moreover, it can be complemented with Prahalad's co-creation of value concept.

3.2.1 *Value Chain*

As Figure 15 shows, Porter's value chain divides organizations' activities into two logical units, the primary value creation activities which create value directly, and the support activities which create value through the primary activities. The *primary value creation activities* include inbound logistics, operations (production), outbound logistics, marketing and sales, and (after-sales) services, while the *support activities* include firm infrastructure, human resource management, technology development, and procurement. (Porter [1991])

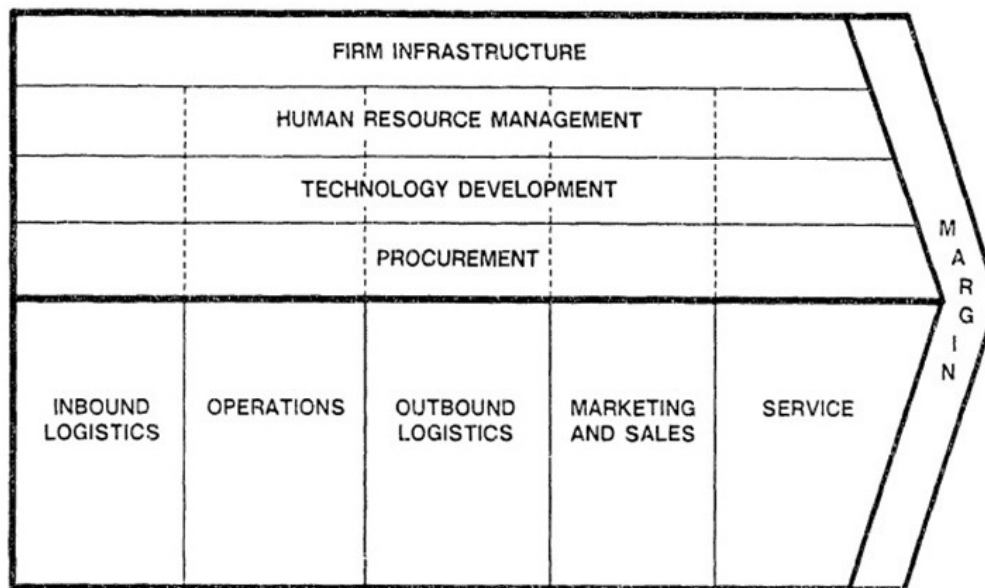
The name of support activities may sound degrading but these activities are essential to acquire and accumulate internal assets in the firm. Individual activities of the value chain build up a complex system, and the interferences among different activities are called as *linkages*.

Different activities *involve* human resources, inputs and technologies, i.e. *organizational routines*. As we discussed in the general model above, activities – besides material processes – also deploy and generate information. In order to perform these activities, however, tangible and intangible resources must be

deployed in the firm. By performing any of these activities – or joint set of activities – intangible resources, such as skills, organizational routines and knowledge, are created. While tangible assets depreciate normally, intangible resources which are deployed in activities can be accumulated in time, such as brand image, relationships and networks, which can influence costs or efficiency of activities in the future. (Porter [1991])

Figure 15.: Porter's value chain

Source: Porter [1985] p. 37



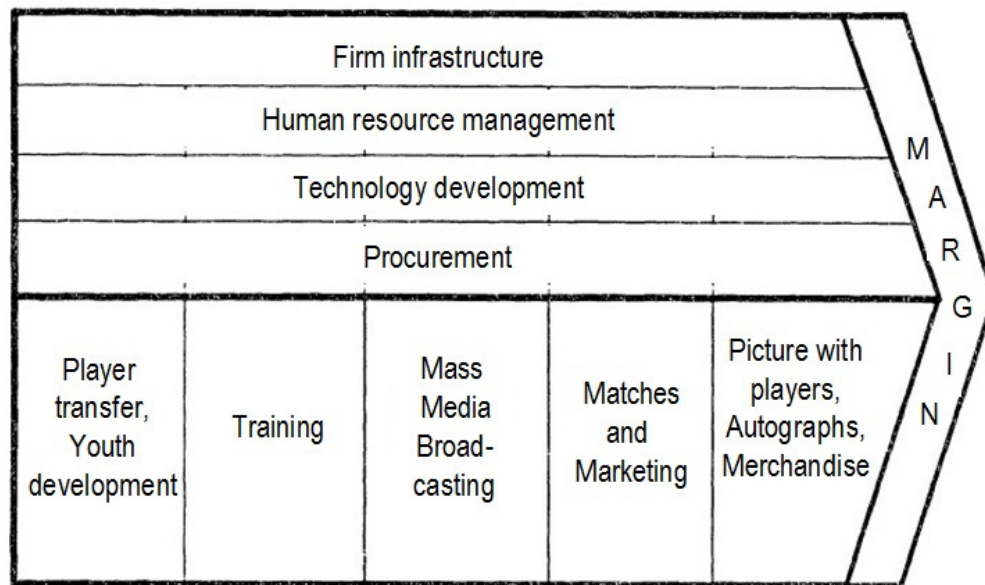
The value chain is usually effective if the organizational technology has linkages which are structurally similar to chains. Linkages between primary value creation activities are sequential; the output of inbound logistics is the input of operations and the output of which is the input of outbound logistics and the output of which is marketed and then after-sales services are provided for products. After these activities have been performed, the value of semi-processed products or products increases. Consequently, based on the value chain methodology, competitive advantage derives from the decomposition of the firm's value creation processes into individual activities which contributes to the improvement of the firm's relative cost position or creates a basis for differentiation. The relative importance or the absolute extent of cost drivers is different under industries or firms. Exploiting and forming

these structural factors is the main source of competitive advantage. (Stabell – Fjeldstad [1998])

There is an abstract way to apply the *value chain* concept on *professional sport businesses*, as Figure 16 shows.

Figure 16.: Value Chain of Professional Sport Businesses

Source: Own figure



While support activities can be similarly identified in professional sport businesses (although in an implicit way) as in manufacturing firms, but primary value creation activities are significantly different. Under inbound logistics we mean youth development and player transfer, which is effectively supported by organizational infrastructure and human resource management. Training can be regarded as production which is primarily supported by procurement of assets (balls, goal net, wax, cones, etc.) and technological improvement of different formations and work-outs. Outbound logistics include broadcasting via mass media or – a more abstract case – when a consumer attends a match to ‘consume the product’. The match itself is the sales activity which is supported by – ideally – significant marketing-mix and organizational infrastructure, and after-sales services include autographs, pictures with players or even blogs. It is an interesting fact that after-sales services include after-sales products, such as merchandise products. Production of merchandise products may have a “classic” value chain but manufacturing of these products is the

suppliers' task, and for excellent teams, independent businesses can produce replicates as complementary products of the sport performance.

Markets of sport businesses defined by András can be interpreted to the primary value creation processes of sport businesses' value chain; player transfer and youth development are related to the player market, broadcasting is linked to broadcasting rights market and to a segment of sport consumers (who consume via mass media), the match is connected to the whole consumer market, marketing is linked with sponsor market, and pictures with players, autographs and merchandising are associated with the merchandising market. We must, however, add a new market, the supplier market, which is basically related to trainings through delivering technological and medical improvements which are deployed to improve performance.

3.2.2 The Value Shop

Firms which can be modeled as value shops intend to solve customer problems; they change the intensity of and schedule their activities and deploy their resources to address specific issues. "Examples of firms that rely on an intensive technology are professional services, as found in medicine, law, architecture, and engineering. Important functions or parts of a firm can also have a value creation logic that is best understood as a value shop, even though the primary activities of the overall firm have a value creation logic that is consistent with the product and transformational logic of the value chain." (Stabell – Fjeldstad [1998] p. 420)

The 'shop' label is in connection with the unique problem the firm is facing "and that assembly and matching of both problems and problem-solving resources are important for the organization and management of the value shop." (Stabell – Fjeldstad [1998] p. 421)

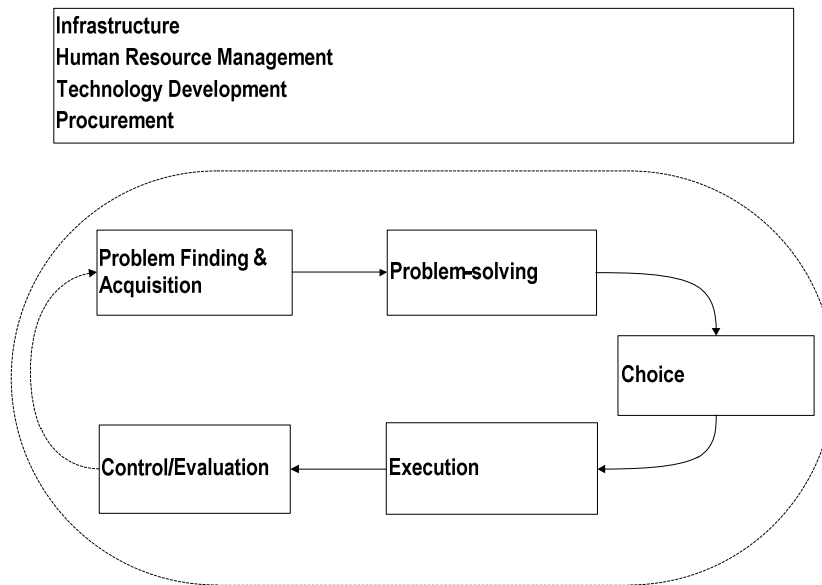
Value creation is problem-solving in the value shop where we make changes in the client's object of interest. The object of interest can be "human, such as in health care and education, [or it can be] ... an artifact to be created or modified, such as a site, a system, or a knowledge state." (Stabell – Fjeldstad [1998] p. 421)

Characteristics of value creation in the value shop:

- *Value information asymmetry*: a strong information asymmetry between the firm and its client is perhaps the single most important attribute. The firm delivers value even by determining that the client has no problem.
- *Configured to deal with unique cases*: Client problems often involve more or less standardized solutions, but the value creation process is organized to deal with unique cases. The client expects the service of the professional and is motivated to follow and trust the instructions by reference to the relevant expertise.
- *Cyclical, iterative and interruptable activities*: In a process, flow of activities is not linear, but iterative between activities and cyclical across the activity set but also potentially interruptable at all stages.
- *Significant sequential and reciprocal interdependence between activities*: although the identification of the problem can influence all the activities, the generation of options can have a feedback to problem definition.
- *Multiple disciplines and specialities in spiralling activity cycles*.
- *Problem-independent information acquisition activities*: The professional often has standard systematic information acquisition activities which provide both value and limits overall costs, in part as it provides the basis for early anticipation of succeeding activities.
- *Leveraging expertise*: Value shops are knowledge intensive with professionals and specialists in the problem domain covered as the core and frequently the largest component of the workforce.
- *Co-performance of support and primary activities*: problem-solving activities include human resource management, procurement and marketing activities.
- *Referrals based on reputation and relationship*: the performance of a value shop contributes to its reputation thus high-quality work strengthens its market position continuously. (Stabell-Fjeldstad [1998] p. 421-422)

Figure 17.: The Value Shop

Source: Stabell-Fjeldstad [1998] p. 424



Primary activities of a value shop include problem-finding and customer acquisition, generating alternative solutions, choosing from alternative solutions, execution of the chosen solution and control and evaluation (see Figure 17). Support activities, such as human resource management, organizational infrastructure, technology development and procurement are not separated sharply from primary activities moreover they play key role in competitive advantage. (Stabell-Fjeldstad [1998])

Value to the client is determined by the success rate and the convenience of the solution. In addition to revenues, value to a firm embodies in reputation, relationships or a problem-solving ability which can be adapted to solve customer problems in the future as well. Relevant examples of signals of value and quality can be measured by success such as winning a professional award (e.g. obtaining a Nobel prize), high-quality employees, publications in prestigious journals, and strong over demand. (Stabell – Fjeldstad [1998])

Value creation of professional sport businesses cannot be explained by the value shop configuration thus no attempt will be made. Otherwise, a scientific research – such as a PhD dissertation – is a typical value shop configuration.

3.2.3 *Value Network and Co-Creation of Value*

Value networks connect the relevant stakeholders of the firm with each other. There are value networks, such as telephone companies, which link only the members of one single stakeholder group, i.e. their consumers, and some value networks connect several stakeholders, such as professional sport businesses.

The mediating technology facilitates exchange relationships among stakeholders distributed in space and time. The firm itself is not the network, but it provides the networking service. Examples of firms that rely on a mediating technology are telephone companies, retail banks, insurance companies, and postal services or entertainment businesses. The term value network emphasizes that the critical success factor of value to any particular customer is the network of stakeholders that are connected. (Stabell – Fjeldstad [1998])

Value creation in value networks happens with linking, what is the facilitation of exchange between stakeholders. “The linking can be direct as in a telephone service, linking two or more parties in a call, or indirect as in retail banking where one customer is not linked directly to another customer, but a group of customers is linked through a common pool of funds”. (Stabell – Fjeldstad [1998] p. 427)

Value creation logic of value networks:

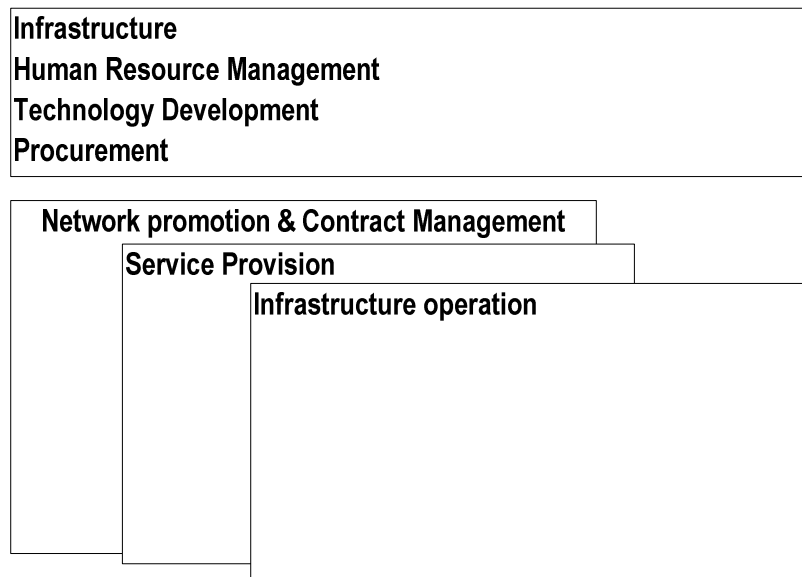
- *Mediators act as club managers:* The firm establishes, monitors, and terminates direct or indirect relationships among members.
- *Service value is a function of positive network demand side externalities:* A new service has relatively low value to its first customers, whereas the costs typically are the highest in the introduction phase. But when the number of customers increases the service will be more and more valuable and popular. The essential difference with the classic product life cycle in this sense is that when the number of customers increases the internal value of a product in the life cycle will not but in value networks it will increase.
- *Value is derived from service, service capacity, and service opportunity:* the customer may receive value from the value network without ever actually invoking the mediation services. Mediators typically charge customers

separately for the linking opportunity and the actual use of linking services in terms of activities performed and capacity utilized.

- *Mediation activities are performed simultaneously at multiple levels:* There is a reciprocal relationship between primary activities. Failure to synchronize activities may lead to a breakdown of the system.
- *Standardization facilitates matching and monitoring of connections.*
- *Distinct life cycle phases of mediation activities:* since the value of the service is dependent on the number of users, it may be difficult to charge for services in the growth phase. But after reaching the critical mass, the service will spread among potential customers by itself.
- *Layered and interconnected industry structure:* the business value system is not made from suppliers and customers as in the value chain, but the simultaneously coperforming levels of mediation service. For example, network operators deliver the infrastructure for service providers in telecommunication, who in turn serve as the communication infrastructure for payment services. (Stabell – Fjeldstad [1998] p. 427-428)

Figure 18.: The Value Network diagram

Source: Stabell – Fjeldstad [1998] p.430



Primary activities of the value network include network promotion and contract management, service provisioning and network infrastructure operation, as Figure 18 shows (with support activities). Support activities of a value network include

organizational infrastructure, human resource management, technology development and procurement.

Among the value network's support activities, two distinct, but related *technology development* activities are important: network infrastructure development and service development. "Network infrastructure development includes activities associated with the design, development, and implementation of network infrastructure. Service development includes everything from the modification of contract terms to the development of brand new services. ... *Procurement* is heavily linked to network infrastructure and service development, and is often specialized for these activities. Similarly, *human resource management* is often quite different for infrastructure development and service development, relative to primary activities. *Firm infrastructure*, i.e. general management, financing, and management information systems, should not be confused with the value network infrastructure." (Stabell – Fjeldstad [1998] p. 430)

In the value network, mediation services between consumers create value thus the difference between this and previous value configurations is that *this process is not directed*. In the ongoing relationship between the customer and the company, breach of the agreement may lead to contract modifications or termination. Increase in the size of the customer base increases the value of the service perceived by a customer and, therefore, it is the critical driver of value in the value network. Capacity utilization may be a driver of both the created value and its costs at the same time since capacity utilization reduces unit costs until a certain level and after that high capacity utilization may also reduce service levels owing to the longer waiting time and the lower service quality. There is sequential and reciprocal interdependence between primary activities thus those have to be synchronized continuously. Learning is relevant at each level of the value network, the firm monitors characteristics and activities of its members, consumers learn from each other and improve the quality of a service together with the company, in addition, interfirm learning with the diffusion of standards may increase the absolute size and hence the value of the networks. (Stabell – Fjeldstad [1998])

In my opinion, it may be possible to interpret professional sport businesses as value chains, however, we may grab the essence of activities if we perceive these firms as value networks, but for a better understanding, we need to define co-creation of value first, and after that, we can discuss the value network of professional sport businesses.

3.2.3.1 *Co-creation of Value*

In the co-creation “the interaction between the firm and the consumer is becoming the locus of value creation and value extraction.” (Prahalad – Ramaswamy [2004] p. 5; Prahalad [2009] p. 267)

Several factors contributed to the development of co-creation of value. Globalization and Internet may be “responsible” for it but these factors had only indirect effects. Transformation of consumers has directly contributed to the co-creation of value.

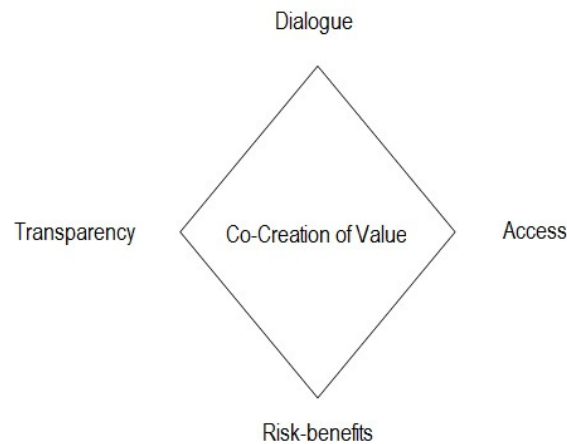
Consumers have become co-creators and extractors of business value. Market has become a forum where consumers play an active role in creating value and, moreover, they can bring their skills and knowledge they possess into the company which may become a competence for a firm. (Prahalad [2009])

Transformation of customers induces *transformation of the firm*. Since consumers are the sources of the value, managers of the firm have to develop a new extensive network, which includes classic suppliers, manufacturers, partners, investors, and consumers where the firm may be able to deploy the collective knowledge available for the whole network. (Prahalad – Ramaswamy [2000])

As a consequence, *transformation of management tasks* is necessary to deploy consumer’s competences. In this case managers have to “engage their customers in an active, explicit, and ongoing dialogue; mobilize communities of customers; manage customer diversity; and cocreate personalized experiences with customers.” (Prahalad – Ramaswamy [2000] p. 81, Prahalad [2009] p. 253)

Figure 19.: The concept of co-creation of value

Source: Prahalad [2009] p. 274



Co-creation of value focuses on understanding of dialogue, access, transparency and risk assessment (Prahalad – Ramaswamy [2004], Prahalad [2009]), as Figure 19 shows.

A *dialogue* of consumers (with the company or among consumers) has to be an active and ongoing interaction of equals to ensure the richer and subtler forms of information exchange. Markets have to be regarded as a set of dialogues between firms and their consumers where opportunities for value creation will be multiplied owing to dialogues and personalized co-creation experiences. (Prahalad – Ramaswamy [2000], Prahalad – Ramaswamy [2004], Prahalad [2009])

Transparency and *access* to information are key elements of the dialogue to be developed. Internet enables consumers to easily establish self-organizing on-line communities where they are able to gain information on products, services and companies from other consumers. The information asymmetry between companies and consumers has been reduced significantly since members of the community share information with others and thus they realize *risk-benefits* related to consumption. Although, consumers are no longer dependent on the firm's experts but the empowerment may develop a higher level of trust between companies and consumers which may even result in a positive effect on experiences. (Prahalad – Ramaswamy [2000], Prahalad – Ramaswamy [2004], Prahalad [2009])

According to Prahalad – Ramaswamy "co-creation converts the *market* into a forum where dialogue among the consumer, the firm, the consumer communities, and network of firms can take place." (Prahalad – Ramaswamy [2004] p. 12, Prahalad [2009] p. 278)

Widespread availability of web 2.0 technology has significantly increased the role of consumer communities since there are many portals where consumers can and do organize communities where they are happy to share their opinion with others. The extent of information about a company or its products and services has significantly grown and consumer communities are continuously monitoring the firm. An advantage can be created from these communities since – in spite of the risks – those serve as reliable forums of promotion and this way communities can be involved in value creation.

In the transformed market of co-creation of value, the focus shifts to the characteristics of the total *experience environment* since consumers perceive products as objects to which they link their experiences. Customers may not accept the experience generated by the firm, it is more likely that they want to create the experience by themselves and through involvement of other experts and consumers. Based on these findings, personalization is about the consumer becoming a co-creator of the content of their experiences. (Prahalad – Ramaswamy [2000], Prahalad – Ramaswamy [2004], Prahalad [2009])

3.2.3.2 *Managing the Personalized Experience*

The firm has to develop an infrastructure which enables an individual consumer or a consumer group to co-create personalized experience with the company. Thus value is co-created by the firm and the consumer. (Prahalad – Ramaswamy [2004])

“An *experience* occurs when a company intentionally uses services as a stage, and goods as props to engage individual customers in a way that creates a memorable event. ...experiences are inherently personal, existing only in the mind of an individual who has been engaged on an emotional, physical, intellectual or even spiritual level.” (Pine II – Gilmore [1998] p. 98-99)

“To provide personalized experiences, companies must create opportunities for customers to experiment with and then decide the level of involvement they want in creating a given experience with a company. Since the level of customer engagement cannot be predetermined, companies will have to give consumers as much choice and *flexibility* as possible.” (Prahalad – Ramaswamy [2000] p. 84, Prahalad [2009] p. 258)

The consumer’s experiences with the company are influenced by the environment in which they occur therefore the method of communication is an integral part of creating the experience. Companies have to manage and integrate several distribution channels where the “key challenge will be to ensure that the nature and quality of the fulfillment, the personalized experience for the individual, is not very different across the channels.” (Prahalad – Ramaswamy [2000] p.84) To manage and assess a multichannel distribution network, a developed information infrastructure is needed which significantly raises the value of information technology, primarily consumer data management systems. (Prahalad – Ramaswamy [2000]; Prahalad [2009])

According to Prahalad and Ramaswamy “it is no longer about e-commerce, but f-commerce” (fulfillment) in Internet companies. (Prahalad – Ramaswamy [2000] p. 85; Prahalad [2009])

The realization that the product is subordinate to the experience derives from that most consumers judge a company's products not by their features but the degree to which a product or a service gives them the experiences they want. Managing the *variety* of consumer experiences is not the same as managing variety in products since the range of experience transcends the company's products (as the experience is inside the consumer’s mind). Consumer expectations can be shaped by active communication with current and potential consumers. Consumers are able to evolve through their experiences and, moreover, they can even improve the firm’s products and services. As a consequence, in addition to its own resources and capabilities, firms – in a paradoxical way – are able to utilize resources and capabilities of active customers to co-create value. (Prahalad – Ramaswamy [2000]; Prahalad [2009])

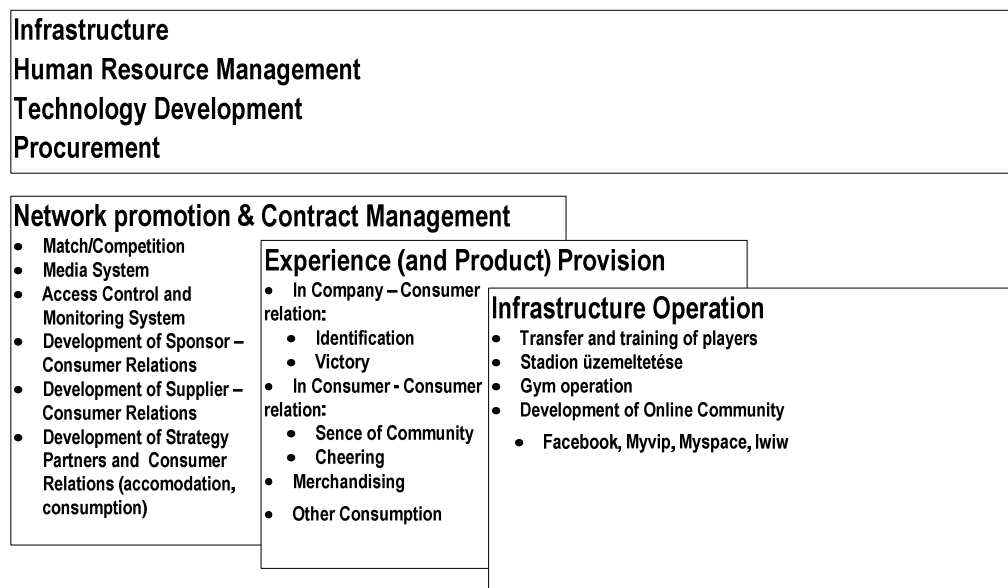
Managers have to develop new infrastructural, functional and management capabilities which shift the focus to co-creation of value through high-level consumer-company interactions and personalized co-creation experience. In the turbulent experience environment, capacity planning, rapid adaptability and reconfiguration ability become the qualifying conditions of successful operations. (Prahalad – Ramaswamy [2004]; Prahalad [2009])

3.2.3.3 The Concepts of Value Network and Co-Creation Applied to Professional Sport Businesses

Inasmuch as the value network and the co-creation of value concepts support each other well, we will discuss professional sport businesses integrated in both concepts simultaneously. Figure 20 shows the value network of professional sport businesses.

Figure 20.: The value network of professional sport businesses

Source: own figure



Operations of professional sport businesses can be basically characterized as they *create connections between different stakeholders of the firm through sport activities*, and *identification* is a key factor in these relations. Consumers of sport activities identify themselves with a team or a player at a certain level, and this identification is a plus linkage which has been recognized by many firms and integrated into their communications strategies. Supposing a domestic example, Hungarian Telecom, Vodafone and Telenor are value networks which are, furthermore, connected to each other as well, but the fee paid for the availability and usage of their network services is the consideration in exchange for their created value. It is quite easy to change telecommunications service provider, however, these companies try to apply a differentiation strategy but these efforts are not quite successful. The level of identification of a consumer with a sport team may be very high thus sport businesses, sponsors, suppliers and local community may realize extraordinary profits. An international example: assuming that the differentiation strategy of Nike

and Adidas is both successful and an individual has become loyal to Nike and it seems impossible to him to buy an Adidas product. But suppose, Adidas become the sponsor and supplier of his favorite team. The individual – after some time – will be happy to buy and proud to wear Adidas products. He will perceive Adidas products as products of his favorite team (and not Adidas's) as he identifies himself with the team and this identification will be extended to the supplier and to other stakeholders as well. In many cases, the supplier and the sponsor sets have major overlapping in professional sport businesses; the supplier provides free products and, moreover, – since its logo appears on its products – pays sponsorship fee for the first team, while other teams of the sport business have to pay the supplier for jerseys and other products.

Different stakeholders are *connected* to each other through the *match*, but this connection remains and still exists after the game. In order to ensure the quality of these relationships, access have to be monitored systematically and continuously; i.e. individual access control systems and monitoring of sport consumers' behavior – both in stadiums and in on-line communities – are necessary. In Hungary, one of the biggest problems with football is hooliganism – none of the sport businesses will be able to develop relationship with and within consumers if they feel uncomfortable attending sport events. The classic example is England where after this problem had been recognized hooligans were prohibited to attend matches and football has become a family activity. In Hungary, water polo seems to be the easiest spectacle sport to be popularized as a family activity but even there is still a lot to be done.

The connection, of course, can be developed through mass media – not only at the location where the sport event takes place. We must, however, highlight that there is a difference between consumption at the event or via mass media. *The most important service of a value network is to offer experience for a customer.* The sense of community can be experienced at a much lower level via mass media than personally attending the event. We have already discussed the experience of identification as a distinctive competence of professional sport businesses. Athletes must be moral role models since consumers identify themselves with them and, thus,

their value system¹¹ is transmitted to customers. Doping, cheating, turning coat and other morally degrading activities are likely to give rise to negative value transfer therefore all possible measures have to be taken to fight against these. The experience of victory may cause even euphoric experience if the game is neck and neck.

Stakeholders can be interconnected through infrastructure operations. To ensure that a match meets the standard requirements, there is a need for players and to train and improve them (transfer and training). It is also important to operate a stadium, a gym or an own hotel since relationships may be developed or cultivated in these premises. On-line communities, such as Facebook, Myspace, Myvip, Iwiw, are designed to sustain consumer communities and inspire their motivation, moreover, different services can be provided (i.e. new relationships between different stakeholders) from which both the sport business and its sponsors, suppliers and strategic partners are able to realize profits. Application of social media tools has started to spread in Hungary as well and it is not a surprising fact that the on-line community of the men handball team MKB Veszprém is the most characteristic.

Of course, support activities are also important but, to my mind, most professional sport businesses have not recognized the importance of these activities yet. Development of organizational infrastructure, such as employing professional managers, information system or financing, should be key activities, however, the Hungarian professional sport businesses need to develop in these fields as well as in human resource management, technology development or procurement, as it can be seen in the empirical part of this study.

The value network is continuously influenced by co-creation and this can even take place between different stakeholders not only between consumers and the company. Interactions between consumers create for example their cheering and sense of community experience – both at the event or in the on-line community. Competences or resources which derive from consumers' voluntary activities can be deployed by

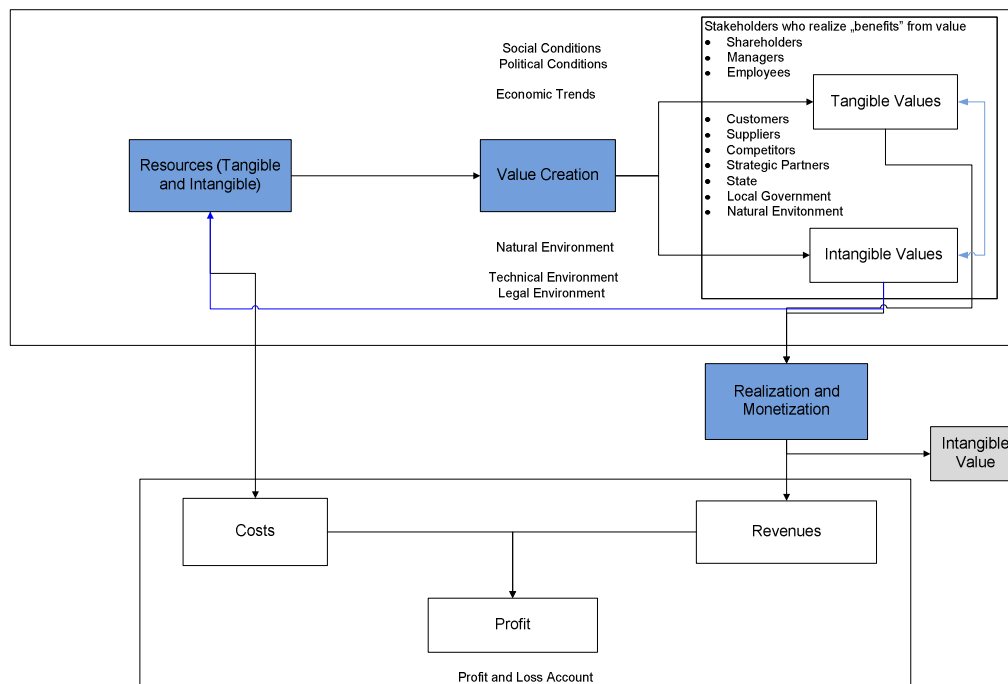
¹¹ Ethical and moral values in sociology

the firm (on-line communities and merchandise shops are operated by volunteers and they help to organize and conduct events, etc.)

3.3 The Target Audience of Value Creation

In this chapter, the created value side of our organizational model will be discussed and we will examine for whom the values are created, as Figure 21 shows.

Figure 21.: The target audience in the organizational model Source: own figure



We have thoroughly discussed how and what kind of values can be created for consumers or customers. We have also discussed the importance of shareholder value as part of dual value creation and its tangible and intangible forms.

However, firm operations can create value for other groups as well, not only for the above two. It is obvious and easy to examine the consumers' and shareholders' groups from a value creation perspective since we can grab the realized value by simple facts and data, such as number of products sold, sales revenues or the results of organizational activities (e.g. retained earnings or free cash flow).

In recent value creation methodologies and configurations, the concept of value, which has been created for consumers and shareholders, is to be extended. Intangible values can be realized by both consumers and shareholders and the business concept of gaining experience makes these values more important and more common.

In addition, we must examine whether values are created for others as well. In the case of the classic supply chain – when the firm purchases raw materials from suppliers and assembles its products then sells those to wholesalers who sell them to retailers who sell them to the end users – value is not only created for these actors. A firm also creates value for the state through its employees on taxes and export as well. Value is created for the natural environment as well, but a negative one, through pollutant emission. But value can be created for the firm's strategic partners through a product bundling marketing strategy or indirect demand increase. All these effects are much more significant if we examine services, or even experience co-creation.

Consequently, the concept of value creation of organizations has to be extended to the stakeholder value concept.

“Any individual or group who/which has a relevant, substantial and reciprocal relationship with the firm's business operations is a stakeholder of the firm.” (Chikán [2003] p.30) Just as “any group or individual who can affect or is affected by the achievement of the organization's objectives” (Freeman [1984] p.52)

The terms interest group and stakeholder are used as a synonyms which can be divided into two classes: internal and external stakeholders. Internal stakeholders include shareholders, managers and employees; external stakeholders include consumers, suppliers, competitors, strategic partners, the state, local governments and natural environment. (Chikán [2008])

Thus *stakeholder value* includes all the tangible and intangible values created for any stakeholders of the firm.

About extension of created value, Neely et al. claims “now – and increasingly in the future – the best way for organizations to survive and prosper in the long term will be to think about the wants and needs of all of their important stakeholders and endeavor to deliver value to each of them.” (Neely et al. [2004] p. 16)

In addition to the created value, we have to examine how stakeholders contribute to the firm’s performance and to what extent meet stakeholders the firm's expectations in exchange for the value created for them. (Neely et al. [2004])

Contribution of stakeholders has a key importance because if costs of value creation exceed their benefits, then it deteriorates shareholder value, which in turn deteriorates stakeholder value as well.

To strengthen the stakeholder value argument, Hillmann – Keim claims that “effective stakeholder management leads to improved financial performance” (Hillmann – Keim [2001] p.132) which they confirmed by an empirical research based on S&P 500 data.

And on the basis of these findings, in addition to customer and shareholder value, stakeholder value will also be discussed in my dissertation. It is an interesting issue whether we should only focus on relevant stakeholders, but we will be able to answer this question based upon the results of our empirical research.

Otherwise, professional sport businesses can create both tangible and intangible values thus in the next section I will present – through domestic and international examples – for which stakeholder what kind of values are created by these firms.

For *shareholders*, shareholder value, which is determined by financial results (calculated upon future free cash flow), is the most important factor in sport organizations. Recognition and prestige realized through sport achievements can be considered as further value for shareholders. Chelsea FC is a good international example, where prestige is worth millions of pounds for Roman Abramovich, the owner of the club.

For *managers, coaches and players*, the most obvious created value is their salary¹², professional recognition, professional career development, reputation, sense of belonging to the team, and, moreover, the love for the team. Furthermore, managers can be recognized by the management society. Managers, coaches and players who are willing to contribute excellent performance even if their salary is well under the average level are good examples for realizing these values.

Consumers, as external stakeholders, perceive the experience of cheering, sense of community, identification and victory as a created value. In spectacle sports, these values can be easily marketed and are reflected in ticket prices and in the popularity of broadcasting. There might be more complex effects of these consumer values. A sport fan who identifies himself with a team or an athlete and starts to pursue a sport will improve and be socialized (instead of becoming a member of a gang) and significant value is likely to be created for this individual, for his family, for the organization, for the society and even for firms which are not related to the given sport at all.

For *suppliers*, the value is the consideration paid for a transaction, and also promotion, or even the contribution to the achievement, such as a new type of swimsuits. In co-creation, however, suppliers and consumers may co-create values by sharing their resources as a contribution to the development or testing of certain products or services.

For *strategic partners*, such as businesses (e.g. buffets, hotels, wellness, cultural events, etc.) which offer services for sport fans of sport organizations and sport tourism, an increase in the number of consumers is likely to deliver value. Moreover, even an opportunity for research (e.g. research on physiology or sports technology researches) may be regarded as a value by other strategic partners.

For *sponsors*, value includes promotion or credibility, e.g. a company – through supporting an athlete or a team – can become credible and thus preferred by the fans of the supported athlete or team.

¹² In this context, we are not interested in whether the salary is considered as a wage or rent or their combination

For *mass media*, value includes the audience of broadcasting, readers of press releases and revenues from advertising. In mass media, a relatively free price mechanism determines the consideration paid for the value. We have to note, if we only focus on short term market results then values which contribute to culture or increase the mass media consumption are not taken into account. Relatively unknown sports attract only a little audience in short term, but their intensive presence correlates positively with the increase in their audience.

A unique feature of professional sport businesses is that they create value for their *competitors* as well. Enhancement of legality or achieving international appearance are obviously values for their rivals as well. It is a good example, when teams of a given nation – by their extraordinary performance – let qualify one more from their domestic rivals for the Champions League, or when credibility of an organization legalizes the presence of other organizations.

For *federations*, value includes legality and opportunity for financial resource allocation. We have to note, that the extent of financial resource allocation is greatly dependent on the performance of sport businesses of the federation.

For the *state*, value includes prestige, role models, socialization or a healthier society. These things result in improved balance of social insurance, higher life expectancy, higher individual performance thus higher tax revenues, decrease in crimes and discrimination, better performance at Olympic Games (defeating other nations) or even sports tourism. At this point, we have to note that this effect is an indirect effect; people will not become healthier just because they attend sport events organized by a professional sport business but if they identify themselves with the team and start to pursue a sport or bring their children to training then these effects can be realized. In Hungary, if the number of people who do regular physical activity had been 10 percentage points higher, the central budget expenses would have been HUF 1.8 billion lower (cost savings on sick pay) in 2009. (Ács – Stocker [2010])

For *local governments*, value derives from new direct workplaces, sport tourism and local patriotism.

For *natural environment*, value may be delivered by a campaign for environmental protection, however, pollution may generate negative values at large events.

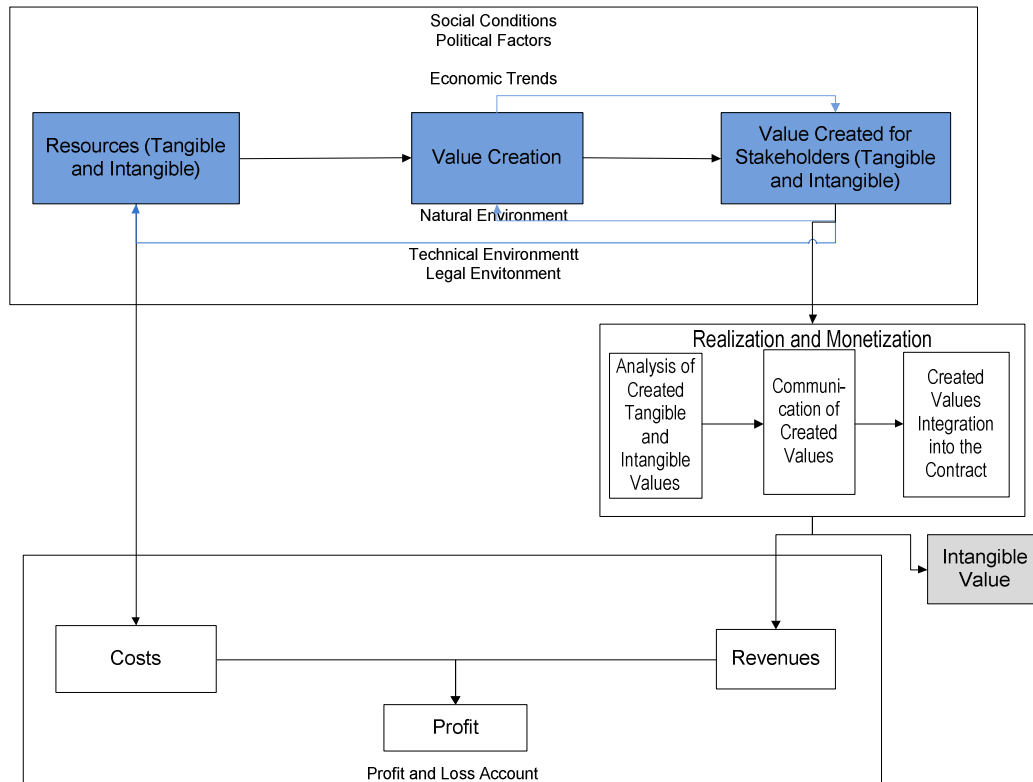
As we presented above, there are several ways how professional sport businesses can deliver value for stakeholders, but we have to note that if the created value is lower than the contribution of stakeholders, as a result, we might have created a negative value. As a consequence, we have to emphasize how important is for a firm to monetize different created values, as it will be presented in the following chapter.

3.4 Perception, Realization and Monetization of Value

In this chapter, we will examine the realization and monetization of created value, as Figure 22 shows.

Figure 22.: Realization and monetization of created value

Source: own figure



As I have mentioned before, we will measure value by money (i.e. the price determined by market) wherever it is possible in spite of that money does not have

any internal value today and even the value to be determined is subjective in many cases. The fact that value is measured by money points to an important attribute. It is obvious, the harder the value to be determined by money, the harder to realize revenue from it – compared to values which can be easily monetized. Value creation is, of course, important for the firm but, from an internal perspective, *monetization* of value has the key importance, i.e. to what extent the created value can be exchanged to money (i.e. revenue), regardless of whether the firm has perceived that value had been delivered.

Monetization in the paradigm of customer value and shareholder value seems to be a simple process; a firm sells its products or services to customers and, thus in return, realizes a certain amount of the customer value as sales revenues. But it is quite complicated to extend this value concept to intangible values (to integrate intangible values into the contract, e.g. materialize them). The situation becomes more complicated when we extend the dual value creation concept and try to identify which values have been delivered for stakeholders thus monetization will become a critical issue.

The given interest groups have to perceive the value delivered by the firm's value creation process since without their perception it is not too likely that they would pay consideration in exchange and then the firm can neither monetize the delivery as sales revenue. In co-creation, a value which derives from a consumer-consumer interaction is hard to be monetized or even perceived by the firm, regardless of whether consumers perceive this value creation.

It is common that in exchange for the value non-cash consideration is realized by the firm, such as voluntary activities (e.g. an individual who operates the on-line community free of charge in exchange for the sense of belonging to the company). In this case, the delivered value is the sense of belonging to the firm, and the value realized by the firm is the wage (which the firm does not have to pay) of the person who operates the on-line community. Moreover, these values are intangible as we can suppose that there is no contract between the parties, the individual is not an employee of the company and does not receive any salary in return for his work.

Besides this, there are values which could be easily measured by money but these cannot be monetized by the firm owing to the bargaining power in the industry structure.

Thus, *stakeholder value* have to be defined more precisely as *realized stakeholder value*, which is the extent of the stakeholder value in exchange any consideration is received, and *monetized stakeholder value*, which can be turned to money and equals with the operating revenues.

Of course, it is important for the firm to transform the biggest possible extent of the created value to money, but monetization is not the most important issue. Moreover, the primary focus is to create as much value as possible, but besides this, the company has to pay attention to monetize the sufficient extent of the created value to operate the company, and the non-monetized part is charity which must not create any operational risk.

3.5 Value Creation and Integration of Resources

We have discussed several conditions and limitations regarding resources to sustainable competitive advantage. The issue, however, is that not only these resources but the processes where these resources create values are key factors to sustainable competitive advantage.

Resources must be analyzed since they are important inputs of the value creation processes, however, we should rather consider values delivered for stakeholders or even perceived values as a starting point of our analysis.

There is a strong relation between these concepts; a firm is not able to sustain competitive advantage only with exceptional value creation processes without the required resources, and, vice versa, to sustain a competitive advantage is not possible by only managing these special resources without the required value creation processes. And it is worth nothing if the delivered value is not perceived (or considered valuable or necessary) by external (or internal) stakeholders.

As a consequence, firms have to focus on:

1. *Values which are present on markets as needs* (regardless of whether a need is known or unknown since it is the purpose of marketing function to address latent needs),
2. *to identify value creation processes which are able to create and deliver these values, and*
3. *resources* (owned by the firm or to be developed) *by means of which value creation processes can be performed.*

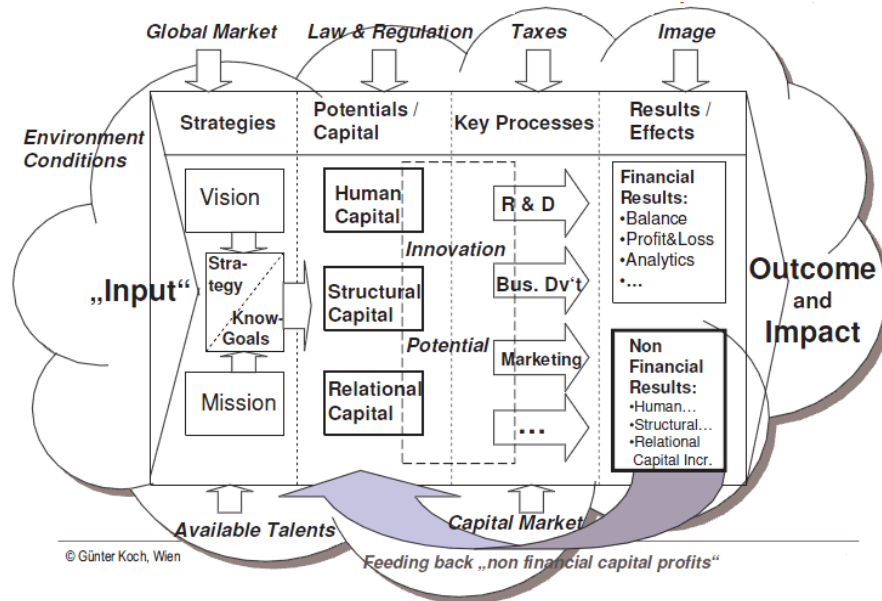
We have to consider also whether the company is able to perform these processes to deliver value by means of these resources *in a profitable way*, and also take into account the *dynamism of the market*. We have to examine whether there is another business or organization in the relevant market which is able to deliver the same perceived value at the same or even a lower price and whether this business or organization is able to meet all the needs of the respective market. If there is such a company, obviously, we do not have a competitive advantage, although, for some time, we can realize normal profit but it is likely not to be sustained.

Sustainability also has to be highlighted. How long should a competitive advantage last to be called sustainable competitive advantage? If we take into consideration *evolution path dependency* (discussed in Chapter II) then the sustainability criteria can be interpreted as development of competences which cannot be closed on by the competitors (presuming that there is no such competence which is able to produce the same or even a better result with shorter evolution path – thus resolving Zeno's paradox). While competitors develop this competence, the firm is able to acquire new resources (or gain experiences which can move the firm further along the learning curve, develop credibility and loyalty in customers, or improve a better value realization competence) which can be deployed and improve the firm's resource base which creates value through better satisfaction of customer needs. These examples reflect that value creation is obviously related to intangible resources and effective value creation processes improve firms' resources, which is called as resource development competence of value creation processes.

In RICARDIS Report, Koch applies a similar logic when he systematizes intellectual capital models (see Figure 23). (RICARDIS [2006])

Figure 23.: Intellectual capital resources in a dynamic environment

Source: RICARDIS [2006] p.66



In this model, Koch examines intellectual capital resources and values created by them in their dynamic environment. Although, the diagram does not contain tangible resources and the value creation process is not emphasized, embeddedness of internal and external factors and the process-oriented approach is extraordinary.

Edvinsson – Richtner – in the RICARDIS Report – underpins our argument: “this combination of intangible resources and activities allows an organization to transform a bundle of material, financial and human resources in a system capable of creating stakeholder value.” (Edvinsson – Richtner [1999] in RICARDIS [2006] p. 126)

4. Research Methodology

4.1 *Aim of the research*

According to Babbie the aim of research can be exploration, description and explanation, however these aims can be found altogether usually. (Babbie [2008])

My research is definitely explorative research, however I have also set out descriptive and explanative research aims. I would like to demonstrate the professional Hungarian sport businesses, I would like to explore the nexus of stakeholders where these operate, the values they create, and the resources they deploy in their value creation process. I have set out explanation type research aim in the examination of the factors determining sport success and economic success, where the deployed resources or the created values can be found as causes.

The exact aim of research is the investigation of the value creation of professional Hungarian sport businesses and within this the examination of the economic features of sport businesses, the realization of the value network configuration, the created values, the resources deployed in value creation, and the relationship between sport success and economic success.

4.2 *Assumptions*

Business level is in the focus of my research is, but as we could see in the aforementioned value creation and resource based logic the examination of the sole business level is not enough, therefore I extend the research focus into the environmental embeddedness of the business and to the stakeholders of value creation.

Because of its importance I have to note that the resource based view of the firm and the industry analysis are based on different assumptions. Barney states that analyses based on Porter's five forces model made simplifying assumptions like the firms within the industry are homogenous according to their resources and strategies (which is actually included even in the definition of the strategic group analysis) and the mobility of firm resources are very high. (Barney [1991])

However as we have seen in the chapter dealing with resources that *resources are sticky* and the *firms can be differentiated by their resources based on what they conceive of and implement strategies*, we have to resolve the mentioned assumptions and substitute them with the assumptions of the resource based view. Although Porter in the case of the value chain does not use these assumptions explicitly, but he accepts several thoughts which are based on these. In the logic of the industry analysis rent is coming from monopolistic rent because of bargaining power, but in the case of the resource based view companies realize *Ricardian rent, which is originated from efficiency and effectiveness of the resources*. In my analysis we will use the resource based assumption again, that means we will think on Ricardian rent, which is not problematic at all however as if we would examine the origin of bargaining power we would see with high probability that it stems from resources or capabilities, therefore Ricardian and monopolistic rent would be the same. Easy example is when the monopol position is based on the access of a given technology or resource. And we can also easily interpret when the monopol position is based on state regulations, which means presumably the company's lobby power, therefore part of its relationship capital resources are the cause of the monopol position.

4.3 *The research model and its logic*

To build the research model I used the resource and the knowledge based logic introduced in the 2nd chapter and the value creation logic introduced in the 3rd chapter.

When we examine the embeddedness in the environment we will not merely focus on the elements of the five forces analysis, rather we will examine *all relevant stakeholders* of the business to whom value can be created. Moreover because of the concept of co-creation we will even let the various stakeholders of the business to create value under their group and between stakeholder groups as well, where the business functions as the platform of this value creation.

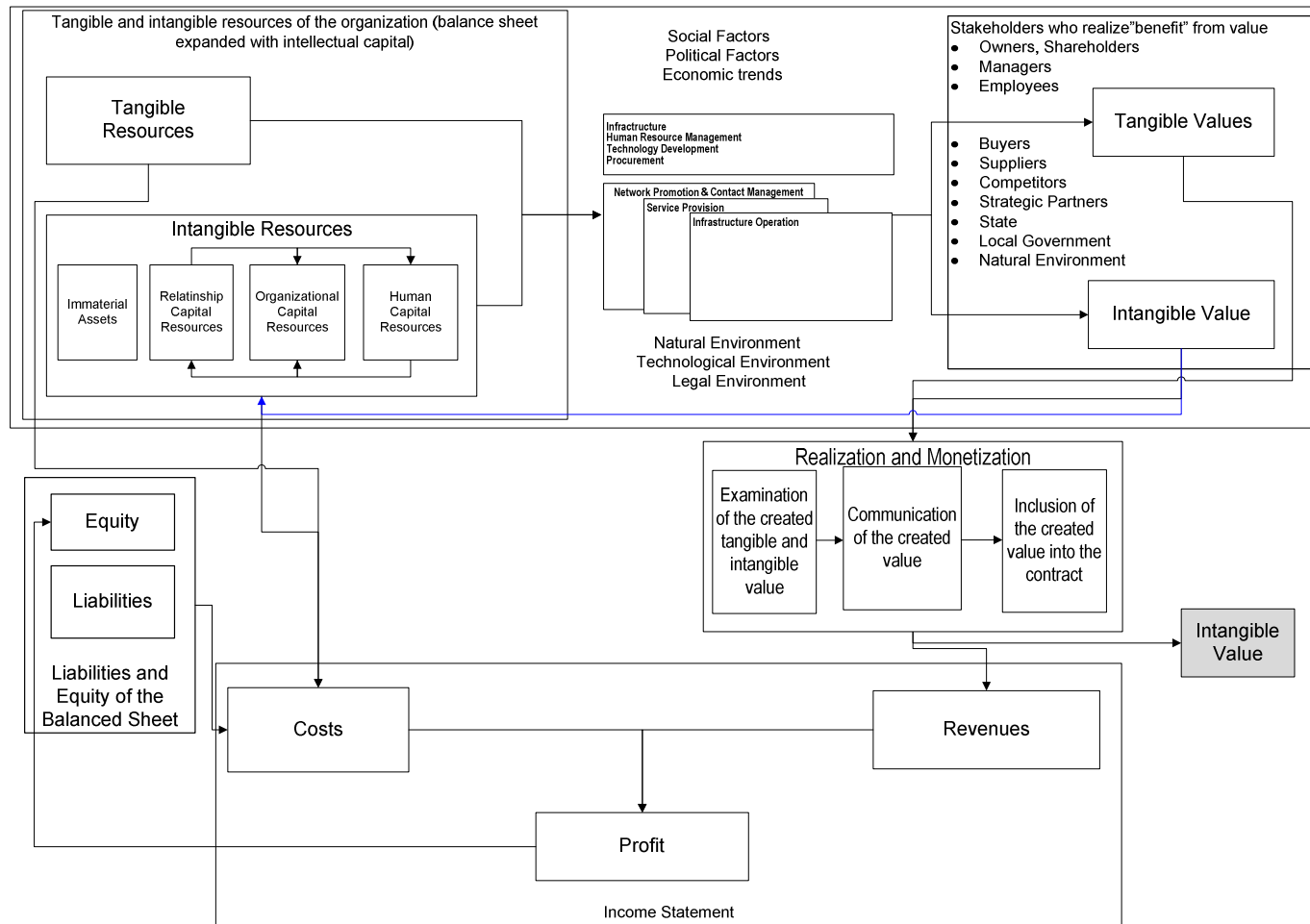
The research model has to have the Anglo-Saxon planning logic that means the business has to decide what and how much it would like to satisfy in its value creation process from the (known or latent) needs and claims in the market and its

resources has to be derived from these. Sadly it is hard to believe that the businesses in focus apply this planning logic, therefore I will be permissive about the planning.

The model should also include the realization and monetization of the created value as well as the costs or expenses of the resources deployed. Based on this the performance of the business can be included in the model until net income and the balance sheet can be included as well. The research model can be seen in figure 24.

Figure 24.: The research model

Source: own figure



4.4 *Research questions and hypotheses*

The following *research questions* and *hypotheses* are addressed in the research:

1. What are the economic features of professional Hungarian sport businesses?
 - H1: Professional Hungarian sport businesses are homogeneous according to their most important business data.
 - H2: The long-term profitability of professional Hungarian sport businesses is possible.
 - H3: Professional Hungarian sport businesses create significant intangible value.
2. Is there significant correlation between sporting success and economic success of professional Hungarian sport businesses?
 - H4: There is strong, significant correlation between sport success and economic success of professional Hungarian sport businesses.
 - H5: There is strong, significant correlation between players' value and sport success of professional Hungarian sport businesses.
 - H6: There is no relationship between sport success and subsidized revenues of professional Hungarian sport businesses.
 - H7: There is strong, significant correlation between sport success and the total revenues and the material and personnel expenses of professional Hungarian sport businesses.
3. Who are the relevant stakeholders of professional Hungarian sport businesses?
4. What are the characteristics of the value creation process of professional Hungarian sport businesses?
5. What kind of resources is deployed by professional Hungarian sport businesses?

4.5 *Selection of research method*

The research is basically primer explorative research, which is based on the collection and analysis of economic and sport data and executive interviews. At the planning of the research I have also planned a survey, but this was not supported by the results of the executive interviews, so this methodological element was rejected.

In the first phase of the research I have analyzed the economic and sport data of some typical professional Hungarian sport businesses, then based on the conclusion of these I have organized executive interviews from different levels of sport. The aims of the interviews were the validation of the first analyses' coherence and the validation of the survey. I have made interviews with sportsman Gergely Harsányi (player in a professional Hungarian sport business, and member of the international team), with sports manager Zsolt Kontra, with ex-strategic manager of a sport organization Milenko Gudic, and with secretary general of Hungarian Basketball Federation dr. Tamás Sterbenz. The executive interviews supported the value creation logic and the coherence of the economic and sport data. According to the survey however it turned out that it is not assured that it measures what it is intended to, without prior theoretical knowledge it is hard to fill out, and the organization of the fill out is problematic. Furthermore it turned out that the self-assessment answers would rather reflect the intended marketing communication of the businesses, and because all of these I have rejected to launch the survey.

For the *examination of the business data* I organized financial data from the research population's financial statements (balance sheet, income statements and from the notes to the financial statements)¹³. The sporting data was organized from the sport federation's databases and some other operating data is originated from the web- and facebook pages of the examined sport businesses.

4.6 Population and sampling

The population of the research consists of Hungarian sport businesses which create value in spectacle team sports and employ professional athletes, engaged in sports activities as an occupation. Therefore sport businesses which are running teams in the first division of men football, men and women handball, men and women basketball, men and women water-polo and ice-hockey.

Although in the CXLV act. of 2000 from sport formulated "that in the case of team sports only sport businesses can participate in the official competition format"

¹³ In Hungary the financial statements of all businesses are published under the sub-webpage of Ministry of Public Administration and Justice. <http://e-beszamolo.kim.gov.hu/kereses-Default.aspx>

(CXLV act. of 2000 from sport 35§ p. 14), this condition was freed up in the act of sport of 2004, which made the designation of the population more difficult as some sport organization liquidated its businesses.

Therefore to be included in the research population I have defined the following three *inclusion criteria*:

1. The member of the population should operate in spectacle team sport, that is in men football, in men or women handball, in men or women basketball, in men or women water-polo or in ice-hockey.
2. The member had to participate in any of the championship season of 2006/07, 2007/08, 2008/09, 2009/10, or 2010/11.
3. In the narrow sense: the member should have to be a sport business, which has open financial statements (balance sheet, income statements and notes to the financial statements) for the given year.

In the broad sense: according to sport data the member can be any kind of sport organization.

I have used as minimal *exclusion criteria* as possible. For example outliers were not excluded from the research, as here we do not infer from sample data, but examine the whole population to reach conclusions. In the level of sport however I had to use exclusion criteria, as there is no sense to include such sport in the research where the number of participant would be very low. In the spectacle sports this problem occurred in the case of water-polo, where in the men section only 2 teams (Szolnok and FTC) out of 13 are run by businesses for a longer term, and the operation of FTC out of them is transferred to a newly formed business. Furthermore two businesses were newly founded (PVSK, and TEVA-Vasas UNIQA), but their financial data will only be available from the reporting period in 2013. Moreover there is not any single sport business out of the 7 teams in the women section. These means out of the 20 possible sport organizations in water-polo only 1 relevant dataset is available, therefore I had to exclude water-polo from the research.

Based on these in the broader sense 103 sport organization constitutes the population, to whom we can interpret sport results. Out of these only 65 is run by sport businesses, which business data can be interpreted as well (that will be the

population in the narrow sense). The distribution of the population can be seen in table 1.

Table 1.: Sport organization and sport businesses in the population according to sport
Source: own figure

	Teams	Sport businesses	Clubs/Associations	Liquidated	Newly founded
Football	23	22		1	
Basketball - men	17	14	3	1	
Basketball - women	17	10	5	1	
Handball - men	21	10	11	3	
Handball - women	19	6	12	5	
Ice Hockey	6	3	3		
SUM	103	65	34	11	
waterpolo	20	2	18		2

According to sampling I do not use sampling as the whole population is examined and all the research questions are addressed to the whole population. The only distinction which is to be made is the narrow or the broad sense as I possess sport data for 103 sport organizations, but financial data is only available for the sport businesses. Sport data are the results of the national championships first division in 2006/07, 2007/08, 2008/09, 2009/10, 2010/11. These results include ranking, earned points, goal difference, and ranking in the playoffs (where it is available). I have got the teams¹⁴ and their sport results from the respective federation's database or official webpage, save the results of basketball which came from the web page <http://www.eurobasket.com> and was later validated by the secretary general of Hungarian Basketball Federation. The following web pages (federal and others) were applied:

- Football: Hungarian Football Federation; <http://www.mlsz.hu/>
- Basketball: Hungarian Basketball Federation; <http://kosarsport.hu/> and <http://www.eurobasket.com>
- Handball: Hungarian Handball Federation and Worldhandball; <http://www.worldhandball.com/>
- Ice-hockey: Hungarian Ice Hockey Federation; <http://www.icehockey.hu/>
- Water-polo: Hungarian Water Polo Federation¹⁵; <http://www.waterpolo.hu/>

The financial data is originated from the balance sheets and income statements of the given sport businesses from financial years of 2007, 2008, 2009 and 2010 completed

¹⁴ As name-sponsors frequently changed I use the last known name of the team

¹⁵ Although its teams were excluded from the research

with the notes of financial statements. The notes of financial statements were however different amongst businesses and for some sport business even among financial years. Therefore these data are not available in a standardized form for all sport businesses, but only for several businesses in a customized way. Some sport businesses had auditor's reports as well, but because of the minimal requirement (minimum 100 million HUF in annual revenues) was difficult to meet their numbers are limited. Although there is not relevant data in the auditor's report it is still very important, because of the validation of the data, and therefore I welcome those cases where auditor's report was also attached. The financial data can be found in the sub-webpage of Ministry of Public Administration and Justice¹⁶ where the Hungarian businesses are obliged to submit their financial statements from 2008.

In the judgments of my thesis proposal it was suggested that I should also use future data. Therefore I planned to ask forecasts when I conducted the research, but I found out in the first interview already that I will get serious difficulties with getting forecasts, which was also confirmed in the federation level interview. Professional Hungarian sport businesses are operating in a nexus nowadays which influences significantly the planning and forecasting. Firstly, the sponsorship revenues are fluctuating because of the continuing economic crisis as several sponsors has financial difficulties or went even to bankruptcy and therefore closing off or do not renew their sponsorship contracts (and former unwritten deals are usually not enforceable). The planned revenues of the sport businesses are more uncertain than before and practically managers can only "plan" with the already arrived revenues (Kontra [2011]).

Secondly the Hungarian government introduced corporate tax (TAO) allowance in the act LXXXII of 2011, entitled act of modification of certain acts regarding the support of sport, to companies if they support sport organizations operating in spectacle team sports in the following actions:

- a.) „youth development,
- b.) development of infrastructure serving the satisfaction of security requirements defined in the specific act about security of sport events,

¹⁶ <http://e-beszamolo.kim.gov.hu/kereses-Default.aspx>

c.) training-related tasks, ...

d.) personnel expenses” (Act LXXXII of 2011, p. 2)

To get the support sport organizations have to apply to their sport federation, which confirms the ideal amount of the application and at the end of the process these amounts are getting to the sport organizations from the given year’s paid corporate taxes. The act formulated a system for a three year period, but this makes planning wacky in this given three years as well, as the obtainable support is filtered three times and before the revenues flow to the sport organization the supporting companies have to pay their corporate taxes. Moreover TAO allowances have significant influence on the former sponsorship contracts which results are unpredictable, even if this questions the real sponsorship relations behind the given sponsorship deals and unveils their donating nature (Sterbenz [2012]).

Furthermore although federations have financial plans submitted by the sport organizations in the beginning of the season, but in these plans unpredictability strongly apply, they are made for only one year and they are not standardized in the way as the financial statements are. Because all of these I could only use factual financial data and also only factual sport data (there is not any system nowadays which are forecasting sport results for years to come).

The population has 322 cases in the broad sense based on the different financial years and sport organizations which distribution can be seen in table 2.

Table 2.: Population in the broad sense

Source: own figure

Sport * Year Crosstabulation						
Count		Year				Total
		2007	2008	2009	2010	
Sport	Men Handball	16	17	15	14	62
	Men Basketball	15	15	15	15	60
	Football	18	18	18	18	72
	Ice-hockey	0	6	6	6	18
	Women Handball	14	13	15	14	56
	Women Basketball	15	13	13	13	54
Total		78	82	82	80	322

The number of members in the population for a given year is different from the number of participants in the championship of the given year as in any financial year there is two championship seasons involved (e.g.: for financial year 2007 the seasons of 2006/07 and 2007/08, where available).

The population in the narrow sense however counts only 202 cases, as only these have financial data as well (see table 3).

Table 3.: Population in the narrow sense

Source: own figure

Sport * Year Crosstabulation						
Count		Year				Total
		2007	2008	2009	2010	
Sport	Men Handball	6	8	6	6	26
	Men Basketball	13	13	13	12	51
	Football	16	17	18	18	69
	Ice-hockey	0	2	2	3	7
	Women Handball	3	4	5	4	16
	Women Basketball	7	8	9	9	33
Total		45	52	53	52	202

It can be seen from table 2 and 3 that in football and men basketball almost all members are included in the research, but in men handball, ice-hockey and women basketball only the 2/3 or the half of them and in women handball only the 1/3 of them. In the excluded water-polo however this rate would be only 5%, from which there is no sense to make any conclusion.

5. Professional sport businesses in Hungary

5.1 Introduction of branches of spectacle team sports

5.1.1 Football

Although these days football¹⁷ does not belong to the most successful sports in Hungary, yet it is the most popular team sport here, even if exact tables in this context are not published either by the MLSZ or any other forums. According to the NB I. men's, adult football championship competition format of the Hungarian Football Association (MLSZ), sport organisations, clubs and businesses could take part in the National Championship First Division (NB I.) mixed (open) method, men's, adult championship providing if there is not bankruptcy or liquidation procedure against them (in case of sport organisations), they are not under dissolution or breaking up (in case of clubs) or they are not under final settlement proceedings (in case of businesses). (MLSZ Nemzeti Bajnokság I. Osztály [2011b] p.2)

Table 4.: Teams in the Hungarian National Championship First Division of Football
source: own figure based on the MLSZ database

Championship results of Football teams in the examination period	Position in the season of				
	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
Videoton FC	6	5	6	2	1
Paksi FC	11	11	11	14	2
Ferencvárosi TC				7	3
ZTE FC	3	7	4	5	4
DVSC-TEVA	1	2	1	1	5
Újpest FC	4	4	2	4	6
Kaposvári Rákóczi	7	6	9	12	7
Haladás Sopron Bank			3	8	8
Győri ETO FC	13	3	8	3	9
Budapest Honvéd	8	8	13	9	10
Vasas-Híd	5	9	10	13	11
Kecskeméti TE			5	10	12
Lombard Pápa Terminál FC				11	13
FGSZ Siófok		14	15		14
MTK Budapest	2	1	7	6	15
Szolnoki MÁV					16
Nyíregyháza Spartacus FC		10	14	15	
DVTK	9	13	12	16	
REAC	14	12	16		
FC Sopron	10	16			
FC Tatabánya	12	15			
Pécsi MFC	15				
Dunakanyar-Vác	16				

¹⁷ Football is also known as soccer in other parts of the world, however as in Hungary the common term is football I will use this term. American football would be referred as American football if considered, but it is not well established in Hungary and could not qualify for the research.

In spite of the possibilities only sport businesses took part in the NB I. during the period under examination and only one of them, the sport business of FC Sopron was liquidated (on the 11th of April 2008) and its team was also disqualified from the championship of 2007/2008.

Together with FC Sopron, all in all, 23 teams took part in the football NB I in the examination period. These are shown in table 4. with the championship positions of the given season. As seen on table 3. economic data are available of almost the whole population of football. From the financial year of 2008 only the liquidated Sopron is missing and from 2007 we cannot see Sopron and MTK (the latter is because of its transformation in 2008).

Let us begin the examination of the data of professional sport businesses with a question of high interest, already examined earlier by professional literature, namely the question of profitability.

In her Ph.d. dissertation, András [2003] raised the following research question: „could a professional football company in Hungary operate on business grounds?” (András [2003] p. 131) To this question András [2003] gave the answer that „a business model built on optimistic strategy resulted negative company enterprise value. ... The examined system of conditions showed that the featured performance could be realized by only one or two teams in Hungary, at best. The analysis proved that the strategy which I traced cannot be succeeded by companies running other teams. Probably they should take another strategy with low-key operational expenses and setting out more modest objectives.” (András [2003] p. 167)

So it is the conclusion of András, that in Hungary even on the grounds of an optimistic strategy, a professional football company cannot operate profitably in the long run in the early 00's.

The question raised by András has been turned up several occasions on conferences connected with sport. For example Bács - Szilágyi [2010] proves by the case of DVSC, that profitable operation as a professional sport business is indeed possible in the long run in Hungarian football (they took the four financial year between 2006 and 2009 as a basis) (Bács - Szilágyi [2010]). Although András emphasized, that in

her business model, she did not feature getting into the table of the Champions League which was achieved by Debrecen in 2009, DVSC was already profitable before that event. From this we could draw the conclusion, that the operation of professional sport businesses in Hungary is significantly progressed by the end of the first decade of the 21st century. However, before drawing any conclusions, let us examine the whole population of professional sport businesses in Hungarian football.

The research question mentioned by András could be examined in case of all Hungarian sport businesses in the financial years between 2007 and 2010, though in this subsection I am going to examine only football, as all the other sports will appear in later ones.

Albeit I am not going to execute business evaluation based on exact discounted free cash-flow, because I could do that only reckoning from the past, because of the lack of business plans, but even from that, lots of data would be missing and it would need several presumptions. Instead of that I have chosen the method to examine whether Hungarian sport businesses would have been able to work profitable in the long run, which I shall operationalize as the positive existing net income in all four financial years. That is, I consider the given sport business profitable in the long run, if positive net income were achieved by it in all of the financial years of 2007, 2008, 2009 and 2010.

In professional Hungarian football DVSC, Nyíregyháza Spartacus FC, Paksi FC, Kaposvári Rákóczi and Lombard Pápa Terminál FC were able to operate profitable in the long run during the research period. It is specifically interesting, that out of them Nyíregyháza Spartacus and Új Lombard were not taken part in the first division in the whole research period, but they had seasons – the Nyíregyháza had 3, the Pápa had 2 – when they were in the second division.

We can even be more permissive as in the broader sense those sport businesses could be considered profitable in the long run which net incomes from the fiscal years of 2007, 2008, 2009 and 2010 had a positive present value in 2007 or positive future value in 2010. Table 5. shows the net present value in 2007 and net future value in 2010 of net incomes of football sport businesses during the examined period.

According to table 5. we can say, that in the examined period the net present value of net incomes was positive in 10 cases, which means there were 10 sport businesses which operation was profitable on the whole four-year-long period. However we should not have to ignore the fact, that there were 13 sport businesses, which net incomes had negative net present value and one of them was also liquidated in 2008. In fact it is really interesting, that only one was liquidated, but I will address this issue later. Also noticeable, that from the profitable companies during the examined period only REAC is from Budapest, moreover it is already not in the first division from the 2009/2010 season. All sport businesses of Budapest, which are presently in the football first division, have losses.

Table 5.: NPV and NFV of net incomes of sport businesses in Football NB I. Source: own figure

Football Club	Net Income NPV 2007	Net Income NFV 2010
DVSC-TEVA	1 364 150	1 582 051
Lombard Pápa Terminál FC	175 242	203 234
Videoton FC	58 356	67 677
ZTE FC	56 890	65 978
Szolnoki MÁV	51 130	59 297
Paksi FC	22 586	26 193
Kaposvári Rákóczi	14 100	16 353
REAC	11 173	12 958
Nyíregyháza Spartacus FC	9 879	11 457
FC Tatabánya	7 558	8 766
FC Sopron	0	0
Haladás Sopron Bank	-812	-941
Újpest FC	-9 767	-11 327
Kecskeméti TE	-30 291	-35 130
Dunakanyar-Vác	-31 092	-36 059
Vasas-HÍD	-31 373	-36 385
FGSZ Siófok	-36 807	-42 686
MTK Budapest	-48 640	-56 410
Pécsi MFC	-156 977	-182 052
DVTK	-213 373	-247 456
Budapest Honvéd	-612 175	-709 960
Győri ETO FC	-843 973	-978 785
Ferencvárosi TC	-2 549 414	-2 956 643
Összesen	-2 793 630	-3 239 869

Furthermore, it is worth examining the overall business data of professional sport businesses in football, which can be seen on table 6. Cumulative data of football reveal a really interesting picture, which, as we could see it later, is actually not so special.

Table 6.: Summary of business data of professional sport businesses in Hungarian Football
Source: own figure

Football - unit of measure '000 HUF	2007	2008	2009	2010
Sales revenues	2 139 153	3 312 504	3 723 691	4 442 905
Other revenues and Extraordinary revenues (typically sponsorship and support)	1 539 807	2 599 354	4 630 195	6 582 820
Total revenues	3 678 960	5 911 858	8 353 886	11 025 725
Material and Personnel expenses (typically wages)	3 569 595	5 153 421	7 679 762	8 578 358
Operating income	-479 641	-424 954	-1 024 183	-1 728 471
Net Income	-593 748	-532 197	-1 824 851	748 295
Owners' Equity	2 948 467	4 442 902	5 237 044	5 995 059
Retained earnings	-4 677 186	-5 460 254	-7 277 598	-9 350 756
Evaluation reserve	4 954 547	5 944 198	5 855 646	4 505 385
Current liabilities (typically accounts payable to players and suppliers and short-term liabilities of supporting companies)	2 794 044	3 310 801	3 845 054	5 041 837
Tangible assets	6 506 934	7 043 317	8 673 788	11 617 178
Invested Capital	3 099 490	3 055 006	4 217 224	5 932 731
Number of teams	18	18	18	18
Missing value	2	1	0	0
Growth rate of Total revenues		61%	41%	32%
Operating Income / Total revenues	-13,04%	-7,19%	-12,26%	-15,68%
Retained earnings / Total revenues	-127,13%	-92,36%	-87,12%	-84,81%
ROA	-7,37%	-6,03%	-11,81%	-14,88%
ROI	-15,47%	-13,91%	-24,29%	-29,13%

On table 6. it can be seen, that during the examined period the Sales revenues, other revenues and extraordinary revenues and so the total revenues of sport businesses taking part in NB I. increased significantly. It is important to underline, that in the year of 2007 the data of MTK and Sopron, while in the year of 2008 the data of Sopron are missing, however the tendency does not change, even if the zero values of these are replaced with estimation¹⁸.

The **growth rate of total revenues** was **61%** (56%) in 2008, **41%** (39%) in 2009 and **32%** in 2010. These growth rates are very impressive, mostly if we consider that the economic crisis has already pierced into Hungary and the GDP decreased by 6,8%, while the total revenues of football sport businesses increased with 41%.

However we should not have to draw too positive consequences from the growth rate of the revenue, for on the level of **operating income** (which is the result of the basic operation of a company) Hungarian sport businesses had losses in all four examined financial year. Moreover, **this loss was 7,19-15,68% of the total income**. Of course this is basically true on the level of net income, however it turned to positive because of the 2 billion HUF extraordinary income of Videoton, which was from the dismissal of the interests and the capital of its former loan by another company. And

¹⁸ On table 6. there are only real data. Estimated data are in brackets, and for the estimation, the data of Sopron were estimated on the grounds of the data of REAC (which has the lowest revenue) and the data of MTK were estimated from next year's data of MTK.

though the owners' equity are positive in all four financial years, it is only because sport business account the value of their players in evaluation reserve and several sport businesses apply significant reserve or additional paid-in capital as well.

The most tragical is, however, the summary of **retained earnings** on the level of sports (the cumulative value of former years' net income, decreased by dividend). Here a **9,35 billion forints loss was accumulated** by 2010, which is 85% of the total revenues of the given year.

Concerning all of these, we could assume, that there are football sport businesses in Hungary which are able to work profitably even in the long run, but these days **the whole professional football in Hungary realized significant losses continuously in the long run**, and it is hard to believe, that it could change all by itself in the financial years ahead.¹⁹ Although professional football can be named as an industry only with serious conditions, but in the competitive sector it is unimaginable that a whole industry could realize of that sort of losses. In the competitive sector companies producing such losses would be liquidated in the middle run by their creditors or bigger companies would acquire them. The lack of liquidation of football sport businesses indicates nicely, that short-term credits mean more than simple finance, as well as their providers realize other benefits beyond interests (mostly, that many of them not even get interests for short term credits). The lack of acquisitions could be traced back to relatively simpler causes. In professional team sports it is impossible to acquire „within the industry,” for example DVSC cannot acquire Ferencváros. Although it is not ruled by the competition format of MLSZ on the dot, but it regulates, that „only one team could take part in the same championship league, cup or division per sport organization. The second (reserve) team of the sport organization, partaking in the championships, could take part in at least one division lower than the men's (first) team. (MLSZ Labdarúgás Versenyszabályzata [2011] p. 24) From that I conclude, that if a sport business would acquire another, then an exact paragraph would get into the competition format, which would lay down, that they could not take part in the same league or division. Think of how the purity of competition could be damaged, if two teams had the same owner.

¹⁹ It is affected by the act 2011/LXXXII, but this topic will be covered later.

5.1.2 *Basketball*

In Hungary both men's and women's championship of basketball are challenging and, unlike football, both genders have sport businesses, so both of them are going to be examined.

„The Men's National Championship I. A division of the Republic of Hungary (henceforth NBI. A) is the mixed scheme competition of the best Hungarian men's basketball teams” (MKOSZ [2011a]), while „the Women's National Championship I. of the Republic of Hungary (henceforth NB I.) is the mixed scheme competition of the best Hungarian women's basketball teams, which is operated by the Hungarian Basketball Federation.” (MKOSZ [2011b])

As it can be seen on table 1. and 7. during the examined period in both men's and women's field there were 17 teams in the first league of basketball and their league positions can be seen on table 7. As we could notice earlier, on table 3., almost all teams are run by sport businesses in men's basketball and we could find several sport businesses in women's basketball, as well (typically run those teams which achieve better results). In basketball both at men's and women's there was one liquidation: in men's league the Ltd. which was running the team of Dombóvár was liquidated in 2011, while in women's league the Ltd. which was running the team of Miskolc was liquidated in 2010. In addition, in men's league the data of the sport business, which runs the Atomerőmű SE are unrealistically low, so it is obvious that here we can see some kind of mixed (club, company²⁰ or sport business) operation.

At men's, in the case of Kecskemét, an interesting transformation took place. Until the 8th of September 2009 the Univer KTE Ltd. ran the basketball team, as an Ltd. with multiple branches of sports, besides judo, fencing, wrestling and weight lifting. After that the Kecskemét KSE Ltd. ran the basketball, the handball and the volleyball teams.²¹

²⁰ Atomerőmű, means Nuclear Plant, which is the only Nuclear Plant in Hungary which is located in Paks and its company has deep embeddedness in the social life of the region.

²¹ I corrected the data of Univer KTE Kft. in the rate of revenue spilling after its exit, while from Kecskeméti KSE Kft. I strained of the volleyball team with its earlier revenue corrected by the rate of inflation, and I split the data between the handball and the basketball team in the rate of weighted sport performance.

Table 7.: Teams and their league positions in Hungarian Basketball First Division

Source: own figure based on MKOSZ database

Teams and their league positions in Hungarian Basketball NB I.		League position: Regular season / Playoffs										Notes
		R 06/07	P 06/07	R 07/08	P 07/08	R 08/09	P 08/09	R 09/10	P 09/10	R 10/11	P 10/11	
Men	Szolnoki Olaj	1	1	6	4	7	7	4	4	1	1	Unreal business data
	Albacomp Fehérvár	3	6	4	3	3	6	5	5	2	2	
	Atomerőmű SE	2	7	5	5	2	1	2	2	3	4	
	Fortress-Lami Véd Kőrmend	6	2	7	2	10	10	3	3	4	3	
	Kecskeméti KSE	9	10	9	10	9	9	7	7	5	5	
	Zalakerámia ZTE KK	5	5	11	11	4	3	1	1	6	6	
	Falco-Szova-KC Szombathely	7	4	1	1	6	4	6	6	7	7	
	Pécsi VSK-Pannonpower	4	3	3	6	1	2	11	11	8	8	
	Kis-Rába Menti Takarékszövetkezet Soproni KC	12	12	10	9	8	8	8	8	9	9	
	Marso-Vagép NYKK	8	8	8	8	11	11	10	10	10	10	
	Kaposvári KK	10	9	12	12	12	12	9	9	11	12	
	Naturtex-SZTE-Szédeák									12	11	Association, d.n.a.
	Factum Sport Debrecen	14	14			13	13	14	14	13	13	Ltd. set up in 09.09.2009
	Konecranes Salgótarján							13	13	14	14	Association, d.n.a.
	Planet-Leasing Dombóvár KC	11	11	2	7	5	5	12	12			Liquidated in 2011
Women	EnterNet Vásárhelyi KS	13	13	14	13	14	14					Basketball school, d.n.a.
	MAFC			13	14							
	Pécs 2010	2	2	2	2	3	2	2	1	1	2	d.n.a for 2007
	UNIQA-Euroleasing Sopron	1	1	1	1	1	1	1	2	2	1	
	UNI SEAT Győr	8	8	7	7	4	5	4	4	3	5	
	ZTE NKK	6	6	4	5	6	6	5	5	4	3	
	FTC									5	6	
	Szeged KE	3	3	3	3	2	3	3	3	6	4	
	Szolnoki MÁV	7	7	6	6	7	7	9	8	7	7	
	Bajai NKK							10		8	8	
	Atomerőmű KSC	12		8	8	9		7	7	9	9	
	Vasas-Basket	11		9		8	8	8		10		
	BSE-FCSM	4	4	5	4	5	4	6	6	11		
	Ceglédi EKK	9	9	10		11		12		12		Association, d.n.a.
	ELTE-BEAC Újbuda	14		11		10		11		13		Section of Club, d.n.a.
	Szombathely Egyetem SE			13		12						Association, d.n.a.
	Kanizsai Diákkosárlabda Klub	13		12								Basketball school, d.n.a.
	DKSK MISI	5	5									Liquidated in 2010
	Kecskeméti KC	10										Ltd. set up in 06.06.2011
												Club, d.n.a.

I begin the examination of the data of Hungarian basketball sport businesses with the question of profitability, as I did in the case of football. In men's basketball only two sport businesses finished all four examined financial years with positive net income, namely the sport businesses running Marso Vagép-NYKK and Atomerőmű SE. Although, as I have already indicated, in case of Atomerőmű SE we have unrealistic measures, so we cannot decide that its running was indeed profitable.

Table 8.: NPV and NFV of net incomes of the sport businesses in basketball NB I.

Source: own figure

'000 HUF	Team	Net Income NPV 2007	Net Income NFV 2010
Men	Fortress-Lami Véd Körmend	17 092	19 822
	Szolnoki Olaj	13 167	15 270
	Atomerőmű SE	3 603	4 179
	Marso-Vagép NYKK	1 919	2 225
	Planet-Leasing Dombóvár KC	-2 203	-2 555
	MAFC	-2 276	-2 640
	Factum Sport Debrecen	-7 302	-8 468
	Pécsi VSK-Pannonpower	-10 627	-12 324
	Kecskeméti KSE	-35 900	-41 635
	Albacomp Fehérvár	-43 824	-50 824
	Kaposvári KK	-53 183	-61 678
	Kis-Rába Menti Takarékszövetkezet Soproni KC	-53 219	-61 720
	Zalakerámia ZTE KK	-79 494	-92 192
	Falco-Szova-KC Szombathely	-112 430	-130 389
	Naturtex-SZTE-Szedeák		
	Konecranes Salgótarján		
	EnterNet Vásárhelyi KS		
Women	UNIQA-Euroleasing Sopron	34 461	39 965
	Bajai NKK	17 816	20 661
	ZTE NKK	10 557	12 243
	Szolnoki MÁV	8 179	9 486
	Szeged KE	1 908	2 212
	FTC	206	239
	Vasas-Basket	-631	-732
	BSE-FCSM	-10 144	-11 764
	UNI SEAT Győr	-69 818	-80 970
	Pécs 2010	-112 098	-130 004
	Atomerőmű KSC		
	Ceglédi EKK		
	ELTE-BEAC Újbuda		
	Szombathelyi Egyetem SE		
	Kanizsai Diákosárlabda Klub		
	DKSK MISI		
	Kecskeméti KC		
	Fortress-Lami Véd Körmend		

In women's field, the sport enterprise running Szeged KE was the only one which had positive net income in all four examined financial years, and besides it, ZTE NKK finished with net income in 2008, 2009 and 2010, but its data of 2007 are missing. Net present value of net income of sport businesses in men's and women's field can be seen on table 8. It is clear from it, that in men's field only 4 sport businesses could produce a positive net present value of net income, thus operate profitably. In women's field, out of 10 sport businesses 6 managed to do the same.

Before we would draw too positive conclusions again, it is worth examining the cumulated business performance of sport businesses running basketball teams, as well, which is shown on table 9.

Table 9.: Summary of business data of professional sport businesses in Hungarian Basketball
Source: own figure

Basketball - unit of measure '000 HUF	2007	2008	2009	2010
Sales revenues	1 610 276	1 807 039	1 747 265	1 794 512
Other revenues and Extraordinary revenues (typically sponsorship and support)	703 581	795 317	942 824	971 313
Total revenues	2 313 857	2 602 356	2 690 089	2 765 825
Material and Personnel expenses (typically wages)	2 158 932	2 454 705	2 531 503	2 698 741
Operating income	-45 817	-199 140	-194 708	-438 319
Net Income	-28 882	-132 148	-111 240	-258 109
Owners' Equity	14 469	-49 938	-172 197	-312 348
Retained earnings	-272 406	-407 267	-542 528	-641 316
Evaluation reserve	83 500	192 681	145 276	215 950
Current liabilities (typically accounts payable to players and suppliers and short-term liabilities of supporting companies)	790 478	778 560	1 018 439	1 148 977
Tangible assets	937 798	868 929	1 022 398	906 476
Invested Capital	147 219	90 269	3 860	-242 602
Number of teams	30	28	28	28
Missing value	9	7	6	6
Growth rate of Total revenues		12%	3%	3%
Operating Income / Total revenues	-1,98%	-7,65%	-7,24%	-15,85%
Retained earnings / Total revenues	-11,77%	-15,65%	-20,17%	-23,19%
ROA	-4,89%	-22,92%	-19,04%	-48,35%
ROI	-31,12%	-220,61%	-5044,71%	180,67%

From table 9 we could see, that in case of **basketball sport businesses** the **annual total revenues spread around 2,6 billion HUF** and the **growth rate of total revenues moves between the interval of 3% and 12%**. An interesting thing is, that the number of sport businesses running men's and women's first league basketball teams is exactly the same, as the number of sport businesses in the first league of football.

Unfortunately basketball sport businesses also achieved negative operating income in all of the examined financial years, which is coupled with negative net income in all these years. These results show that virtually **basketball sport businesses produce losses in the long run in Hungary, which can be even 15,85% of the annual total revenues.**

The picture is even worse if we consider the amount of owners' equity, because it has become negative from 2008 and has been increasing rapidly. The rate of owners' equity is very important, because it is the equity, which was submitted to the business by the owners, it can be utilized freely and shows the economic situation of the business. The negative owners' equity is really problematic, because it shows, that the business has depleted its own equity, secures its operation only from liabilities and the value of liabilities is bigger, than the book value of its assets. Practically it means, if the enterprise would sell all of its assets, then it could not pay all of its creditors. In this case financing from the market is not possible, because there is not any sound actor on the market, who would give credit on market base to an enterprise with negative owners' equity, except if it gets cover for it from an alternative source (for example the Lombard credit, when individuals or other enterprises deposit an amount and the bank offers credit to the enterprise with the negative owners' equity up until the sum of it). Naturally it is possible, that the market value of assets is higher than its book value and it is also possible, that it is not necessary involve additional market sources for maintaining the operation. Nevertheless, negative owners' equity is highly problematic and risky.

Consequently, the negative collective owners' equity of sport businesses running first league basketball teams means, that **basketball teams have depleted the equity submitted by their owners and their further operation is in danger.** Moreover these sport businesses finance their assets, necessary for their operation, almost only from short-term liabilities. Anyway, it shows clearly, that it is probably not market financing, but these creditors are the suppliers (accounts payable for suppliers and for players contracted as suppliers), the National Tax and Customs Administration²² (unpaid taxes), the connected enterprises or otherwise sponsor enterprises which give

²² IRS of Hungary

short-term credit. Otherwise the problem can be easily solved in the short run. In the case of football sport businesses, the owners' equity is not negative mostly because the value of their players is registered in their owners' equity as evaluation reserve, just like in men's basketball at the team of Sopron and Pécs and in women's basketball at the team of Pécs. Although in basketball it is more difficult to adapt market value to the players, yet a value formed by such an evaluation system could be registered as evaluation reserve or as intangible assets, and to make their owners' equity positive this way.

In the long run, however, the problem of deficit cannot be solved with this solution, it has to be solved by teams either with increasing their revenues or decreasing their expenses. The TAO act quoted earlier will have a positive effect on the revenues side of sport businesses, but the effects of it, and other possible solutions will be covered later, for they concerns other sports, as well.

Such deficit of basketball sport businesses in the long run includes the problem, that, because of their debts, sport businesses could be disqualified from the first league or their creditors make them liquidated. Moreover as acquisitions within the branch of sport are not possible, not only because the federation would make a regulation against it, but also even the profitable sport businesses could not have enough money to acquire those with losses.

5.1.3 Handball

According to the years 2011-2012 first league competition format of women's Handball National Championship of the Republic of Hungary and of the Budapest Bank Men's Handball League announced by the Hungarian Handball Federation, the aim of the championship „is to make a continuous and quality competition amongst the best Hungarian handball teams.” (MKSZ [2011])

Table 10.: Teams and their league positions in Hungarian Handball First League

Source: own figure based on MKSZ database

Teams and their league positions in Hungarian Handball NB I.		League position: Regular Season / Playoffs										Notes
		R 06/07	P 06/07	R 07/08	P 07/08	R 08/09	P 08/09	R 09/10	P 09/10	R 10/11	P 10/11	
Men	MKB Veszprém KC	1	2		1	1	1	1	1	1	1	Ltd. dissolved in 2009
	Pick Szeged	2	1		2	2	2	2	2	2	2	
	Celebi FTC							10	9	4	3	Ltd. set up in 2010
	Tatabánya Carbonex KC	8	8		9	6	6	4	3	5	4	d.n.a. in 2007
	Balatonfüredi KSE				10	5	5	9	7	6	5	Ltd. set up in 2008
	Csurgói KK					12	9	7	6	7	6	Club, d.n.a.
	Pajor Pálinka Kecskeméti KSE					10	10	8	8	8	7	business data of 2009 and 2010 are estimated
	PLER KC	4	4		6	4	4	6	5	9	8	
	TM-LINE PTE-PEAC PVSE									11	9	Ltd. liquidated in 2010
	Mezőkövesdi KC				13	8	7	11	10	10	10	Club, d.n.a.
	Orosházi FKSE									12	11	Association, d.n.a.
	Dunaferri Alexandra	3	3		3	3	3	5	4	13	12	Ltd. liquidated in 2011
	DKSE - Hotel Lycium	5	5		4	7	8	13	11			Association, broken off
	Erste-Békési FK C	6	6		5							
	Győri ETO FK C	7	7		12	13						Club, broken off
	Gyöngyösi KK	9	10		11	9	11	12	12			Ltd. set up in 11.07.2011
	Nyíregyházi KSE	10	11		16							Ltd. liquidated in 2011
	Százhalombattai KE	11	9		7	11	12					Association, d.n.a.
	Komlói BSK	12	12		8	14						Ltd. liquidated in 2010
	Tatai HAC				14							Club, d.n.a.
	Hort SE				15							Association, d.n.a.
	Tatran Presov							3		3		From Slovakia
Women	Győri Audi ETO KC	2	2	1		1	1	1	1	1	1	Club, d.n.a.
	DVSC-KORVEX	5	5	5		2	3	3	2	3	2	
	FTC-Rail Cargo Hungaria	1	1	3		3	2	5	5	2	3	
	SYMA-Váci NKSE	9	9	9		10		2	3	4	4	Association, d.n.a.
	Alcoa FK RightPhone	4	4	4		5	5	7	8	5	5	Ltd. liquidated in 2010
	Budapest Bank-Békéscsabai ENK SE	10	11	8		4	4	4	4	6	6	Ltd. liquidated in 2009
	Dunaújvárosi Regale Klíma	3	3	2		7	8	8	6	7	7	not in operation anymore
	Veszprém Barabás KC							9	9	8	8	Club, d.n.a.
	ETV-Erdi VSE									9	9	Ltd. set up in 02.12.2009
	Siófok KC-Galerius Fürdő							6	7	10	10	Ltd. set up in 29.02.2008
	UKSE Szekszárd									12	11	Association, d.n.a.
	Óbudai Goldberger SE/Újbuda TC/Hunnia KSK			12				12	12	11	12	Broken off
	Vasas SC	6	6	10		12						Club, d.n.a.
	Kiskunhalas NKSE-Bravotel	7	7	11		9		11	11			Association, d.n.a.
	ASA-Consolis-HNKC	8	8	6		6	6	10	10			Club, broken off
	Bp. Kőbányai Spartacus SC	12	10									Club, d.n.a.
	Németh Tóli Makó	11	12									Broken off
	Tajtvári-Nyíradony			7		8	7					Ltd. liquidated in 2010
	Pikler-PTE-PEAC					11						

Teams taking part in the first league of men's and women's handball and their championship results in the examined period are shown on table 10. There are only 10 teams which are run by sport businesses out of all the teams in the men's first division, moreover, because of various reasons, there are only 3 amongst them which have available data of all four financial years. The many liquidation and dissolution are especially painful. Out of them, only perhaps the team of MKB Veszprém was cancelled by free will of the owners. The situation is similarly bad in women's field. There were 9 sport businesses here in the past 5 seasons and there are 3 of them which have available data for all four financial years. In the women's field **several sport businesses were also liquidated and clubs were broken off.** It is indeed interesting, that while in first division football and in first division men's and women's basketball only one sport business was liquidated respectively, in first league handball, 5 sport businesses were liquidated at men's and 3 were liquidated at women's, and besides of them, 4 clubs were also broken off.

A further problem is that we do not possess business data in cases of Győri Audi ETO KC and MKB Veszprém KC (although in case of MKB, we do not have them only for 2009 and 2010), for these two teams exceeds far and away from the Hungarian field, moreover, on international level, in the championship league they take part usually as probable winners. Thus, economic data of handball are contorted on the level of sport, and leaders of the aforementioned sport clubs did not submit their business data for this research, not even for our humble request.

Examination of the question of profitability shows an interesting picture, in case of handball. In all four years of the research period, neither of the handball sport businesses could realize positive net income, moreover, instead of it, continuous losses are typical. In case of net income (see table 11) in men's field out of 10 sport businesses only 2 could reach positive net present value, however, at women's, out of 6 sport businesses 4 could reach it. From these data we could conclude, that although in the case of handball sport businesses profitable operation is also possible, but it is more like a unique and rare phenomenon, and the many liquidations and terminations show, that operation with deficit in the long run cannot be sustainable.

Table 11.: NPV and NFV of net incomes of the sport businesses in handball First League
Source: own figure

'000 HUF	Team	Net Income NPV 2007	Net Income NFV 2010
Men	MKB Veszprém KC	20 033	23 232
	Balatonfüredi KSE	274	317
	Komlói BSK	-455	-528
	Tatabánya Carbonex KC	-2 513	-2 915
	Erste-Békési FKC	-3 956	-4 588
	Celebi FTC	-9 937	-11 524
	PLER KC	-20 651	-23 950
	Pajor Pálinka Kecskeméti KSE	-22 537	-26 137
	Dunaferr Alexandra	-46 903	-54 394
	Pick Szeged	-163 180	-189 246
	Other teams do not have business data available!		
Women	DVSC-KORVEX	14 920	17 303
	FTC-Rail Cargo Hungaria	14 826	17 195
	Pikker-PTE-PEAC	1 698	1 969
	Siófok KC-Galerius Fürdő	202	235
	ÉTV-Érdi VSE	-1 241	-1 439
	Tajtavill-Nyíradony	-6 052	-7 018
	Other teams do not have business data available!		

On the level of sport, handball does not show more positive picture either (see table 12). Handball sport businesses realized a total revenues of 1-1,5 billion HUF annually, in the examined period, and here is the first time when we can see decrease of total revenues from one year to the other (from 2008 to 2009). In this case we have to take in mind the contorting effect of the lack of data of MKB Veszprém and Győri Audi ETO. Supposedly, if those two teams were run by sport businesses, then the revenue and other business data of handball sport businesses would be substantially higher. In fact, one of the most significant factor of the decrease of total income between the years 2008 and 2009 is that the MKB Veszprém changed its operation, and thus we do not possess data about the Ltd. running the team for 2009, that is, the revenue of almost 330 million HUF realized in 2008 quasi „fell out” from the total revenues of sport businesses in handball.

Table 12.: Summary of business data of professional sport businesses in Hungarian Handball
Source: own figure

Handball - unit of measure '000 HUF	2007	2008	2009	2010
Sales revenues	872 989	1 267 477	752 427	815 319
Other revenues and Extraordinary revenues (typically sponsorship and support)	206 425	328 602	400 266	422 996
Total revenues	1 079 414	1 596 079	1 152 692	1 238 315
Material and Personnel expenses (typically wages)	1 096 868	1 566 103	1 077 654	1 166 880
Operating income	-56 556	-10 567	-45 081	-135 670
Net Income	-63 540	-37 663	-39 726	-111 229
Owners' Equity	-56 944	-128 300	-133 766	-203 469
Retained earnings	-285 802	-329 502	-310 326	-122 148
Evaluation reserve	0	0	0	0
Current liabilities (typically accounts payable to players and suppliers and short-term liabilities of supporting companies)	322 879	306 134	329 271	426 796
Tangible assets	356 947	362 706	267 646	243 276
Invested Capital	29 968	56 472	-61 645	-183 639
Number of teams	30	30	30	28
Missing value	21	18	19	18
Growth rate of Total revenues		48%	-28%	7%
Operating Income / Total revenues	-5,24%	-0,66%	-3,91%	-10,96%
Retained earnings / Total revenues	-26,48%	-20,64%	-26,92%	-9,86%
ROA	-15,84%	-2,91%	-16,84%	-55,77%
ROI	-188,72%	-18,71%	73,13%	73,88%

On the level of operating income we can see the usual picture in the case handball, as well. The operating income of sport businesses is negative in all four years, which naturally means that their net income is also negative.

An unfortunate fact in handball (just like in basketball) that **the cumulative owners' equity of sport businesses is negative and it increases rapidly**, which means forming the same problem discussed earlier. Enterprises owning negative owners' equity are unable to finance their operation from the market; they get the amounts for operation from current liabilities in handball, as well. These appear typically in the form of account payables and short-term credits offered by sponsor companies. For that matter, **the rate of current liabilities has grown for more than the double of the total value of equity by 2010**. This means that in market conditions handball sport businesses would be liquidated within a year by the market.

5.1.4 Ice-hockey

In case of ice-hockey even the definition of the first division is not simple. Basically, we could name the OB I as the Hungarian first division, but into its results counts the results of MOL League²³, which is a league formed together with Romania. Indeed, as far as I am concerned, for such a small country as Hungary, international leagues

²³ MOL is the Hungarian based regional Oil Company which sponsors the league

are really blissful, merely it makes the operationalization of my research a bit difficult.

By all accounts, I am going to consider the results achieved in MOL League during the research, and I shall use the financial data of sport businesses running teams in MOL League. We can see teams and their results taking part in MOL League in table 13.

Table 13.: Teams and their league positions in Hungarian Ice-Hockey First League
Source: own figure based on MJSZ database

Team	League position: Regular Season / Playoffs						Notes
	R 08/09	P 08/09	R 09/10	P 09/10	R 10/11	P 10/11	
HC Csíkszereda	1	1			1	1	not Hungarian, merged together
SC Csíkszereda	2	2	2	4			
Újpesti TE	3	3	3	2	9	8	
Vasas Bp. Stars	4	4	4	1	4	4	Ltd. set up 06.01.2011
Dab Docler	5		1	3	2	2	d.n.a. for 2007
Steua Bucuresti	6				8	9	not Hungarian
Ferencvárosi TC	7		5		5	5	Ltd. set up 06.08.2009
Progyrn Hargita Gyöngye	8						not Hungarian
Miskolci JJSE	9		6		3	3	Association, d.n.a.
Sapa Fehérvár AV19	10				7	7	Section of club, farm team, d.n.a.
SCM Fenestela 68 Brasov			7		6	6	not Hungarian

Another difficulty is that SAPA Fehérvár AV19 takes part in Erste Bank League (EBEL), an international league gathering neighborhood countries, which is on a higher level than MOL League and Fehérvár takes part in MOL League, as well with its farm team. From the viewpoint of the research, participation of SAPA AV19 in a higher division would not be a problem, if data of its sport business were realistic (for SAPA AV19 is a Hungarian sport business even this way, which takes part in a spectacle team sport). However financial data of the sport business running the team of SAPA AV19 has obviously not been containing the financial performance of the EBEL team since 2007. We could get an insight into the financial data of SAPA AV19 from the TAO application of the club. According to that, the club realized 686 million HUF of revenue in the financial year of 2010 which is, of course, significantly more than revenues of teams taking part in MOL League.

In the examination of profitability, the only team, which had positive net income during the whole research period, is the sport enterprise running the team of Dab Docler (although data of the year 2007 are missing here).

Table 14.: NFV of net incomes of the sport businesses in the MOL League Source: own figure

Team	Net income NFV 2010
Dab Docler	24 347
Újpesti TE	-7 352
Ferencvárosi TC	-41 642
Vasas Bp. Stars	
Miskolci JJSE	
Alba Volán SC jégkorong szakosztály	

Table 14 shows the net future value of net income in the examined period. Here, unlike earlier, we do not examine the net present value of 2007, because I have financial data only of UTE Profi Sport Ltd. from this year. Dunaújvárosi Jégkorong Ltd. is the only one, which works profitable in the long run, out of ice-hockey sport businesses.

The two or three ice-hockey sport businesses, which I have data from, realized a total income of a mere 125 million HUF (see table 15). This remained more or less the same in the different financial years. It shows that the business data of SAPA AV19 is badly missing, from which we know, that it realized 686 million HUF revenues only in 2010. However, despite of even my especial request, leadership of Alba Volán SC ice-hockey division has not provided data.

Ice-hockey sport businesses had losses for the year 2010, and this loss made their owners' equity negative, which shows the earlier problem's appearance in ice-hockey as well. As long as owners of ice-hockey sport businesses complete their negative owners' equity with additional paid-in capital or the net income of 2011 can compensate it, then it can be only a short-term reel and operation in the long run will not be in danger. Otherwise, ice-hockey sport businesses are threatened by the same dangers which are threatening basketball or handball sport businesses.

Table 15.: Summary of business data of professional sport businesses in Hungarian Ice-hockey
Source: own figure

Ice Hockey - unit of measure '000 HUF	2008	2009	2010
Sales revenues	122 962	110 538	99 272
Other revenues and Extraordinary revenues (typically sponsorship and support)	2 670	14 840	25 032
Total revenues	125 632	125 378	124 304
Material and Personnel expenses (typically wages)	112 433	119 650	150 331
Operating income	11 823	1 547	-36 577
Net Income	11 311	719	-38 593
Owners' Equity	2 059	3 491	-35 101
Retained earnings	-13 752	-2 229	-1 509
Evaluation reserve	0	0	0
Current liabilities (typically accounts payable to players and suppliers and short-term liabilities of supporting companies)	19 744	35 728	85 613
Tangible assets	20 785	23 987	32 099
Invested Capital			
Number of teams	6	6	6
Missing value	4	3	3
Growth rate of Total revenues		0%	-1%
Operating Income / Total revenues	9,41%	1,23%	-29,43%
Retained earnings / Total revenues	-10,95%	-1,78%	-1,21%
ROA	56,88%	6,45%	-113,95%

5.1.5 Water-polo

As I mentioned before, I cannot examine water-polo as a branch of sports, because of its missing sport businesses and financial data. Practically, the only sport business is the one, which runs the water-polo team of Szolnok, that has data in the Register of the Ministry of Public Administration and Justice²⁴, thus we could not draw any relevant conclusion concerning water-polo. Operating sport businesses is not characteristic in water-polo, although it is true, that new sport businesses are established, but at the moment, even together with them, only 20% of the whole field is covered by sport businesses. And at first in 2013 will we possess data about 75% of them.

5.1.6 Effects of TAO allowance that can be forecasted

In act LXXXII of 2011, entitled act of modification of certain acts regarding the support of sport, which was mentioned several times earlier, corporate tax (TAO) allowances were introduced, and through them the state provides new sources for sport businesses operating in spectacle team sports (besides other sport organizations), even if it seems as a significant intervention into the market co-

²⁴ To where all businesses have to submit their financial statements

ordination. According to the act, those companies could take part in TAO allowance, which proves support to the following:

- e.) the national federation of the given spectacle team sport
- f.) amateur sport organizations operating as members of the national professional association of the given spectacle team sport, including sport schools operating according to the rules defined in the act regarding sport, and as members of the federation
- g.) professional sport organizations operating as members of the national federation of the given spectacle team sport
- h.) public foundations come into existence for the sake of the given spectacle team sport
- i.) public body of sport disposing the power of decision-making in state support aiming of sport and granting support, which aims the strategic development of sport

(Act LXXXII of 2011, p. 1-2)

Those companies can get corporate tax reduction, which are granting support – for professional sport organizations operating as members of the national sport federation of spectacle team sports, which are forming the population of the research – for the following fields:

- ca.) **„youth development,**
- cb.) **development of infrastructure serving the satisfaction of security requirements** defined in the specific act about security of sport events,
- cc.) **training-related tasks** – on condition that support offered on such pretence can be offered as common or vocational training support in accordance with section 8 of committee enactment of 800/2008/EK 6th August 2008, about announcing the compatibility of certain kinds of supports with the common market (enactment of general company exemption) in engagement of items 87 and 88 of the Treaty establishing the European Community,
- cd.) **personnel expenses** – on condition that support offered on such pretence can be offered as support of de minimis amount according to the committee enactment of 1998/2006/EK about enforcement of supports of de minimis amount” (Act LXXXII of 2011, p. 2)

In my opinion, in case of areas regulated by the act, state support can be a good solution in case of professional sport, as well, in favor of development and improvement in the long run. However an important question emerges: what effects will the instrument have on the former financing structure of spectacle sports?

- Does it take the place of former sponsorship contracts? It would admit, that former sponsorship was rather donation.
- Does it cut back the supports received earlier from the local government? It would be the centralization of financing the values created for local communities as it were shifted to the whole society.
- Does it increase rate of wages significantly? Thus getting to the internal stakeholders as only an extra profit with techniques of cross-financing. Here we could really speak about extra profit, because, intervention into the market structure can result profit-increase in the case of sport businesses or players, coaches and managers working as their suppliers. But it can even lift the rate of wages simply without investing any extra efforts.

Another exciting question is how long will be the supporting time and what will happen of its termination? Would the changing financial structure set back to its original form, because of the missing revenues or would the whole segment realize such losses, which could endanger its long term operation, and make a new system of state support unavoidable?

The most important question is whether the involvement of the state into the current, ineffectively operating market structure results an increase in effectiveness and efficiency in case of sport businesses?

Answers to these questions would exceed the prospect given by my thesis; however, these could be exciting research questions for a later examination. Approved TAO allowances are available for the public on the websites of sport federations. Hopefully, most of them will be applied. Based on professional and financial results of spectacle sports in Hungary, answers can be given to the aforementioned questions even from July 2014, insofar the system is unchanged.

5.2 Hypotheses and their verifications about the characteristics of the research population

5.2.1 Homogeneity of professional Hungarian sport businesses

By the introduction of sport businesses and their fundamental financial data taking part in the research, verification of my three first hypotheses becomes possible. The mentality of today's Hungarian sport profession suggests, that there are significant differences of sport businesses, by the branches of sports, however, on grounds of strategic management, branches of sports are not necessarily a factor of difference in case of sport businesses. The first hypothesis of my research is associated with the segmentation of sport businesses by branches of sports.

H1. In the circle of **Hungarian** professional sport businesses the branch of sport is not a significant differentiating factor, thus the **professional sport businesses** which are running the clubs taking part in the first division of national championship in spectacle team sports **are homogeneous according to their most important business data.**

The first hypothesis comes from the scope of problems, that amongst the sport businesses we are principally engaged with sport businesses running teams of football, while we deal the other branches of spectacle team sports separately. Knowing of different financial data it is conceivable, that this hypothesis would be rejected in case of another geographical segmentation. However my research is focused to Hungary, thus I am going to prove the hypothesis by Hungarian data.

Of sport businesses running teams taking part in the Premier League it is easily conceivable, that they stand out of other English sport businesses on the strength of their financial indicators, however, it is important to see, that they compete in a different dimension comparing Hungarian sport businesses. For example, Chelsea FC plc., which runs Chelsea FC, bought Fernando Torres for 50 million GBP on the 1st of February 2011, thus on that day's course of exchange it bought the most expensive footballer of Chelsea with 44% more expensively, than it was the total annual

revenue of all the Hungarian first league football businesses together in their record year of 2010.

For the examination of the homogeneity of Hungarian sport businesses I chose the method of cluster analysis, because „the primordial aim of cluster analysis is that it arranges the points of observation into relatively homogenic groups by the modifiers drawn into the analysis.” (Sajtos – Mitev [2010] p. 283) That is, I am going to constitute clusters according to the most important financial indexes and look for an answer to the question, how many significantly different clusters containing relevant number of objects can describe Hungarian sport businesses.

Amongst the proceedings of clustering, the hierarchical methods are those, which help defining the number of necessary clusters, thus I performed a hierarchical clustering based on between-group linkage.

In case of variables drawn into the analysis, we need such financial indicators, which are specifically relevant and represent the cases quite well. Thus, I drew the following variables into the cluster analysis:

1. **Value of immaterial assets:** it is, typically and in the highest degree, the value of players.
2. **Total assets:** all physical assets used in value creation, including immaterial assets.
3. **Retained earnings:** amount of profits and/or losses accumulated by sport businesses during their former operation.
4. **Net income:** net income of the given financial year.
5. **Total revenues:** the sum of sales revenues, other revenues and extraordinary revenues. In case of sport businesses other revenues and extraordinary revenues are usually supporting in their nature, and their extent is significant.
6. **Material and personnel expenses:** the sum of material and personnel expenses. On both of these pretences Hungarian sport businesses allocate payment for their players, and it can be perceived, that the bigger the sport business is, the smaller is the extent of contracts made with players as suppliers within material expenses (regarding image-transferring or other marketing activity).

During examinations for the preparation of cluster analysis, it turned out, that the value of immaterial assets can be defined in only 96 cases out of 202 relevant ones, thus this modifier had to be excluded from the cluster analysis, that is, I performed it with the help of modifiers 2-6.

Table 16.: Correlation of variables drawn into the cluster analysis

Source: own source

		Correlations					
		IMMATERIAL ASSETS	TOTAL ASSETS	RETAINED EARNINGS	NET INCOME	TOTAL REVENUES	MATERIAL AND PERSONNEL EXPENSES (typically wages)
IMMATERIAL ASSETS	Pearson Correlation	1	,480**	-,386**	,054	,313**	,302**
	Sig. (2-tailed)		,000	,000	,601	,002	,003
	N	96	96	95	96	96	96
TOTAL ASSETS	Pearson Correlation	,480**	1	-,839**	,011	,594**	,602**
	Sig. (2-tailed)	,000		,000	,881	,000	,000
	N	96	202	197	202	201	202
RETAINED EARNINGS	Pearson Correlation	-,386**	-,839**	1	,255**	-,408**	-,593**
	Sig. (2-tailed)	,000	,000		,000	,000	,000
	N	95	197	197	197	197	197
NET INCOME	Pearson Correlation	,054	,011	,255**	1	,459**	-,164
	Sig. (2-tailed)	,601	,881	,000		,000	,020
	N	96	202	197	202	201	202
TOTAL REVENUES	Pearson Correlation	,313**	,594**	-,408**	,459**	1	,773**
	Sig. (2-tailed)	,002	,000	,000	,000		,000
	N	96	201	197	201	201	201
MATERIAL AND PERSONNEL EXPENSES (typically wages)	Pearson Correlation	,302**	,602**	-,593**	-,164	,773**	1
	Sig. (2-tailed)	,003	,000	,000	,020	,000	
	N	96	202	197	202	201	202
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

The examination of correlation (see table 16) during the preparation revealed another, very important case, **namely a strong (-0,839), negative correlation between total assets and retained earnings, significant on 1%**. It means, *that the more assets are used up by a Hungarian sport enterprise, the less cumulative profit (or the bigger loss) can be amassed during its operation*. This relation is from those sport businesses which installed or developed serious amount of assets, but cannot realize enough revenues to counter its higher amortization and other expenses, probably because they cannot achieve sufficient capacity utilization. However, since correlation is not stronger than 0,9, both modifiers were left among the modifiers of the cluster analysis.

According to these, I performed the hierarchical cluster analysis with the between-group linkage method, and the dendogram representing its result can be seen on figure A2. of the appendix.

Out of 202 cases 197 could be taken into the cluster analysis, that is, we could find missing data of only 5 cases in case of the chosen variable. The 202 cases taken into the examination contain the financial data of 65 sport businesses relating the research period, in releasing of financial years, but only in those financial years, when the given team took part in the first league. As a result of hierarchical cluster analysis, with the between-group linkage method, 177 cases got into the first cluster, while the remaining 20 cases got into 8 different mini clusters. These 20 cases are the sport businesses of the football clubs of DVSC, MTK, UTE, Videoton, FTC and Győri ETO, while the remaining 177 cases are all the other sport businesses.

We can interpret the result of the cluster analysis, that **according to their most important business indicators, Hungarian sport businesses pool together in one, huge cluster, from where only 6 football sport businesses are hanging out.** Practically it means, that over 90% of the sport businesses are homogenic, and only a little more than one-third of the football first division is significantly different from them. **Thus, the first hypothesis is accepted.**

5.2.2 Profitability of professional Hungarian sport businesses

The second hypothesis of the research is about the examination of the research question of profitability presented earlier. Among the former researches of sport economics, András [2003] proved in her Ph.d. thesis that a professional Hungarian football team on business grounds cannot operate in a profitable way in the long run. (András [2003]) Naturally, I accept the thesis proved by András [2003], although I think it has changed for the late 00's.

H2. By the research period, it is possible for sport businesses in Hungary to operate profitable in the long run.

I am going to prove my hypothesis by the financial data of the second half of the 00's, where long-term profitability will be operationalized by the net future value of net incomes of the years of 2007, 2008, 2009 and 2010 of professional Hungarian sport businesses (see table A1. of the appendix and table 17).

Table 17.: Net future value in 2010 of the net incomes of sport businesses operating teams in the Hungarian first division of spectacle sports

Source: Own figure

Nr.	Sport	Team	Net Income NFV 2010
1	Football	DVSC-TEVA	1 582 051
2	Football	Lombard Pápa Terminál FC	203 234
3	Football	Videoton FC	67 677
4	Football	ZTE FC	65 978
5	Football	Szolnoki MÁV	59 297
6	Women Basketball	UNIQA-Euroleasing Sopron	39 965
7	Football	Paksi FC	26 193
8	Ice-Hockey	Dab Docler	24 347
9	Man Handball	MKB Veszprém KC	23 232
10	Women Basketball	Bajai NKK	20 661
11	Men Basketball	Fortress-Lami Véd Kőrmend	19 822
12	Women Handball	DVSC-KORVEX	17 303
13	Women Handball	FTC-Rail Cargo Hungaria	17 195
14	Football	Kaposvári Rákóczi	16 353
15	Men Basketball	Szolnoki Olaj	15 270
16	Football	REAC	12 958
17	Women Basketball	ZTE NKK	12 243
18	Football	Nyíregyháza Spartacus FC	11 457
19	Women Basketball	Szolnoki MÁV	9 486
20	Football	FC Tatabánya	8 766
21	Men Basketball	Atomerőmű SE	4 179
22	Men Basketball	Marso-Vagép NYKK	2 225
23	Women Basketball	Szeged KE	2 212
24	Women Handball	Pikker-PTE-PEAC	1 969
25	Man Handball	Balatonfüredi KSE	317
26	Women Basketball	FTC	239
27	Women Handball	Siófok KC-Galerius Fürdő	235

I am using the net future value of 2010, because in case of sport businesses running ice-hockey teams we do not possess values for the year 2007, thus counting present value of 2007 for them is less relevant. The difference between the present value of 2007 and the future value of 2010 is only in the time value of money, which I counted, by the way, with the inflation given out by the Hungarian Statistic Office. At choosing the variable, I was considering the usage of profit after tax, however out of the 202 extant cases altogether, there were two cases in which paying of dividend took place, thus I preferred the usage of net income.

On table 17 we can see those sport businesses, which net incomes had positive net future value in the examined period. By the data of the table it is clear, that out of 65 sport businesses, whose clubs take part in the first leagues of spectacle team sports,

there were 27 sport businesses, which had positive net future value of their net incomes in the last four financial years. Thus, I find the second hypothesis being proved, as **it is possible for sport businesses in Hungary to operate profitable in the long run.**

Besides the possibility of profitable operation in the long run or even for its proof on a higher level, it is worth examining the rate of paid dividends. For in case of healthy operation, the meaning of paying dividends is that by the effective and efficient operation of the given business, it gives income to the owners and the rate of the dividend does not endanger the successful future operation of the enterprise.²⁵ In case of Hungarian sport businesses which operate teams taking part in the first division of the national championship there were only two cases, where paying of dividend happened. Both cases are from football, **DVSC in 2009 and Szolnok in 2010 paid dividend out of the football clubs in the first division**, and another interesting case is, that Szolnok also paid dividend as a second league-club in 2009. It is obvious, that paying dividend did not endanger long-term success in the operation of DVSC, for the team is still at the top of the championship in this current season of 2011/2012 (1st place after 17 rounds, 41 points and a goal difference of +24 on 30 January 2012, although it is true, that it was only the 5th in the season of 2010/2011). In case of Szolnok it is a little bit more complicated, because it had paid dividend for the first time in 2009, and after that, at the end of the season it got promoted into the first division, then the next year it paid dividend again, but then, it relegated from the first division as they were the very last in that season.

Besides all of these, it is good to see, that there are sport businesses, which are able and willing to pay dividend, but I reckon the dividend paying rate of 1% tragic, even then if it is almost 7% of total revenues of the given year.

5.2.3 Intangible value creation of Hungarian sport businesses

The third hypothesis of the research is about the creation of intangible value. Nowadays, the discourse of sport profession is not concerned with the creation of intangible value however, by the models of value creation in the theoretical part, we could suppose a significant extent of it.

²⁵ Nevertheless the owner of the enterprise could get income in several other ways.

H3. Hungarian sport businesses create a significant extent of intangible value.

Although long-term profitability on the company level is possible, we do not have to forget how great losses are realized and accumulated by sport businesses on sport level (see table 18).

Table 18.: Profitability of sport businesses in Hungary

Source: own figure

Profitability of sport businesses in Hungary in '000 HUF		2007	2008	2009	2010
Total	Operating Income	-582 014	-622 838	-1 262 425	-2 339 036
	Net Income	-686 170	-690 697	-1 975 098	340 364
	Owners' equity	2 905 992	4 266 723	4 934 572	5 444 141
	Retained earnings	-5 235 394	-6 210 775	-8 132 681	-10 115 729
Football	Operating Income	-479 641	-424 954	-1 024 183	-1 728 471
	Net Income	-593 748	-532 197	-1 824 851	748 295
	Owners' equity	2 948 467	4 442 902	5 237 044	5 995 059
	Retained earnings	-4 677 186	-5 460 254	-7 277 598	-9 350 756
Basketball	Operating Income	-45 817	-199 140	-194 708	-438 319
	Net Income	-28 882	-132 148	-111 240	-258 109
	Owners' equity	14 469	-49 938	-172 197	-312 348
	Retained earnings	-272 406	-407 267	-542 528	-641 316
Handball	Operating Income	-56 556	-10 567	-45 081	-135 670
	Net Income	-63 540	-37 663	-39 726	-111 229
	Owners' equity	-56 944	-128 300	-133 766	-203 469
	Retained earnings	-285 802	-329 502	-310 326	-122 148
Ice-Hockey	Operating Income		11 823	1 547	-36 577
	Net Income		11 311	719	-38 593
	Owners' equity		2 059	3 491	-35 101
	Retained earnings		-13 752	-2 229	-1 509

Table 18 shows clearly, that Hungarian sport businesses altogether realized losses on operating income throughout the years of the research period, which were moreover increased in a growing rate during this period. Although, in case of ice-hockey the operating income were positive in the first two years, but for 2010 it is also transformed into a massive loss. Value of retained earnings is more shocking. **Hungarian sport businesses accumulated over 10 billion HUF of loss by 2010, as a result of their previous operation,** and their owners' equities only remained positive, because a big part of football sport businesses account here the market value of their players, as an evaluation reserve.

Cumulated business results show clearly, that, all in all, on the level of sport businesses there is a serious problem in Hungary. The question emerges, *how come that losses of such level taking shape year by year have not resulted a wave of mass-liquidations?* In table 1. (Chapter 4.6) we could see, that altogether 11 sport businesses have been liquidated, which is 15% of the sport businesses. It can be even

an acceptable mortality rate among small businesses (meanwhile in the field of football, which produces the biggest losses, only one sport enterprise was liquidated).

In chapter 3.1, which deals with value and value creation, we examined the types and features of the created value item by item. **In the sales revenues, other revenues and extraordinary revenues of sport businesses, we could obviously meet tangible value.** The given revenues were included in contracts, for the exchange of which the sport business offered value to the stakeholders irrespectively, the worth of the offered value for these stakeholders. Hypothetically, we could measure the worth of the given value by the reservation price of the stakeholders for the given services, but it is an abstract definition unmeasured in the market.

In spectacle team sports, sport businesses create several kind of value, which are immaterialized, but they are included in the contracts (the experience of cheering, reputation, professional improvement etc.), and thus, according to the classification seen on figure No. 12²⁶, they fall into the category of the aforementioned tangible value.

Let us examine how we can detect intangible values by financial data, those which are not materialized nor have been included in contracts, but they come into existence either as implicit expectation of the partners, or even without it. *Persistent operation of sport businesses even with continuous losses gives a remarkable proof of the existence of intangible values.* **There are stakeholders, mostly sponsoring companies, local governments, suppliers, players and the state (through the revenue office), for whom operation of sport businesses produces so much value over the contract, that they decide to maintain the sport businesses operation, despite of the losses.** If this value became tangible, then sport businesses would realize them as sales revenues, other revenues or extraordinary revenues, however, **as intangible values these are not manifested as revenues, but current liabilities** none of the actors would extend in clean market conditions. Yet, they are renewed year by year, not to say they are increasing, as we can see on table 19.

²⁶ Figure 12 can be found on page 55

Table 19.: Current liabilities of professional Hungarian sport businesses Source: own figure

Current liabilities in '000 HUF	2007	2008	2009	2010
Total	3 907 401	4 415 239	5 228 492	6 703 223
Football	2 794 044	3 310 801	3 845 054	5 041 837
Basketball	790 478	778 560	1 018 439	1 148 977
Handball	322 879	306 134	329 271	426 796
Ice-hockey		19 744	35 728	85 613

However, we cannot measure the exact rate of intangible values from the financial data, because it is not known, how much of the current liabilities are real current liabilities, and how much is the consideration “paid” in exchange for the perceived intangible values, and we do not know whether there are even more intangible value upon these. However, it implies much, that the rate of current liabilities highly overcompensate the losses.

We can also track down *an example for the transformation of intangible value into materialized value* from the financial data. The sport business running the football team of Videoton FC realized 2.170.727 thousand HUF extraordinary revenue which was from dismissing of its former loan with its interests by another company (Fehérvár F.C. Kft. 2010. évi Kiegészítő melléklet p. 9). Practically, it means, that the loan dismissing company materialized the previously intangible value it got for exchange of the loan of 2 billion HUF with the dismissal, thus acknowledged, that the value created by Videoton FC is worth a supplementary 2 billion HUF for it.

Therefore **I consider** my 3. hypothesis, namely **that Hungarian sport businesses create a significant extent of intangible value, proven.**

5.3 Relationships between sporting results and economic performance

After presenting the financial data of Hungarian sport businesses and the features of the research population, let us examine the relationships between sporting results and economic performance of Hungarian professional sport businesses. But before we would begin to analyze the relationships with economic performance, let us examine the effects of sporting results on itself in time.

5.3.1 Effects of sporting results on itself in time

For the examination of the effects of sporting results on itself in time we shall examine the achieved position in the given season of the championship and the effects of championship positions in different seasons to each other. In case of examining championship positions among the cases taken into the research, we examine not only the championship results of sport businesses with financial data, but of all teams taking part in the first divisions. When examining two different periods, however, only those are analyzed in which the team took part in the first division in both given seasons (thus the number of cases is between 45 and 59; the reason of this significant deviation is the transformation of handball championship in 2007).

As all the variables are ranking measures in the correlation, that means we shall examine the Spearman's rank correlation coefficient, which is shown on table 20. It is clear from this table, that results of sport profession are, in all cases, in a medium or strong positive correlation with each other, significant on 1%. In relation with championship results, we can expect, that a result achieved in the given championship season would mostly correlate results achieved in the previous and in the following seasons, and correlation would decrease as we go farther on time. These expectations come true almost perfectly.

Table 20.: Spearman's rank-correlation of championship positions

Source: own figure

Correlations			Season 06_07	Season 07_08	Season 08_09	Season 09_10	Season 10_11
Spearman's rho	Season 06_07	Correlation Coefficient	1,000	,691**	,739**	,558**	,496**
		Sig. (2-tailed)	.	,000	,000	,000	,001
		N	68	49	57	51	45
	Season 07_08	Correlation Coefficient	,691**	1,000	,779**	,504**	,408**
		Sig. (2-tailed)	,000	.	,000	,000	,008
		N	49	55	50	45	41
	Season 08_09	Correlation Coefficient	,739**	,779**	1,000	,650**	,525**
		Sig. (2-tailed)	,000	,000	.	,000	,000
		N	57	50	68	58	52
	Season 09_10	Correlation Coefficient	,558**	,504**	,650**	1,000	,654**
		Sig. (2-tailed)	,000	,000	,000	.	,000
		N	51	45	58	66	59
	Season 10_11	Correlation Coefficient	,496**	,408**	,525**	,654**	1,000
		Sig. (2-tailed)	,001	,008	,000	,000	.
		N	45	41	52	59	67

**. Correlation is significant at the 0.01 level (2-tailed).

In case of the *championship season of 2006/2007* there is no previous season, so we cannot examine this question. However it is interesting, that this season has a stronger correlation with the results of the 2008/2009 season, than with the results of the 2007/2008 season (but probably it is because of the missing data of handball). After that, the correlation is decreasing, according to the expectations, but it is still a medium correlation, significant on 1%.

At the results of the *championship season of 2007/2008*, expectations come true perfectly, correlation is strong-medium with the results of 2006/2007 and strong with the results of 2008/2009.

At the results of the *championship season of 2008/2009*, correlation is curiously strong with the results of 2006/2007 and 2007/2008 seasons, but it is only strong-medium with the results of 2009/2010 season.

Correlation of results of *2009/2010 season* is, due to the expectations, strong-medium with results of 2008/2009 and 2010/2011 seasons, and it has a medium correlation with former seasons.

Correlation of results of *2010/2011 season* is substantially stronger (although it is only strong-medium) with results of 2009/2010 season, than with former seasons.

All in all, we can say, that **sporting results are in strong or in strong-medium correlation with sporting results of previous and following years, and as we go farther in time, this relation decreases, but it remains significant on 1% all the while.** On the scope of sporting results a bigger change has happened in the season of 2009/2010, than earlier, but still, results move together dependably.

In-time correlation of sporting results does not mean that the sporting results of the given year depend on the sporting results of the previous year. The result only shows, that factors affecting sporting results of a given year move together with factors affecting sporting results of the previous and following years. The stochastic dependence proves, that it is possible to change these factors.

5.3.2 Relation between sporting results and economic performance

After the effects of sporting results in time, let us examine the relation between sporting results and economic performance. I set up hypothesis H4 for the examination of this question.

H4. There is strong, significant correlation between sport success and economic success of professional Hungarian sport businesses.

This hypothesis springs from the assumption, that the better is the sporting results of the sport business, the better is its economic performance or vice versa, the better is the economic performance of the sport business, the better is its sporting results.

I have chosen the following variables for testing the hypothesis, and I have operationalized them as seen below:

- Sport success: the achieved position in the first league of the given championship. Unfortunately, position is the only element in sporting results, which could be interpreted in the same way in all spectacle team sports. The achieved number of points is not ideal, because it is influenced by the number of teams taking part in the championship, and the goal difference moves in an even bigger interval, since in basketball, handball, football and ice-hockey a significantly different amount of goals are scored in each matches. It follows, that I am going to **measure sporting results by the championship positions achieved in the given seasons (2006/2007, 2007/2008, 2008/2009, 2009/2010, 2010/2011)**, which is naturally a ranked system, where the smaller value represents the better result.
- Economic success: I am going to use net income to judge economic success.

As sporting results is a rank where smaller result represents the better performance, in case of this hypothesis, close positive relation prevails, if the correlation between the variables is negative. During the examination N means the section of net income of the given year and position of the given championship season (that is, for example in 2007, there were 41 sport businesses, for which we possess data of net income, and which took part in the national championship first division of one of the spectacle team sports). Correlations between variables are shown on table 21.

It is seen clearly on table 21, that all examined seasons net income are in a very weak correlation, significant on 5%, with the result of 2006/2007, which practically means an accidental relation. Net income of Hungarian professional sport businesses in 2007 have no relation with championship results of any seasons of the examined period. Similarly, net income in 2008, 2009 and 2010 show no significant relation of

results of any of the championship seasons. Moreover if we perform the analysis in splitting of branches of sports, we shall have the same conclusion. Between the two variables there is neither linear nor any other relation.²⁷

Table 21.: Correlations of sport success and economic success

Source: own figure

		Correlations					
		Season 06_07	Season 07_08	Season 08_09	Season 09_10	Season 10_11	Net Income
Net Income - whole research period	Pearson Correlation	-,160*	-,070	-,134	-,067	,001	1
	Sig. (2-tailed)	,045	,399	,071	,373	,986	
	N	158	147	182	177	172	202
Net Income - 2007	Pearson Correlation	-,238	,144	-,086	,137	-,073	1
	Sig. (2-tailed)	,134	,395	,596	,427	,681	
	N	41	37	40	36	34	45
Net Income - 2008	Pearson Correlation	-,198	-,059	-,239	-,114	-,190	1
	Sig. (2-tailed)	,209	,720	,098	,461	,229	
	N	42	39	49	44	42	52
Net Income - 2009	Pearson Correlation	-,157	-,008	-,165	,026	,126	1
	Sig. (2-tailed)	,339	,963	,258	,861	,397	
	N	39	37	49	49	47	53
Net Income - 2010	Pearson Correlation	-,154	-,213	-,110	-,200	-,032	1
	Sig. (2-tailed)	,369	,225	,477	,172	,828	
	N	36	34	44	48	49	52

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

By all of these, we have to reject hypothesis H4, because, in case of Hungarian sport businesses, there is no relation between sport success and economic success at all.

Besides net income, I have examined correlations with operating income as well, which can be seen on table 22. In fact, it is more appropriate examining net income, because it includes the extraordinary revenues as well, which are significant sources of income in Hungarian sport businesses.

Table 22.: Correlation of sporting results and operating income

Source: own figure

		Correlations					
		Season 06_07	Season 07_08	Season 08_09	Season 09_10	Season 10_11	Operating Income
Operating Income - all sports	Pearson Correlation	-,150	-,049	-,138	-,025	,073	1
	Sig. (2-tailed)	,059	,558	,063	,742	,342	
	N	158	147	182	177	172	201
Operating Income - Women Basketball	Pearson Correlation	,358*	,373*	,454*	,490**	,419*	1
	Sig. (2-tailed)	,048	,039	,010	,004	,015	
	N	31	31	31	33	33	33

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

²⁷ Enforcement of linear correlation is yet suitable, because the lack of linear correlation, that is, rejecting the hypothesis possesses also valuable scientific contents.

It is consonant with the correlation of net income, that there is no significant relation between operating income and sporting results of Hungarian professional sport businesses, which does not appear in the periodical splitting either. Nevertheless, it is interesting, that **in case of Hungarian women's basketball between the operating income and the sporting results**, there is a **medium, positive relation, significant on 1%** in the 2009/2010 season, while in other seasons it is medium, positive, significant on 5%. It means that **in Hungarian women's basketball the better position can be achieved by a team in the championship, the worse operating income can be realized by it**, or if it realizes better operating income, it has a worse position in the championship. It obviously proves, that successful women's basketball teams overspent.

Rejecting of hypothesis H4 results in interesting **conclusions**, for it seems, that **sporting success is more important than economic success**. Moreover the **market does not value the sporting success so much** – with tangible value given in exchange – **as the expenses needed to achieve it**. Also, rejecting of hypothesis H4 raise the question, which are those economic factors, which are in close relation with the sporting success?

5.3.3 Relation between sport success and other economic indicators

Since relation between economic success and sport success does not apply, it is worth laying the focus of the examination to inner factors. Thus, hypothesis H5 is about the widely assumed suspicion, that value of the players of sport businesses has a strong positive relation with sport success.

H5. There is strong, significant correlation between players' value and sport success of professional Hungarian sport businesses.

To test the hypothesis I have applied the championship position used before and the value of immaterial assets introduced several times before, as value of the players is registered among immaterial assets in many cases. Positive relation means negative correlation again, because of the ranking system in the championships. Correlation of immaterial assets and league positions are shown on table 23.

Table 23.: Correlation of Immaterial assets and sporting success

Source: own figure

		Correlations					
		Season 06_07	Season 07_08	Season 08_09	Season 09_10	Season 10_11	Immaterial Assets
Immaterial Assets - whole research period	Pearson Correlation	-,196	-,293*	-,222*	-,227*	,063	1
	Sig. (2-tailed)	,097	,014	,044	,037	,584	
	N	73	69	83	85	79	91
Immaterial Assets - 2007	Pearson Correlation	-,240	-,228	-,338	-,192	-,123	1
	Sig. (2-tailed)	,338	,396	,184	,477	,676	
	N	18	16	17	16	14	19
Immaterial Assets - 2008	Pearson Correlation	-,230	-,290	-,193	-,191	,025	1
	Sig. (2-tailed)	,344	,243	,388	,408	,919	
	N	19	18	22	21	19	23
Immaterial Assets - 2009	Pearson Correlation	-,156	-,358	-,191	-,277	,158	1
	Sig. (2-tailed)	,525	,145	,383	,190	,482	
	N	19	18	23	24	22	25
Immaterial Assets - 2010	Pearson Correlation	-,131	-,287	-,196	-,266	,105	1
	Sig. (2-tailed)	,616	,264	,394	,209	,625	
	N	17	17	21	24	24	24
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

On table 23 the value of N means the number of sport businesses in the given financial year, and in the given championship season, of which we possess the value of immaterial assets and championship results, as well. From the table it is clear, that values of immaterial assets shown in different financial years do not have a significant correlation of championship results of different seasons (value of immaterial assets of none of the financial years correlates with none of the championship results, either).

Interestingly, there are significant negative relations, significant on 5%, between immaterial assets in the whole research period and the championship results in the seasons of 2007/2008, 2008/2009 and 2009/2010, but there is no significant relation with the seasons of 2006/2007 and 2010/2011. The result can be explained, that there are championship seasons, when, all in all, Hungarian professional sport businesses possessing higher value of immaterial assets achieve better result, but it cannot be generalized to a financial year or to a championship season, either.

By all of these, hypothesis H5 has to be rejected, because there is no strong, significant correlation between the value of immaterial assets of professional Hungarian sport businesses and their championship results.

However, the given result is not so tragic, as it can be seen at first sight, for it is possible, that the low valid element number distorts the results. In the background of it, we can see, that there are sport businesses, which do not register the value of their players as immaterial assets. More distortion can be resulted, that those sport businesses, which register the value of their players, use two kinds of evaluations; one register its players on their market value, the other register them on the value of their contracts.

About the value of players – as the presumed most important factor of value creation in case of professional Hungarian sport businesses – is proven that there is no correlation with sport success. Let us examine whether the different, support-type revenues have any relation with sport success, or restated do sport businesses receive supports according to their sport success?

H6. There is no relation between sport success and subsidized revenues of professional Hungarian sport businesses

This hypothesis based on the assumption that subsidized revenues are given by the supporting companies and local governments not according to the sport results, but for providing survival. For testing the hypothesis we shall still measure sport success with championship positions; the subsidized revenues are the sum of other revenues and extraordinary revenues, because these are the types of revenues, in which supports typically appear.

Table 24 shows the correlations between subsidized revenues and championship positions. In this examination, N shows the number of those sport businesses, which took part in the first division of the championship in the given season, and realized other and/or extraordinary revenues in the given financial year. It is clearly seen on the table that the other revenues and extraordinary revenues from any fiscal year in the research period do not correlate significantly with sporting results in any seasons. Here also we could find a very weak, negative correlation, significant on 5%, in case of data of other and extraordinary revenues in the whole research period with the championship seasons of 2007/2008 and 2009/2010.

Table 24.: Correlation of subsidized revenues and sport success Source: own figure

Correlations							
		Season 06_07	Season 07_08	Season 08_09	Season 09_10	Season 10_11	Other revenues and Extraordinary revenues (typically support and subsidy)
Other revenues and Extraordinary revenues (typically support and subsidy) - whole research period	Pearson Correlation	-,121	-,176	-,132	-,185	-,130	1
	Sig. (2-tailed)	,145	,037	,084	,017	,098	
	N	147	141	172	167	163	191
Other revenues and Extraordinary revenues (typically support and subsidy) - 2007	Pearson Correlation	-,080	-,151	-,120	-,146	-,233	1
	Sig. (2-tailed)	,639	,386	,479	,417	,208	
	N	37	35	37	33	31	41
Other revenues and Extraordinary revenues (typically support and subsidy) - 2008	Pearson Correlation	,023	-,238	-,106	-,210	-,216	1
	Sig. (2-tailed)	,888	,156	,490	,192	,192	
	N	39	37	45	40	38	48
Other revenues and Extraordinary revenues (typically support and subsidy) - 2009	Pearson Correlation	-,284	-,238	-,245	-,208	-,075	1
	Sig. (2-tailed)	,088	,161	,093	,157	,619	
	N	37	36	48	48	46	52
Other revenues and Extraordinary revenues (typically support and subsidy) - 2010	Pearson Correlation	-,070	-,177	-,094	-,243	-,191	1
	Sig. (2-tailed)	,696	,325	,555	,103	,194	
	N	34	33	42	46	48	50

*. Correlation is significant at the 0.05 level (2-tailed).

By all of these, I accept hypothesis H6, that is, there is no relation between sport success and subsidized revenues of professional Hungarian sport businesses.

In case of the next hypothesis we proceed from the presumptions, that as the consequence of good sporting results, sport businesses could realize higher total revenues, and better sporting results can be achieved by a higher cost level.

H7. There is strong, significant correlation between sport success and the total revenues and the material and personnel expenses of professional Hungarian sport businesses.

For testing the hypothesis we measure sporting success with the championship position, as we did earlier, while total revenues with the sum of sales revenues, other revenues and extraordinary revenues. The material and personnel expenses are also measured, although there are other elements of expenses besides them, but their extent is marginal, moreover in the former ones are the two elements where players and coaches get their payment. Table 25 shows correlations of total revenues and material and personnel expenses with sporting results and with each other. In addition, at the bottom of the table, partial correlations can be seen, as well.

Table 25.: Correlation and partial correlation between sporting success and total revenues and material and personnel expenses
Source: own figure

Control Variables			Correlations					
			Season 06_07	Season 07_08	Season 08_09	Season 09_10	Season 10_11	Total Revenues
-none- ^a	Season 06_07	Correlation	1,000	,661	,732	,539	,467	-,206
		Significance (2-tailed)		,000	,000	,000	,000	,009
		df	0	185	220	202	178	158
	Season 07_08	Correlation	,661	1,000	,773	,535	,425	-,261
		Significance (2-tailed)	,000		,000	,000	,000	,001
		df	185	0	193	178	162	148
	Season 08_09	Correlation	,732	,773	1,000	,668	,518	-,183
Material and Personnel expenses (typically wage)		Significance (2-tailed)	,000	,000		,000	,000	,013
		df	220	193	0	240	216	181
	Season 09_10	Correlation	,539	,535	,668	1,000	,630	-,233
		Significance (2-tailed)	,000	,000	,000		,000	,002
		df	202	178	240	0	230	177
	Season 10_11	Correlation	,467	,425	,518	,630	1,000	-,155
		Significance (2-tailed)	,000	,000	,000	,000		,040
Total Revenues		df	178	162	216	230	0	174
	Material and Personnel expenses (typically wage)	Correlation	-,206	-,261	-,183	-,233	-,155	1,000
		Significance (2-tailed)	,009	,001	,013	,002	,040	
		df	158	148	181	177	174	0
		Correlation	-,222	-,304	-,188	-,222	-,206	,777
		Significance (2-tailed)	,005	,000	,010	,003	,006	,000
		df	159	148	183	179	176	206
Material and Personnel expenses (typically wage)	Season 06_07	Correlation	1,000	,639	,721	,515	,442	-,056
		Significance (2-tailed)		,000	,000	,000	,000	,486
		df	0	147	158	158	158	157
	Season 07_08	Correlation	,639	1,000	,765	,504	,388	-,041
		Significance (2-tailed)	,000		,000	,000	,000	,620
		df	147	0	147	147	147	147
	Season 08_09	Correlation	,721	,765	1,000	,654	,499	-,060
Total Revenues		Significance (2-tailed)	,000	,000		,000	,000	,421
		df	158	147	0	178	175	180
	Season 09_10	Correlation	,515	,504	,654	1,000	,612	-,098
		Significance (2-tailed)	,000	,000	,000		,000	,193
		df	158	147	178	0	175	176
	Season 10_11	Correlation	,442	,388	,499	,612	1,000	,009
		Significance (2-tailed)	,000	,000	,000	,000		,910
Total Revenues		df	158	147	175	175	0	173
	Total Revenues	Correlation	-,056	-,041	-,060	-,098	,009	1,000
		Significance (2-tailed)	,486	,620	,421	,193	,910	
		df	157	147	180	176	173	0
	Material and Personnel expenses (typically wage)	Correlation	-,100	-,167	-,074	-,067	-,138	1,000
		Significance (2-tailed)	,211	,042	,321	,371	,069	
		df	157	147	180	176	173	0

a. Cells contain zero-order (Pearson) correlations.

Between the total revenues and the championship positions of 2008/2009 and 2010/2011 seasons there is a weak, negative correlation, significant on 5%, while in all the other seasons it is significant already on 1%. Material and personnel expenses are in a weak, negative correlation, significant on 1%, with the championship results in all seasons. However, unfortunately, there is also a strong, positive correlation, on the significance level of 1%, between the two variables, that is, the relation between the championship positions and the total revenues and material and personnel expenses cannot be explained, because of the multicollinearity of the two variables. Moreover it is strengthened by the fact, that, in case of partial correlations, it is clearly seen, that the total revenues and the material and personnel expenses extinguish each other's effects.

By all of these, we can neither prove, nor falsify hypothesis H7, because the correlation between the total revenues and the material and personnel expenses blurring their effects on sport success in Hungarian professional sport businesses. The close, positive relation, significant on 1%, means, that revenues and expenses move tightly together, however it can be easily explained, not to say the measure of closeness of the relation (0,777) is lower than expected.

We could not find significant connection between sport success and economic success, thus we have to reveal the factors behind this phenomenon, which can be examined by the characteristics of value creation by sport businesses.

6. Features of value creation in professional sport

In the former chapter it has been proven, that professional Hungarian sport businesses are homogenic, long-term profitable operation is possible for them, and they create a significant amount of intangible value, but there is no relation between the sporting success and the economic success. In this chapter we are going to analyze the factors behind the aforementioned phenomena, thus, we shall examine the theoretical model of value creation, featured in my thesis by the public financial data.

6.1 Relevant stakeholders of professional Hungarian sport businesses

As we could see in chapter 3.3, professional sport organizations could create tangible and intangible values, as well, for practically all of their stakeholders, and the introduced theoretical argumentation is not terminated, thus it can be broaden according to a suitable conception. Let us examine, however, how the theoretical train of thought came true in practice, in case of professional Hungarian sport businesses operating in spectacle team sports.

In case of the research question related to relevant stakeholders of professional Hungarian sport businesses, the most critical task is to operationalize the question. In this current case I considered, that the manifestation in financial data is the most important criteria, for it can give a real picture related to the truly important stakeholders. According to these, I shall consider those ones as relevant stakeholders, who produce revenue for the sport business or who gives consideration in exchange for the created values as revenues for the sport business or finance the sport business, respectively.

On the sports manager interview it was heard, that a sport manager can not make a differentiation in the importance of the stakeholders easily, but either way, sportsmen are the most important stakeholders. (Kontra [2011])

In case of public financial data, the problem emerges, that the notes to the financial statements contain quite a few information related to the distribution of revenues in most of sports, with the exception of football, thus I present them through the example of football. Revenue categories can be easily generalized to other sports as well, however we have to pay attention, that in other sports there are no transfer fees of a similar extent, and no supports coming from international organizations, so arithmetic results should only be generalize warily. Table 26 shows the revenue categories and their rates connected to football.

Table 26.: Revenue distribution of Hungarian professional football businesses Source: own figure

Revenue distribution '000 HUF	Sport businesses in Football Cumulative - 2010	Sport businesses in Football Weighted - 2010
Sales revenues – in case of statements without sales distribution	1 428 639	12,96%
Broadcasting rights	761 635	6,91%
Gates and season tickets	222 497	2,02%
Transfer fees	851 274	7,72%
Sponsorships, advertisements, promotions	1 032 713	9,37%
Other sport-related activity (rental)	2 196	0,02%
Other operational revenues	51 560	0,47%
Intermediary services	7 754	0,07%
Normative subsidy	113 786	1,03%
Membership from sportsmen	4 764	0,04%
Export sales revenues	7 050	0,06%
Revenue of goods sold	44 312	0,40%
Youth development allowance	26 312	0,24%
Revenues from cups	4 150	0,04%
Sales revenues – In statements with distribution	3 130 003	28,39%
Sales revenues – in case of statements without sales distribution	1 428 639	12,96%
Total Sales Revenues	4 558 642	41,35%
Other revenues	3 861 022	35,02%
Extraordinary revenues	2 606 061	23,64%
Total Revenues	11 025 725	100,00%

Besides categories of revenues, financing actors also appear in the financial statements. Those, how make the owners' equity available are the owners, who risk

their capital, and the players, whose value is as evaluation reserve in the owners' equity at several sport businesses (in 41 cases out of 202 valid cases, and among the former ones, 31 cases come from football, 10 cases come from basketball). If the retained earnings of sport businesses were positive, then the operation of the sport business would also create its owners' equity. However, according to chapter 5.1 we have already known, that, all in all, professional sport businesses accumulated a huge, negative retained earnings (a loss over 10 billion HUF). Table 27 shows descriptive statistics concerning liabilities.

Table 27.: Descriptive statistics of the Liabilities

Source: own source

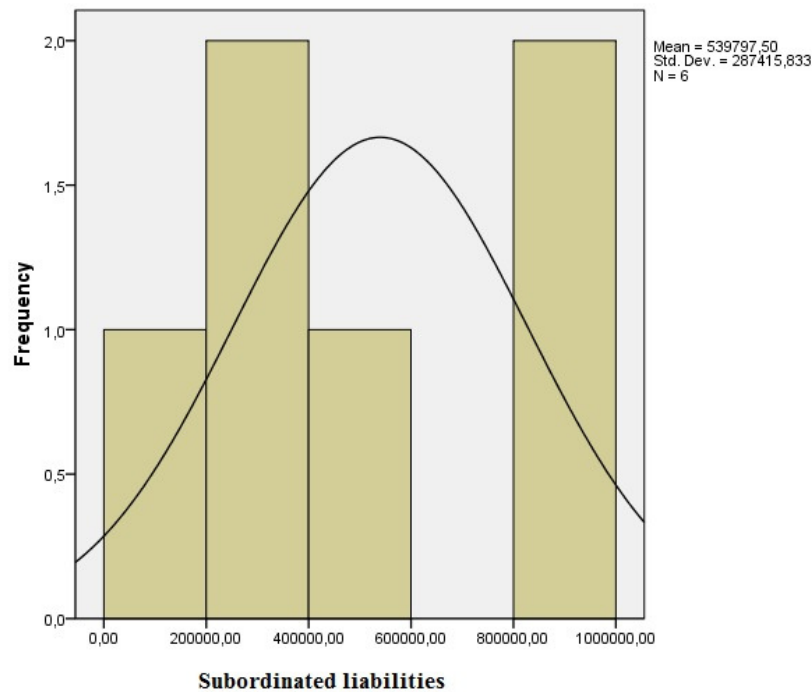
Statistics					
	Liabilities	Subordinated liabilities	Long-term liabilities	Current liabilities	
N Valid	205	6	88	203	
Missing	117	316	234	119	
Mean	164 901	539 798	115 668	99 775	
Std. Error of Mean	31 028	117 337	42 322	14 715	
Median	45 072	454 383	7 506	33 959	
Mode	16,00 ^a	184635,00 ^a	2200,00	16,00 ^a	
Std. Deviation	444 254	287 416	397 017	209 657	
Variance	197 361 259 512	82 607 861 232	157 622 203 593	43 956 107 075	
Skewness	5,198	,373	4,542	4,451	
Std. Error of Skewness	,170	,845	,257	,171	
Kurtosis	29,281	-1,586	20,279	24,905	
Std. Error of Kurtosis	,338	1,741	,508	,340	
Range	3 145 917	711 851	2 394 998	1 760 040	
Minimum	16,00	184 635	257,00	16,00	
Maximum	3 145 933	896 486	2 395 255	1 760 056	
Sum	33 804 636	3 238 785	10 178 758	20 254 354	

a. Multiple modes exist. The smallest value is shown

It is clearly seen on table 27, that, in case of liabilities, it is typical to the members of the whole population, that they are specifically rarely financed by subordinated liabilities, moreover, long-term liabilities are not applied generally either, but in almost all cases they have short-term liabilities. Only six cases possess subordinated liabilities in the examined period, and these cases cover only two sport businesses (those run the teams of Budapest Honvéd and Győri ETO respectively). Distribution of subordinated liabilities is shown on table 25.

Figure 25.: Distribution of Subordinated liabilities

Source: own figure



Long-term liabilities are much more common, than subordinated liabilities, however they are not as common as in other industries. Out of 202 valid cases of Hungarian sport businesses in only 88 cases are applied long-term liabilities for financing, as it is seen on figure 26. The mentioned 88 cases include 13 football, 15 basketball and 7 handball sport businesses with a modus of 2.2 million HUF, which can be considered minimal. Providers of long-term credits, by the way, are mostly owners, affiliates or sport organizations.

In the field of current liabilities, the situation is completely different, since sport businesses finance themselves mostly through current liabilities. Altogether, there are only two cases out of all the valid cases of the population, when the given sport business do not use current liabilities. One of them is the sport business running Kecskeméti KSE in its founding year, and the other is Alba Volán SE, where there is a shortage of the provided data, but obviously they also use current liabilities. Distribution of current liabilities are shown on Figure 27.

Figure 26.: Distribution of Long-term liabilities

Source: own figure

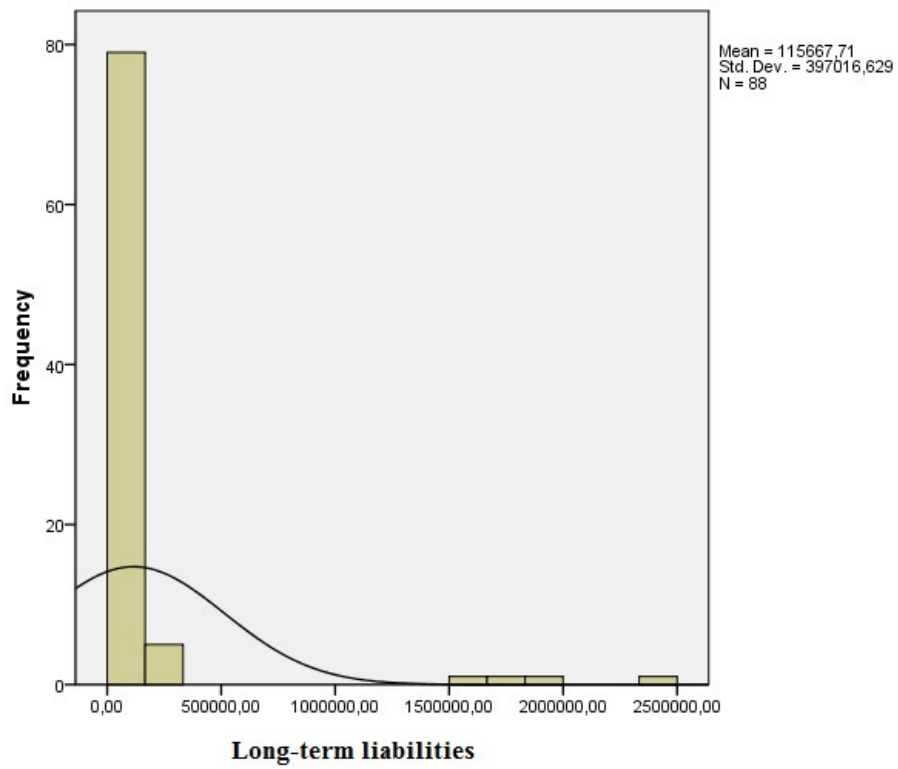
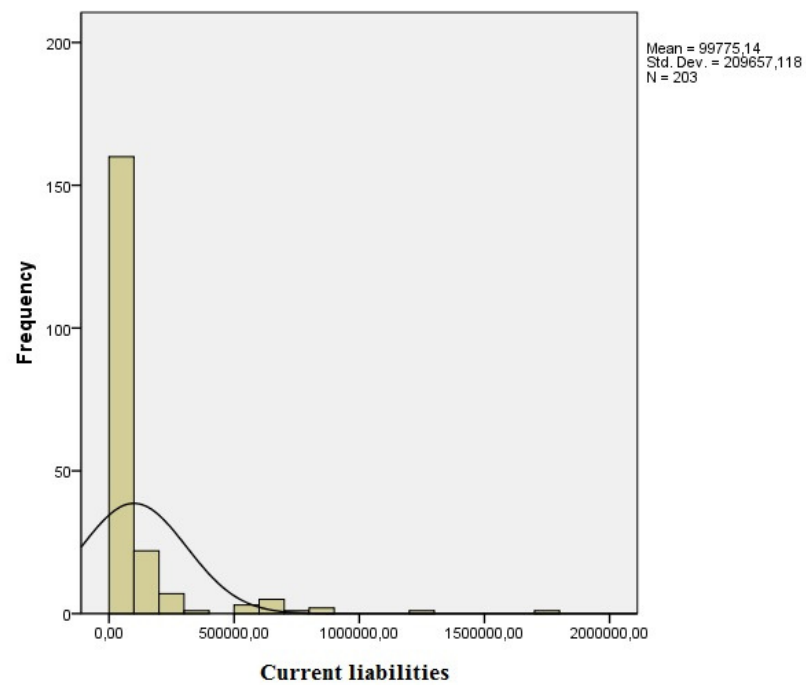


Figure 27.: Distribution of Current liabilities

Source: own figure



Although current liabilities are the most popular financing instrument of sport businesses, yet we can find the internal distribution of these liabilities almost only in football sport businesses' notes to financial statements. Moreover, among them, sport businesses of Budapest Honvéd, Szolnoki MÁV and DVTK do not make internal distribution, and the sport business running Újpest allocates only until the quarter of its current liabilities. In case of current liabilities we have to use similar restrictions like in the case of revenues, for these results not certainly represent the whole population arithmetically, however the types of current liabilities can be generalized very well. Table 28 shows the liabilities of football sport businesses.

Table 28.: Liabilities of football sport businesses

Source: own figure

Liabilities of football sport businesses - 2010	Total	Weighted	Weighted ll.
Subordinated liabilities	1 056 509		
Long-term liabilities	2 365 044		
Current liabilities without distribution	1 707 188		33,71%
Short-term debt	57 458	1,71%	1,13%
Short-term loan	1 379 952	41,11%	27,25%
Accounts payable	281 113	8,38%	5,55%
Current liabilities to Affiliates	696 894	20,76%	13,76%
Other current liabilities	843 738	25,14%	16,66%
Taxes payable	97 329	2,90%	1,92%
Current liabilities (where distributed)	3 356 484	100,00%	66,29%
Total current liabilities	5 063 672		100,00%
Liabilities	6 778 037		

Out of the *stakeholders* according to the financial data of sport businesses (the introduced revenues, owners' equities and liabilities data), the following stakeholders are relevant for Hungarian sport businesses:

- **Sportsmen, players** (as immaterial assets, and evaluation reserve in the owners' equity, **almost all extent of owners' equities comes from „them,”** they are responsible almost 8% of revenues through the transfer market, moreover through accounts payable **they are financing 8% of current liabilities**)
- **Owners** (paid-in capital and committed reserves come from them, just as a notable proportion of current liabilities and extraordinary revenues)

- **Sponsors, advertisers** (almost 10% of the revenues come from them, they also provide current liabilities and dismiss liabilities as extraordinary revenues)²⁸
- **Media** (almost 7% of the revenues are from them)
- **Local governments** (most part of other revenues are from them)
- **Federation** (normative supports are from them and they could also regulate the operation of sport businesses directly or indirectly)
- **State** (through the financing effect of the tax office and the budget allocated to sport by the government)
- **Managers and other employees** (they take part in value creation with supporting activities, however they mostly remain hidden)²⁹

It is astonishing, however that revenues from gate receipts and season tickets are responsible for only 2% of the total revenues, and merchandising revenues is not even 0,5% of the total revenues, that is, **practically neither the local consumer segment of consumer market nor the merchandising market does not work**. The real problem resides in the fact, that the consumer market should pull the other markets of sport businesses, and though these are working so far, but this is certainly not a healthy configuration in the long run.

6.2 Value creation process of professional Hungarian sport businesses

Examining hypothesis H3, I proved, that professional Hungarian sport businesses create a significant amount of intangible value, moreover I could even showed an example how these intangible value can be materialized. In this chapter, I am going to examine how the value creation configurations shown in the theoretical part could be noticed in professional sport, and what effects they have, that is, how the value creation process of professional Hungarian sport businesses takes shape. In the examination of the value creation process of professional Hungarian sport businesses

²⁸ The role of an owner and a sponsor can merge into one another many times.

²⁹ Although numbers of employees are in quite a wide range (0-100) in case of Hungarian sport businesses, but most of them are the players and we do not have other information about the number of managers and other employees.

and its configuration, the critical task again is the operationalization of the research question. Former research questions and hypotheses and the research interviews at the beginning strengthened, that the value network operates in the dimension of intellectual capital³⁰, thus filling the questionnaire focusing visible wealth could have served only partial results, not to say, that it seemed theoretical knowledge of chapter 3 is also needed to filling them up. So I decided, that I am going to focus to objective facts in this research question as well, while the value network of invisible wealth could be a topic of an exploration type, qualitative research later.

I am ascertained, that logical approach of the value network of professional sport businesses described in subsection 3.2.3.3 is right and true, however, in the empirical part, we could look for the answer to the question, that in case of the defined population whether it is true, can be come true and can be noticed in the examined period. Thus, in the following, I shall examine what the objective factors are, through which elements of the value network's value creation logic could be noticed in sport businesses of Hungarian spectacle sports.

Whether *the mediators act like club managers*, that is, professional sport businesses set up an agent within the framework of sport, where consumers could have a vivid connection with each other, and other stakeholders and this connection could be managed. Championship and cup matches are obviously potential "places" of this activity, however, in the operation of professional sport businesses relationship management cannot be revealed. Football and men's basketball are the two sports, in which the rate of sport businesses is the highest in Hungarian spectacle team sports, and in the case of these sport businesses, we could find a communicated frame of regulations on their homepages in only 6 cases (DVSC, UTE, Videoton, Paks, PMFC and BFC Siófok) out of 36 sport businesses. These regulations control only the desired behavior of supporters, they do not say anything about the relations of supporters amongst each other and with other stakeholders³¹, not to say the possibilities of value creation between each other.

³⁰ At Sveiby they are invisible resources.

³¹ Except that supporters cannot disturb the matches, that is, it regulates their relation to the sportsmen.

The value of the service is a function of positive network demand side externalities, that is, the more people use the service, the more valuable it is, which is obviously true, however I could not find communication regarding it on homepages or facebook profiles of either sport businesses from the sample. At least we can use existing data here. Although I cannot possess attendance data, sizes of communities of the given sport businesses are indicated well by their web2.0 presence, that is, the number of likes on their facebook profiles. It is shown on table 29 (data show the status of 31st January 2012).

Table 29.: Number of likes of the Hungarian football and basketball businesses
Source: own figure (latest download: 31.01.2012)

Sport	Team	Number of Likes in Facebook page
Football	Videoton FC	16 921
Football	DVTK	15 550
Football	Újpest FC	11 632
Football	DVSC-TEVA	9 788
Football	Győri ETO FC	5 043
Football	Budapest Honvéd	4 244
Football	Ferencvárosi TC	3 610
Football	Kaposvári Rákóczi	2 677
Football	MTK Budapest	2 263
Football	Vasas-HID	2 073
Football	ZTE FC	1 884
Football	Kecskeméti TE	1 806
Football	Lombard Pápa Terminál FC	1 329
Football	Pécsi MFC	994
Football	Haladás Sopron Bank	838
Football	FGSZ Siófok	366
Football	Szolnoki MÁV	233
Football	Paksi FC	164
Football	FC Tatabánya	42
Football	REAC	15
Football	Nyíregyháza Spartacus FC	1
Football	Dunakanyar-Vác	0
Men's Basketball	Szolnoki Olaj	1 766
Men's Basketball	Albacomp Fehérvár	1 353
Men's Basketball	Pécsi VSK-Pannonpower	762
Men's Basketball	Atomerőmű SE	740
Men's Basketball	Falco-Szova-KC Szombathely	474
Men's Basketball	Marso-Vagép NYKK	390
Men's Basketball	Fortress-Lami Véd Körmend	388
Men's Basketball	Naturtex-SZTE-Szédeák	378
Men's Basketball	Zalakerámia ZTE KK	336
Men's Basketball	Factum Sport Debrecen	204
Men's Basketball	Kis-Rába Menti Takarékszövetkezet Soproni KC	85
Men's Basketball	Kecskeméti KSE	67
Men's Basketball	EnterNet Vásárhelyi KS	25
Men's Basketball	MAFC	16
Men's Basketball	Kaposvári KK	11
Men's Basketball	Konecranes Salgótarján	5
Men's Basketball	Planet-Leasing Dombóvár KC - Liquidated	n.a.

It is clearly seen on the table, that existing communities are very small, from which we can conclude, that co-creation is only in the introduction phase of the life-cycle, with maybe the exception of Videoton, DVTK, Újpest and DVSC. In their cases, we can talk about the beginning of the growth phase.³² Of the professional sport organisations, men's handball team of MKB Veszprém is far on the top with likes of 29 115.

Value is derived from service, service capacity, and service opportunity: These items are obviously true, however neither financial data, nor homepages of sport businesses or their facebook profiles provide factual data on them.

Mediation activities are performed simultaneously at multiple levels: We do not have any information on relations between primary activities. Perhaps the mediated services could be manifested in the value of intermediary services, however, unfortunately there is only very few sport business which includes this item in their income statement. In 27 cases of the population we possess data on intermediary services (with the median 3 292) and most part of them come from cell phone fleet-subscription charged forward to the players. We have only one outlier, which is the 2008 data of the sport business running MKB Veszprém, about which I suppose, that it covers the invoice of players in the role of suppliers.

Standardization facilitates matching and monitoring of connections: In this field introducing act LXXXII of 2011 could be a help for us in the future, because the cb.) item of this act introduced in chapter 5.3 provides a possibility of tax allowance for companies if they provide sum for sport business exactly for the same kind of infrastructural developments. So, at present, we do not possess such data, but in the future, according to the realized TAO allowances, it will be public, which sport businesses and sport organizations set up safety systems of entrances and monitoring.

Distinct life cycle phases of mediation activities: Although we do not possess economic data of this item either, but in my opinion, there are no economic data of

³² Although it does not make too much sense to compare Hungarian football sport businesses with the top clubs of the Championship League, but only for an illustration: Barcelona has over 25 million likes. Albeit football is a global sports, Hungarian sport businesses are still at the very beginning of the process of internationalization.

the visible elements of value network exactly because, at the moment, co-creation is in its unconscious or early introduction phase.

Layered and interconnected industry structure: This item is really interesting, because it fits perfectly to the practice of Hungarian professional sport businesses, despite of the fact, that, of course Stabell-Fjeldstad did not think of the Hungarian practice or something similar, when developed their conception, for Hungarian professional sport organizations employ their players with supplier contracts, in a significant extent, which can be interpreted easily, as mediation of the service.

By all of these, we could draw the conclusion, that although professional Hungarian sport businesses have the theoretical possibility to introduce co-creation into the value network configuration. **However the present practice of Hungarian sport businesses does not prove the tendentious operation as a value network with any financial or other data.** First signs of operation as a value network can be seen in the case of MKB Veszprém KC, whilst the cases of Videoton, DVTK, Újpest and DVSC are promising. But together with the rest of the sport businesses they have to improve significantly to realize the advantages of the value network.

It is interesting, however that we have proof to the value network of the internal stakeholders. The present sport businesses, which have deficit in all sports is kept alive, that for their internal stakeholders the sport organization provides some mediating service, but not towards customers, rather towards politics of sport or local government, or towards other companies. In this case the value creation logic of Stabell-Fjeldstad shows up in the opposite way. The less actor use the „service,” the more valuable is it for them and standardization sets back the individual and flexible relationships.

Regarding the operation as a value network we possess codified proofs on the level of federations. Where the value network is the championships, the members are the sport businesses and other sport organizations, and their mutual relation to the media and to the sponsors can be explained as well (Woratschek – Schafmeister [2005]). The constitution and competition formula of MLSZ, MKOSZ, MKSZ and MJSZ unequivocally regulate the relations of the members of the value network, rule

their admission and secession, and with the help of a standardized system they even monitor the members' relationships (for example match reports, referees and committees). (MJSZ [2011], MKOSZ [2011a], MKOSZ [2011b], MKSZ [2011], MLSZ [2011a], MLSZ [2011b]) Further examination of the operation of federations would, however, cross the boundaries of my thesis.

6.3 *Resource structure of professional Hungarian sport businesses*

On examining the structure of resources of professional Hungarian sport businesses we have to examine the point of operationalization of the research question again. At this research question, however, unlike the former ones, a relatively big amount of objective factual data are available from the financial statements of sport businesses, which we can complete with further factual data.

On figure 9 of chapter 2.2.3 of the theoretical part, the extended balance sheet of the company can be seen, which we developed by works of Sveiby in former studies and which is, otherwise, the foundation of the research model seen through this thesis. In case of the research question about the structure of resources of professional Hungarian sport businesses, I am looking for the answer to exactly that question, how the structure of resources of the extended balance sheet of the company takes shape in the practice of today's Hungarian professional sport businesses.

The equity side of the balance sheet of Hungarian professional sport businesses is well covered already in my thesis, thus let us examine the assets side, which are shown on tables No. 30 and 31.

It can be seen clearly on table 30, that *net property, plant and equipment* are the most common category of fixed assets in case of professional Hungarian sport businesses, however, there are 23 such cases here, in the examined period, which do not possess any net property, plant and equipment (mostly basketball sport businesses). It is interesting, that there is a huge deviation in the value of net property, plant and equipment; while Győri ETO possess over 3 billion HUF in it, the first modus in the population can already be found at the value of 246 thousand HUF, and the median is only 5,8 million HUF. The reason of it is that **most part of Hungarian professional**

sport businesses does not have an own stadium, but they get it in very favorable construction of rent (typically for 1 forint or for free) **from the local government** or the owner **sport association**. And this will be important later in the case of relationship capital resources.

Table 30.: Assets of professional Hungarian sport businesses I. Source: own source

Statistics					
	Fixed assets	Immaterial Assets	Net property plant and equipment	Long-term investments	deferred income and accrued expenses
N Valid	183	91	179	35	113
Missing	19	111	23	167	89
Mean	199 002	195 223	92 197	72 851	11 438
Std. Error	44 708	40 004	31 627	33 120	2 423
Median	8 486	41 000	5 872	1 200	2 519
Mode	246,00 ^a	15000,00 ^a	246,00 ^a	3 000	5
Std.	604 795	381 619	423 134	195 943	25 752
Variance	365 776 958 077	145 632 761 462	179 042 282 763	38 393 610 270	663 153 239
Skewness	4,656	2,794	6,283	2,522	5,218
Std. Error	,180	,253	,182	,398	,227
Kurtosis	23,081	8,133	39,069	4,658	33,835
Std. Error	,357	,500	,361	,778	,451
Range	3 781 927	2 002 233	3 110 894	629 980	206 988
Minimum	16	2	16	20	1
Maximum	3 781 943	2 002 235	3 110 910	630 000	206 989
Sum	36 417 447	17 765 254	16 503 280	2 549 770	1 292 467
a. Multiple modes exist. The smallest value is shown					

Table 31.: Assets of professional Hungarian sport businesses II. Source: own source

Statistics						
	Current Assets	Inventory	Accounts receivable	Short-term investments	Cash	Total Assets
N Valid	201	96	197	2	201	202
Missing	1	106	5	200	1	0
Mean	94 661	5 976	63 095	30 695	29 203	281 601
Std. Error	18 487	981	11 861	10 778	11 912	51 603
Median	25 239	3 372	13 616	30 695	3 369	44 508
Mode	140,00 ^a	873	669	19917,00 ^a	350,00 ^a	234,00 ^a
Std.	262 094	9 607	166 476	15 242	168 877	733 418
Variance	68 693 072 553	92 294 741	27 714 295 535	232 330 568	28 519 296 601	537 902 030 255
Skewness	5,511	3,233	5,276		9,571	4,176
Std. Error	,172	,246	,173		,172	,171
Kurtosis	34,399	11,249	33,960		94,444	18,708
Std. Error	,341	,488	,345		,341	,341
Range	2 181 402	50 261	1 480 113	21 556	1 842 649	4 432 584
Minimum	140	2	20	19 917	1	234
Maximum	2 181 542	50 263	1 480 133	41 473	1 842 650	4 432 818
Sum	19 026 902	573 740	12 429 739	61 390	5 869 734	56 883 449
a. Multiple modes exist. The smallest value is shown						

Deployment of *immaterial assets* can be found in 91 cases in the population in the examined period, and the first modus (15 million HUF) and median (41 million HUF) of it exceeds the value of net property, plant and equipment significantly. The value of players are accounted mostly among immaterial assets, however, besides

sport, it is an accounting policy question as well. For there are sport businesses, which do not register their players this way, neither their market values nor the value of their contracts, while, obviously, their players have got value. Irrespectively of it, it is highly important, that in the case of professional Hungarian sport businesses, the value of immaterial assets is higher than the value of tangible assets, that is, **even before the examination of invisible wealth, it is proven that value creation of professional Hungarian sport businesses utilize mostly intangible resources.** This high value of immaterial assets issues unequivocally from the feature, that the value of players could be defined easily compared to the employees of other companies.

Application of *long-term investments* is not really typical of professional sport businesses, football sport businesses apply them mostly, but there are also some cases in basketball and in handball.

Within current assets the *short-term investments* are the least applied asset. In case of professional sport businesses their application is very rare (we could find it in case of the sport enterprise running the basketball team of ZTE only).

Almost half of the professional Hungarian sport businesses have got *inventory*. Although the mean of inventories does not reach 6 million HUF, the median is 3,3 million HUF, while the modus is 873 thousand HUF. Practically, sport accessories and merchandising products compose most parts of the inventory, and thus, **the value of inventory shows nicely the knowledge-intensive character, that is, professional Hungarian sport businesses possess a specifically low value of inventory.**

Cash and equivalents and accounts receivable form the biggest proportion of current assets in case of professional Hungarian sport businesses. The mean of accounts receivable is 66 million HUF, while the mean of cash and equivalents is 29 million HUF. It is interesting however that professional Hungarian sport businesses deploy significant amount of current assets and current liabilities as well, with more efficient management both amount could be decreased simultaneously which could free up working capital.

On the amounts of fixed assets and current assets, the features of **professional Hungarian sport businesses** are well visible, which fit perfectly into the knowledge-intensive character, that is, **with minimal inventory, applying low or medium amount of net property plant and equipment, they build their operation mostly upon intangible resources.**

However, examination of resources applied in value creation must be extended to (invisible) intellectual capital resources. As I have indicated above, there is an important feature of sport businesses, that some extent of their intellectual capital resources can become visible through immaterial assets. The value of players manifested in immaterial assets is exactly the *human capital resource*, which I have already discussed in the chapter knowledge-based theory of the firm, with the distinction, that in most cases of sport businesses it is measured and included in the financial statements.

It is an important question in this case whether we measure the value of players on the market value or on the value of their contracts. We could find examples for both solutions. In case of football sport businesses the market based valuation is maybe easier, for there are independent, international organizations, which evaluate the value of players. But in other sports, the value of the contract or the transfer is used preferably. Market evaluation of (intellectual capital) resources has to be based on the expected future value of the given resource that means it has to price risk as well. Against all evaluation difficulties I consider very beneficial for sport businesses to feature the value of their players in their books.

Those sportsmen are also included among the human capital resources, whose value is not in the balance sheet of sport businesses as well as the value of coaches, managers and other employees. Unfortunately, we do not have objective information from the aforementioned missing items, but in the future there will be perhaps a bigger coverage in the field of players' evaluation. According to all of these, we can certainly state, that **value of human capital resources deployed by professional Hungarian sport businesses is over 4,5 billion HUF.**

Among the *relationship capital resources*, we could also find several factors, which we are not able to measure in case of sport businesses. In case of tangible assets, I have already indicated, that in the background of that huge deviation, there is the fact, that most professional Hungarian sport businesses are not the owners of their stadium, thus most part of the population has a low value of net property, plant and equipment, while some other sport businesses (and among them, mostly Győri ETO) possess a huge amount of net property, plant and equipment. In case of the value of net property, plant and equipment in the year 2010 (figure A3 in the appendix) we could see, that 66,7% of those members, who deploy net property, plant and equipment deploy less than 10 million HUF, while 91,7% of them deploy less than 100 million HUF. While in 2010 the cumulated value of net property, plant and equipment owned by sport businesses barely exceeded 4 billion HUF (from which Győri ETO participated with 2,7 billion), the mean value of net property, plant and equipment was 84 million HUF. Let us suppose, that in the case of stadium, vehicles, equipments and training facilities the average amount of 84 million HUF is enough for sport businesses for operation, and thus, from the estimated value of net property, plant and equipment received with the symbolic rental agreements, we could make an estimation of one of the elements of the relationship capital resources, as it is shown on table 32.

Table 32.: Estimation of relationship capital resources from net property, plant and equipment in professional Hungarian sport businesses
Source: own source

Amount of relationship capital resources instead of net property plant and equipment		2010
Number of sport businesses in first division		52
Using plant and equipment		48
net property, plant and equipment		
Mean		84 097
Sum		4 036 702
	Without Győri ETO	1 390 018
	Sum of means	4 373 044
Relationship resources from plant and equipment		2 983 026

According to the estimation, **professional Hungarian sport businesses deploy relationship capital resources instead of net property plant and equipment in the amount of nearly 3 billion HUF just because of renting their plants and equipments from the local government or sport association for a nominal fee.**

Most prevalent elements of relationship capital resources are the brands, the trademarks, logos and the images of the company. In this area, sport businesses also show a good performance; all teams have their own logo, moreover several of them have even patent rights. Practically, professional Hungarian sport businesses run such teams, which can be the successors of associations and clubs looking back for a past of even more than hundred years. There are several cases, which brands are even recognized internationally. However, unfortunately we do not possess market values concerning brand values in case of professional Hungarian sport businesses, but we could accept that they certainly have.

Customer databases, customer communities and offline and online media appearances related to the communities are also important elements of the relationship capital resources. Nowadays all functioning sport businesses have websites and the community building has also begun, as we could see on table 29. It is true, although, that these communities are still in their infancy, and we do not have market values regarding them, but it is obvious, that they also increase the value of relationship capital resources of sport businesses. Through commercial, advertising and other media revenues, a part of the relationship capital resources is even realized on the market.

Moreover, in case of relationship capital resources, we do not have to forget about the value of connections in politics or sport politics, which cannot be measured either.

According to all of these, we can state, **that professional Hungarian sport businesses deploy over 3 billion HUF of relationship capital resources.**

In case of *organizational capital resources*, however, more serious problems are encountered. There is no proof, that professional Hungarian sport businesses employ transaction or controlling systems, whether they have patents and standardize their processes. Do they apply methods of management well-known for the manager society? (For example European football teams apply Balanced Scorecard). Do they have a system of strategic planning or strategic management? Although all sport businesses have a well-defined mission, even if they do not reveal it explicitly, we do

not have any other information on other parts of their strategy. In case of sport businesses, we do not know anything about the innovation process or the approach to innovation, though physiological or other researches of sport technique are obviously important for them.

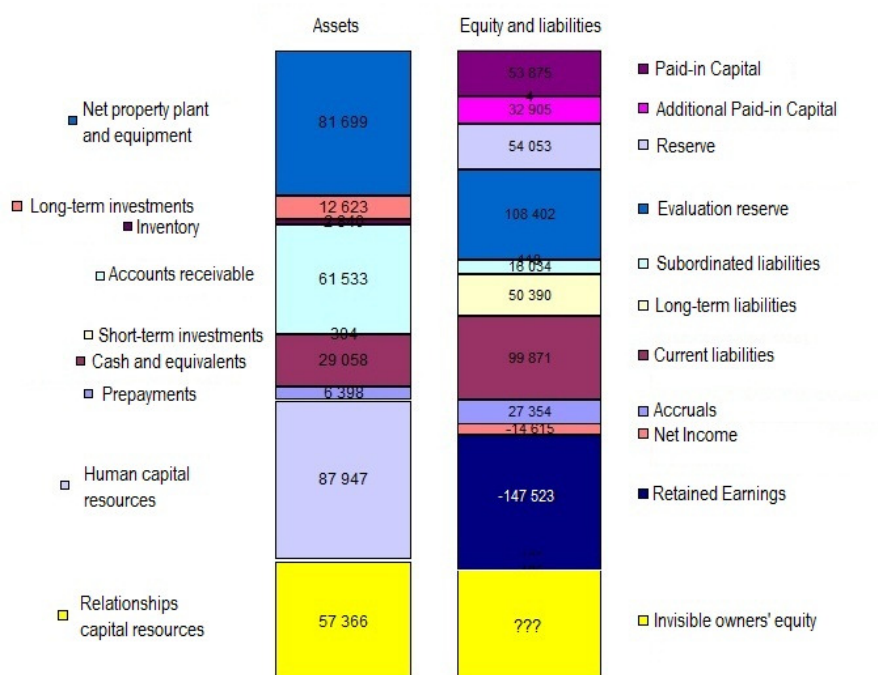
Regarding organizational culture, it is only supposed, that a strong organizational culture can appear in case of sport businesses, but, according to Balogh, everyday experience implies, that sport managers just infrequently take good use of direct and indirect effects of the strong organizational culture, in the sake of improving the results of the team (Balogh [2008]).

According to all of these, we have to state, that **there is no financial proof of the fact, that professional Hungarian sport businesses would deploy significant organizational capital resources during their value creation process.** It is very sad mostly, because since Penrose [1959], we know, that companies achieve economic rent not because they have better resources, but they have skills and competencies, with which they could utilize their resources in a better way (Penrose [1959]). This feature depends mostly on the management, which is exactly the field of organizational capital resources.

We can draw the extended balance sheet of the firm according to Sveiby by the measures of this chapter, thus, the resource structure of the average Hungarian professional sport businesses can be seen in figure No. 28.

Figure 28.: Resource structure of the professional Hungarian sport businesses

Source: own figure



Summary

In the theoretic part of my thesis I introduced knowledge-intensive companies, the theoretic concepts of resources deployed by them, their value creation process, configuration and stakeholders. In the practical part of my thesis, I examined the professional Hungarian sport businesses, operating in spectacle team sports, with the research model developed in the theoretic chapters.

The population of the research consist professional Hungarian sport businesses in spectacle team sports. In Hungary spectacle team sports are football, basketball (women and men), handball (women and men), ice hockey and water polo (women and men). From the research I had to exclude water polo as from the 20 women and men teams there are only 2 sport businesses and 2 are newly founded, all the others are associations without obligatory financial statements. According to this the population of the research consist 65 sport businesses from the first division in sport fields of football, women and men basketball, women and men handball and ice hockey. Their sporting data comes from their performance in the first division in the given sports in season 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11. And the business data were available for the year 2007, 2008, 2009 and 2010. The population of the research in these four business years represents 322 cases in the broad sense (sporting data of all clubs in the given seasons) and 202 in the narrow sense (financial data of the sport businesses involved in the first division in any season of any business years). In the research *I examine the whole population.*

My first research question was about the economic features of professional Hungarian sport businesses and it consisted from three hypotheses. The first hypothesis stated that the **professional Hungarian sport businesses are homogeneous according to their most important business data**. I operationalized the most important business data as total assets, retained earnings, net income, total revenues, and material and personnel expenses. **The first hypothesis was proven** by the examination, as from the hierarchical clustering with the between-group linkage method from the 202 cases 197 was valid and 177 was included in the first cluster and the remaining 20 cases got into 8 mini clusters.

From the beginning of 2000's there is a debate in the Hungarian sport business literature whether it is possible to operate profitably for professional Hungarian sport businesses or not. Although I accept that in the beginning of 2000's it was not possible to operate profitably, according to my **second hypothesis** in the research period **the long-term profitability of professional Hungarian sport businesses is possible**. The long-term profitability criterion was operationalized with the net future value in 2010 of the net incomes of sport businesses. From the 65 professional Hungarian sport businesses 27 had positive net future value of its net incomes so the **hypothesis was proven**.

According to the **third hypothesis professional Hungarian sport businesses create significant intangible value**. In the theoretical part of my dissertation I defined intangible value as those implicitly expected or even unexpected values which are created without being part of the contract nor physically manifested. The persistent operation with losses of the sport businesses proves the existence of intangible value. There are stakeholders, usually the sponsor companies, local governments, suppliers, sportsmen or the government (with the National Tax Bureau) to whom the sport businesses create enough value above the contract to sustain the liquidity and operation of the sport businesses against their losses. If the value would be tangible it would be realized in sales revenues or extraordinary revenues, these intangible values are not realized however in revenues, but in current liabilities, which would never be renewed in market conditions. Although I could not precisely define the **magnitude of the intangible value, but in 2010 it could even be 5 billion HUF**. Furthermore there was also example of huge materialization of intangible value as one sport business realized 2 billion HUF in extraordinary revenues by the forgiveness of its loans and interests. Therefore the third **hypothesis was proven**.

The *second research question was about the relationships between sporting success and economic success of professional Hungarian sport businesses* with four hypotheses. Before the hypotheses I examined the correlations of sporting success in time. I found that the sporting successes are in significant, strong or medium correlation with the previous years and the next years sporting successes and as we are increasing the time gap the strength of correlation is weakening. It does not mean

however that sporting success is determining next years sporting success, it's only message is that the factors of sporting success is not shifting easily in the short-run.

According to **the fourth hypothesis there is strong, significant correlation between sport success and economic success of professional Hungarian sport businesses**. The sporting success was measured with the final position in the first division in the given season and the economic success was measured with the net income and also tested with the operating income. The **fourth hypothesis was falsified** as there was no connection between the sporting success and the economic success. With the falsification of the fourth hypothesis I could come to the conclusion that *the sporting success is far more important in the professional Hungarian sport businesses than the economic success and the market is not valuing the sporting success in tangible terms to the amounts of its creation costs*.

According to the **fifth hypothesis there is strong, significant correlation between player's value and sport success of professional Hungarian sport businesses**. I operationalized the value of players with the value of immaterial assets as its value contains only players' value in almost all cases in professional Hungarian sport businesses. According to the correlation measures **the fifth hypothesis was also falsified** as there was no significant correlation between the sporting success and the value of immaterial assets. This result is not so bad however as there are some sport businesses who are not valuing their players and those who are valuing are using two different methods (market value and contract value). Presumably the connection is failed because of these restrictions although even with these restrictions medium correlation was expected.

According to the **sixth hypothesis there is no relation between sport success and subsidized revenues of professional Hungarian sport businesses**. The subsidized revenues were counted with other revenues and extraordinary revenues as these are the revenue categories where professional Hungarian sport businesses are realizing subsidies. According to the correlations **the hypothesis was proven**, there is no relation between sport success and subsidized revenues, which means *the subsidies are independent from sporting success and are given solely for survival*.

According to the **seventh hypothesis there is strong, significant correlation between sport success and the total revenues and the material and personnel costs of professional Hungarian sport businesses**. In the background of the hypothesis lie the assumptions that from better sporting results sport businesses can realize more revenues and to obtain better sporting results sport businesses should have higher costs. The total revenues are the sum of sales revenues, other revenues and extraordinary revenues as professional Hungarian sport businesses realize significant proportion of their revenues as other and extraordinary revenues. And material and personnel costs were also counted together as these are the cost categories where professional Hungarian sport businesses are paying their staff (i.e. it is widely applied that sportsmen have also marketing contracts as suppliers and coaches are also employed often as suppliers). **With the correlation measure I could neither falsify nor prove the hypothesis as there was significant, strong correlation between the revenues and the costs, which were blurring their correlation with the sporting success** (and partial correlations were not showing any significant relationships).

As there was no connection between the sporting and the economic performance of professional Hungarian sport businesses I examined the underlying factors with the research model's following research questions.

In the third research question I examined the relevant stakeholders of professional Hungarian sport businesses. According to my operationalization the stakeholder is relevant if it becomes visible in the financial statements of the business either as it creates value or provides revenue or finances the professional Hungarian sport business. From the notes to the financial statements I created a revenue distribution and a liabilities distribution and the executive interviews provided also useful information. According to these documents I found the following stakeholders relevant in professional Hungarian sport businesses:

- **Sportsmen, players** (as immaterial assets and their value is the major part of the owners equity, “they” conduct 8% of the revenues from the player’s market, and they also provide around 8% of the current liabilities)
- **Owners and shareholders** (they provided the owners equity, they also provide current liabilities and unusual revenues)

- **Sponsors and advertisers** (they provide around 10% of the revenues, they also provide current liabilities and extraordinary revenues)
- **Media** (they provide around 7% of the revenues)
- **Local governments** (providing most part of the other revenues)
- **Sport federations** (providing normative subsidies, regulating the operation of sport businesses)
- **Government** (“providing” current liabilities with unpaid taxes, sport budget of ministry)
- **Managers and other employees** (although they perform managing and supporting roles they stay usually hidden)

It is astonishing however that season ticket and other **ticket revenues** are providing **only 2%** of the revenues and the **merchandise revenues** are **less than 0.5%** of the combined revenues, which means that the **consumer market’s local consumer segment and the merchandise market is also failing**. The real problem behind these is that the consumer market should pull the other markets of the professional sport businesses and although those are still working, but it is certainly not sustainable.

In the fourth research question I examined the characteristics of the value creation process of professional Hungarian sport businesses. To address the research question I examined the empirical part’s value networks features of the professional Hungarian sport businesses. Based on that research I found that **nowadays’ practice** of the sport businesses **does not support value network operations** with any business or other data. The first signs of value network operations can be seen however on MKB Veszprém KC and Videoton, DVTK, Újpest and DVSC seems to be in the introduction phase, but all of them should also consciously develop to realize the advantages of value networks.

It is very interesting however that in the **internal stakeholders** we can see **value network solutions**, as sport businesses provide mediator services for their internal stakeholders, but not to the consumers, rather to the politics of local government or other companies. *In this case the value network logic of Stabell-Fjeldstad works in*

the opposite way, the less to resort the service the more it is worth and standardization set back the flexible individual relationships. There is also codified evidence for value networks in the level of sport federation.

The fifth research question of the dissertation examined the resources deployed by professional Hungarian sport businesses according to the extended balance sheet based on Sveiby's work.

From **tangible resources** the net plant and property are the most common category, but there were 23 cases when the sport businesses did not even have net plant and property (mostly basketball businesses). There were also huge deviation in the value of net plant and property as most of the professional Hungarian sport businesses do not own their facilities, but it is provided by the local government or by a sport association for token payment. Immaterial assets were found in 91 cases and their first mode was 15 million HUF with a 41 million HUF median. It is striking that the value of immaterial assets are much larger than the value of net plant and property. Sport businesses do not use long-term investments and frequency and value of inventory is also quiet low. Cash and equivalents and receivables are the majority of the current assets. We can easily identify **the knowledge-intensive features of the sport businesses as they operate with marginal inventory, low or medium net plant and property and bases their value creation mainly on intangible resources.**

In the professional sport businesses major part of the **intangible resources** could be measured as well. The value of the players accounted in the immaterial assets is the major part of the human capital resources. Although not valued players, coaches, managers and other employees are also part of the human capital resource I could not estimate their value. Based on this part of the research I could state that the **human capital resources deployed** by the professional Hungarian sport businesses **worth more than 4.5 billion HUF in 2010.**

Major part of the **relationship capital resources** could also be measured. As the professional Hungarian sport businesses are provided with facilities by local government or sport associations for token payment I could estimate their

relationship capital resources worth around 3 billion HUF from this source. The most well known elements of the relationship capital resources are however the trademarks, brand names and the image of the sport club, which are widely used by professional Hungarian sport businesses even though I could not get any valuation for them. These businesses also deploy consumer database, communities, off- and on-line media presence, which valuation is also missing. From the advertisements, commercials and other media revenues professional Hungarian sport businesses are even selling a part of their relationship capital resources. The political and sport-political relationships of internal stakeholders are also important unmeasured parts of the relationship capital resources. Based on the research I could state that the **relationship resources deployed** by professional Hungarian sport businesses are **worth at least 3 billion HUF**.

In the case of **organization capital resources** however I encountered some serious problems. **I could not find any objective proof of the deployment** of organizational capital resources by the professional Hungarian sport businesses. It is very sad as these resources catalyze other resources, provide synergy and enhances efficiency.

My thesis is perhaps the most important station of my research activity, however several *more research questions* emerged for me, *which could call forth further researches*. Regarding the stakeholders, it would be interesting to examine what kind of ownership types are presented in case of professional Hungarian sport businesses, and whether this type of ownership affects the efficiency of a sport business. Perhaps the most important direction of further research would be the examination of boost possibilities of the consumer market. Another important direction of further research could be the examination of the factual data of tax allowances evolved by the results of TAO act in the area of financing professional sport businesses; its effects on sponsorship, or its stimulating effect. An exciting research question of further exploration is of the intensive media-presence of sport businesses, mostly in the light of the development of value networks. Invisible wealth's value networks can be the topic of a further, revealing-type, qualitative research, and based on that even a large sample sized quantitative research could be completed. Furthermore, an interesting direction of research could be putting the definitions of capital and resources into a historical context, even illustrate them with examples of sport businesses. Making the

research internationally is again, a plausible further research direction, comparative studies could be made with the neighboring countries and further revealing researches could be defined in case of more successful countries by sport success and economic success. By regional series of cups, another obvious direction of research is the regional examination of research questions.

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<http://www.waterpolo.hu/>

<http://e-beszamolo.kim.gov.hu/kereses-Default.aspx>

Appendix

A1. The net future value of professional Hungarian sport businesses'

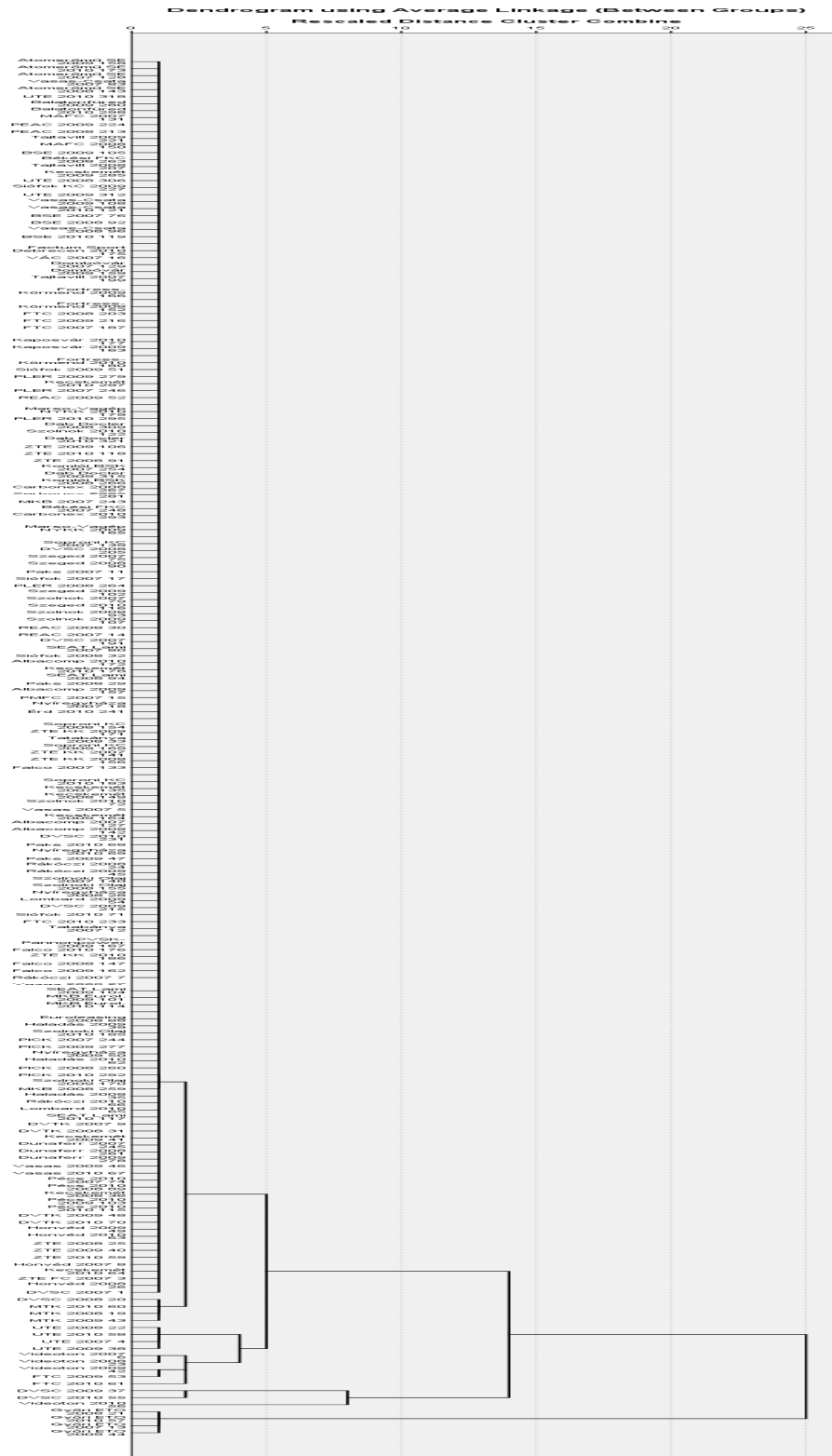
net incomes in the research period

Nr.	Sport	Team	Net income NFV 2010
1	Football	DVSC-TEVA	1 582 051
2	Football	Lombard Pápa Terminál FC	203 234
3	Football	Videoton FC	67 677
4	Football	ZTE FC	65 978
5	Football	Szolnoki MÁV	59 297
6	Women Basketball	UNIQA-Euroleasing Sopron	39 965
7	Football	Paksi FC	26 193
8	Ice-hockey	Dab Docler	24 347
9	Men Handball	MKB Veszprém KC	23 232
10	Women Basketball	Bajai NKK	20 661
11	Men Basketball	Fortress-Lami Véd Kőrmend	19 822
12	Women Handball	DVSC-KORVEX	17 303
13	Women Handball	FTC-Rail Cargo Hungaria	17 195
14	Football	Kaposvári Rákóczi	16 353
15	Men Basketball	Szolnoki Olaj	15 270
16	Football	REAC	12 958
17	Women Basketball	ZTE NKK	12 243
18	Football	Nyíregyháza Spartacus FC	11 457
19	Women Basketball	Szolnoki MÁV	9 486
20	Football	FC Tatabánya	8 766
21	Men Basketball	Atomerőmű SE	4 179
22	Men Basketball	Marso-Vagép NYKK	2 225
23	Women Basketball	Szeged KE	2 212
24	Women Handball	Pikker-PTE-PEAC	1 969
25	Men Handball	Balatonfüredi KSE	317
26	Women Basketball	FTC	239
27	Women Handball	Siófok KC-Galerius Fürdő	235
28	Men Handball	Komlói BSK	-528
29	Women Basketball	Vasas-Basket	-732
30	Football	Haladás Sopron Bank	-941
31	Women Handball	ÉTV-Érdi VSE	-1 439
32	Men Basketball	Planet-Leasing Dombóvár KC	-2 555
33	Men Basketball	MAFC	-2 640
34	Men Handball	Tatabánya Carbonex KC	-2 915
35	Men Handball	Erste-Békési FKC	-4 588
36	Women Handball	Tajtvill-Nyíradony	-7 018
37	Ice-hockey	Újpesti TE	-7 352
38	Men Basketball	Factum Sport Debrecen	-8 468
39	Football	Újpest FC	-11 327
40	Men Handball	Celebi FTC	-11 524
41	Women Basketball	BSE-FCSM	-11 764
42	Men Basketball	Pécsi VSK-Pannonpower	-12 324
43	Men Handball	PLER KC	-23 950

44	Men Handball	Pajor Pálinka Kecskeméti KSE	-26 137
45	Football	Kecskeméti TE	-35 130
46	Football	Vác	-36 059
47	Football	Vasas-HÍD	-36 385
48	Men Basketball	Kecskeméti KSE	-41 635
49	Ice-hockey	Ferencvárosi TC	-41 642
50	Football	FGSZ Siófok	-42 686
51	Men Basketball	Albacomp Fehérvár	-50 824
52	Men Handball	Dunaferr Alexandra	-54 394
53	Football	MTK Budapest	-56 410
54	Men Basketball	Kaposvári KK	-61 678
55	Men Basketball	Kis-Rába Menti Takarékszövetkezet Soproni KC	-61 720
56	Women Basketball	UNI SEAT Győr	-80 970
57	Men Basketball	Zalakerámia ZTE KK	-92 192
58	Women Basketball	Pécs 2010	-130 004
59	Men Basketball	Falco-Szova-KC Szombathely	-130 389
60	Football	Pécsi MFC	-182 052
61	Men Handball	Pick Szeged	-189 246
62	Football	DVTK	-247 456
63	Football	Budapest Honvéd	-709 960
64	Football	Győri ETO FC	-978 785
65	Football	Ferencvárosi TC	-2 956 643
66	Football	FC Sopron	
67	Ice-hockey	HC Csíkszereda	
68	Ice-hockey	SC Csíkszereda	
69	Ice-hockey	Vasas Bp. Stars	
70	Ice-hockey	Steaua Bucuresti	
71	Ice-hockey	Progy Hargita Gyöngye	
72	Ice-hockey	Miskolci JJSE	
73	Ice-hockey	Sapa Fehérvár AV19	
74	Ice-hockey	SCM Fenestela 68 Brasov	
75	Men Basketball	Naturtex-SZTE-Szedeák	
76	Men Basketball	Salgótarjáni KSE	
77	Men Basketball	EnterNet Vásárhelyi KS	
78	Women Basketball	Atomerőmű KSC	
79	Women Basketball	Ceglédi Elefántkőlykök Kosárlabda Klub SE	
80	Women Basketball	ELTE-BEAC Újbuda	
81	Women Basketball	Szombathely Egyetem SE	
82	Women Basketball	Kanizsai Diákkosárlabda Klub	
83	Women Basketball	DKSK MISI	
84	Women Basketball	Kecskeméti KC	
85	Men Handball	DKSE	
86	Men Handball	Győri ETO FK	
87	Men Handball	Gyöngyösi KK	
88	Men Handball	Nyíregyházi KSE	
89	Men Handball	Százhalombattai KE	
90	Men Handball	Mezőkövesdi KC	
91	Men Handball	Tatai HAC	
92	Men Handball	Hort SE	
93	Men Handball	Csurgói KK	
94	Men Handball	TM-LINE PTE-PEAC PVSE	
95	Men Handball	Orosházi FKSE	
96	Men Handball	Tatran Presov	
97	Women Handball	Győri Audi ETO KC	

98	Women Handball	Dunaújvárosi Regale Klíma	
99	Women Handball	Alcoa FKC RightPhone	
100	Women Handball	Vasas SC	
101	Women Handball	Kiskunhalas NKSE	
102	Women Handball	ASA HNKC	
103	Women Handball	SYMA-Váci NKSE	
104	Women Handball	Bp. Kőbányai Spartacus SC	
105	Women Handball	Budapest Bank-Békéscsabai ENK SE	
106	Women Handball	Németh Toll Makó	
107	Women Handball	Veszprém Barabás KC	
108	Women Handball	Óbudai Goldberger SE/Újbuda TC/Hunnia KSK	
109	Women Handball	UKSE Szekszárd	

A2. Dendrogram of hierarchical clustering



A3. Net property plant and equipment of professional Hungarian sport businesses in 2010

Net property plant and equipment					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	50,00	1	1,9	2,1	2,1
	100,00	1	1,9	2,1	4,2
	131,00	1	1,9	2,1	6,3
	246,00	1	1,9	2,1	8,3
	306,00	1	1,9	2,1	10,4
	348,00	1	1,9	2,1	12,5
	360,00	1	1,9	2,1	14,6
	385,00	1	1,9	2,1	16,7
	440,00	1	1,9	2,1	18,8
	641,00	1	1,9	2,1	20,8
	741,00	1	1,9	2,1	22,9
	742,00	1	1,9	2,1	25,0
	755,21	1	1,9	2,1	27,1
	877,00	1	1,9	2,1	29,2
	1239,00	1	1,9	2,1	31,3
	1267,00	1	1,9	2,1	33,3
	1283,00	1	1,9	2,1	35,4
	1456,48	1	1,9	2,1	37,5
	1930,00	1	1,9	2,1	39,6
	2645,00	1	1,9	2,1	41,7
	2761,00	1	1,9	2,1	43,8
	2851,00	1	1,9	2,1	45,8
	4112,00	1	1,9	2,1	47,9
	4908,00	1	1,9	2,1	50,0
	5112,00	1	1,9	2,1	52,1
	5582,00	1	1,9	2,1	54,2
	6087,00	1	1,9	2,1	56,3
	6611,00	1	1,9	2,1	58,3
	6727,00	1	1,9	2,1	60,4
	7065,00	1	1,9	2,1	62,5
	8980,00	1	1,9	2,1	64,6
	9432,00	1	1,9	2,1	66,7
	14125,00	1	1,9	2,1	68,8
	15954,00	1	1,9	2,1	70,8
	19266,00	1	1,9	2,1	72,9
	20556,00	1	1,9	2,1	75,0

28404,00	1	1,9	2,1	77,1
30972,00	1	1,9	2,1	79,2
37869,00	1	1,9	2,1	81,3
46945,00	1	1,9	2,1	83,3
82124,00	1	1,9	2,1	85,4
83205,00	1	1,9	2,1	87,5
97076,00	1	1,9	2,1	89,6
98091,00	1	1,9	2,1	91,7
115603,00	1	1,9	2,1	93,8
145582,00	1	1,9	2,1	95,8
383929,00	1	1,9	2,1	97,9
2730831,00	1	1,9	2,1	100,0
Total	48	92,3	100,0	

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