

Hamid Gholamzadeh Fasandoz

# Sport as an Industry in Finland

Exploring the Economic  
Significance, Contributions,  
and Development of the Sport  
Sector as an Industry



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Esitetään Jyväskylän yliopiston liikuntatieteellisen tiedekunnan suostumuksella  
julkisesti tarkastettavaksi yliopiston Liikunnan salissa L209  
toukokuun 18. päivänä 2016 kello 14.

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UNIVERSITY OF JYVÄSKYLÄ

JYVÄSKYLÄ 2016

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STUDIES IN SPORT, PHYSICAL EDUCATION AND HEALTH 240

Hamid Gholamzadeh Fasandoz

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UNIVERSITY OF JYVÄSKYLÄ

JYVÄSKYLÄ 2016

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Publishing Unit, University Library of Jyväskylä

URN:ISBN:978-951-39-6607-2

ISBN 978-951-39-6607-2 (PDF)

ISBN 978-951-39-6606-5 (nid.)

ISSN 0356-1070

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## ABSTRACT

Gholamzadeh Fasandoz, Hamid

Sport as an industry in Finland. Exploring the economic significance, contributions, and development of the sport sector as an industry

Jyväskylä: University of Jyväskylä, 2016, 171 p.

(Studies in Sport, Physical Education and Health

ISSN 0356-1070; 240)

ISBN 978-951-39-6606-5 (nid.)

ISBN 978-951-39-6607-2 (PDF)

Sport as an industry is one of the diverse industries in the business world. Economically it is considered one of the significant factors for revitalization of the national economy in many countries. However, the size of its real economic value and its industrial coverage sectors are debated issues that need proper research at the national level. Therefore, this study utilized a quantitative methodology by applying a production approach and its framework to find out the significance, contributions, and developments of the industry in Finland.

The Finnish industrial sport sector comprises sixteen sub sectors of which nine were active in manufacturing of sport goods and seven in services. The present study concluded that the industry is shifting towards more service orientations. From 2002 until 2011, the sports sector on average generated 1.45% value-added while its gross domestic product constituted 1.31% of Finland's gross domestic product. The share of sport enterprises was 1.7% of total enterprises, and the present study found that new enterprises were the main sources for generation of new jobs in most of the subsectors. Employment in the sport industry constituted 1.15% of total employment of all Finnish enterprises, and its industrial production of goods and services reached to 1.25% of total industrial output. During the same period, 0.52% of total exports of Finland happened in sports while 0.58% of total imports were in sports goods and services. Moreover, the sports sector generated 0.39% of taxes on production. The average aggregate supply of the sports sector was over four billion € per year, of which 93% was produced in the country and 7% was imported, while 92% of it was consumed and 8% was exported. The growth rate in aggregate, domestic, and foreign supply was on average over 4%.

The study concluded that the sport sector is one of the major industries in the Finnish national economy. Its generation of value-added and gross domestic product was the fiftieth largest among one hundred thirty-five top industries in the country, and the eighteenth largest among twenty-two in Finland's industrial head groupings.

Keywords: sport industry, employment, enterprises, production, imports, exports, value added, gross domestic product, taxes on production, supply, consumption

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Urheilu- ja liikuntateollisuus on osa liike-elämää. Monissa maissa sitä pidetään merkittävänä kansantalouden elvyttäjänä, vaikka sen tosiasiallisesta taloudellisesta merkityksestä ja siihen kuuluvista aloista ei ole yksimielisyyttä. Aiheesta kaivataan kansallisen tason tutkimusta. Tässä tutkimuksessa on käytetty määrällisiä tutkimusmenetelmiä soveltaen ns. tuotantolähestymistapaa ja sen viitekehystä alan merkityksen, aseman ja kehityksen valottamiseksi maassamme. Suomen liikuntateollisuussektori jakautuu 16 alasektoriin, joista yhdeksän kattaa liikuntatuotteiden valmistajat ja seitsemän palveluntuottajat. Tutkimuksen perusteella alasta on tulossa palvelupainotteisempi. Vuosina 2002–2011 liikuntasektorin arvonlisäyksen osuus oli keskimäärin 1,45 % ja bruttokansantuote (BKT) oli vastaavana ajankohtana 1,31 % Suomen bruttokansantuotteesta. Liikuntayritysten osuus oli 1,7 % kaikista yrityksistä. Useimmilla alasektoreilla pääosa uusista työpaikoista syntyi uusiin yrityksiin. Liikuntateollisuuden työpaikat muodostivat 1,15 % suomalaisten yritysten työpaikoista, ja sen tuotteiden ja palveluiden tuotanto oli 1,25 % teollisuuden kokonaistuotannosta. Samalla ajanjaksolla 0,52 % Suomen kokonaisviennistä koostui liikuntateollisuudesta, ja liikuntatuotteiden ja -palveluiden osuus kokonaistuonnista oli 0,58 %. Liikuntasektorin osuus tuotantoveroista oli 0,39 %. Liikuntasektorin kokonaistarjonta oli keskimäärin yli neljä miljardia euroa vuodessa. Tästä määrästä 93 % oli tuotettu omassa maassa ja 7 % tuotu ulkomailta sekä 92 % siitä kulutettiin ja 8 % vietiin maasta. Kokonais-, kotimaisen ja ulkomaisen tarjonnan keskimääräinen kasvu oli yli 4 %.

Tutkimustulosten perusteella liikuntasektori kuuluu Suomen kansantalouden avainaloihin. Arvonlisäyksen ja BKT:n perusteella se oli sijalla 50 maamme 135 suurimman alan joukossa sekä 18. suurin Suomen 22 päätoimialasta.

Avainsanat: Liikuntateollisuus, työllisyys, yritykset, tuotanto, tuonti, vienti, arvonlisäys, bruttokansantuote, BKT, tuotantovero, tarjonta, kulutus



## ACKNOWLEDGEMENTS

Since the initiation of this research, I had the privilege to receive advice, critiques, and support by many who directly and indirectly played notable role in the completion of my thesis. I would like to thank my supervisor Professor Kimmo Suomi for giving me this opportunity to study this interesting topic in the University of Jyväskylä and for all the advice during this period. My deepest gratitude is owned to Professor Johanna Mappes, without her help and her advices, I was not able to complete this thesis. Three times I decided to give up this dissertation, but her supports and encouragements made me determine to continue.

I wish to thank Professor Kari Heimonen in the School of Business and Economics, University of Jyväskylä who guided me to right direction. I also wish to thank adjunct professor Pasi Saiasalo and Adjunct Professor Esa Mangelöja which pre-examined my thesis and gave me advice to follow. I specially thank professor Saiasalo for his efforts and time in helping me how to follow this thesis step by step. I would like to thank senior researcher Esa Storhammar in the department of management and leadership who thought me how to work with input-output analysis. Data collection was one of the problematic issues during this period; I would like to thank Finnish Statistics Office, and those in this office who helped me kindly by phone and emails to cover this area as much as we could. Finally, I would like to thank my thesis official examiners Professor Matti Koironen and Victor Eduardo Sojo for their critiques and further improvement of this study.

Finally I wish to thank my loved ones, my wife, Roghieh Ashrafi, my son Sina, and my family. Without their support, encouragement, and suffering during all these years, this was not possible to proceed.

Jyväskylä 31.3.2016

Author

## **ABBREVIATIONS**

CPA	Classification of Products by Activity
CN	Combined Nomenclature
EU	European Union
ISIC	International Standard Industrial Classification
GDP	Gross Domestic Product
GNP	Gross National Product
OECD	Organization for Economic Co-Operation and Development
NACE	Classification of Economic Activities in the European Communities (Nomenclature Statistique Des Activites Economiques Dans La Communaute Europeenne)
NIA	National Income Accounting
SNA	System of National Accounts
TOL	Toimialaluokitus (Standard Industrial Classification)
UN	United Nations

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# 1 INTRODUCTION

The political, cultural, educational, medical, and recreational well-being of every nation is dependent upon its economic health. The amount of wealth, which any nation can produce, is dependent on its industries in manufacturing, agriculture, and services. In fact, we live by the efforts of our industries and only if these activities produce a surplus, we can enjoy reasonable levels of education, medical care, and all those other services, which amount to a good standard of living. According to the Finnish Prime Minister's Office Reports (2010), growth in our incomes and material standard of living stems from higher productivity, in other words, being able to produce, in any given time, either more goods or goods of greater value. Baumol and Blinder (2015) suggested that nothing has as great an effect on our material well-being and the amounts society can afford to spend on hospitals, schools, and social amenities as the rate of growth of productivity.

Zhong (2010) pointed out that productivity in a society is the process of formation and development of industries. The developmental sequence of industries moves along with economic growth and has a leading effect on a national economy. The United States Department of Commerce (1995) defined an industry as a group of establishments producing the same product or a closely related group of products. The product groupings from which industry classifications derived are based on considerations such as similarity of manufacturing processes, types of material used, types of customers and the like. The Organization for Economic Co-Operation and Development (OECD, 2002) noted that "an industry consists of a group of establishments engaged in the same type of productive activity, whether the institutional units to which they belong are market producers or not. The United Nations (UN), Department of Economic and Social Affairs, Statistics Division (2008) described that the activity carried out by a unit is the type of production in which it engages. This is the characteristic of the unit that groups with other units to form industries. Thus, an industry is defined as the set of all production units engaged primarily in the same or similar kinds of productive activity. Talloo (2007) suggested that an industry



can be classified either by a major input (goods or services used to produce the final product) or by the industries' final product.

On the other hand, with recent economic developments, sport is gaining huge economic potentials as an industry. The huge involvement of economic interests in sport and physical activities (Bogusz, Cygan, & Szyszczak, 2007) has created industrial aspects for sports in national and international level and extended its economic boundaries towards big businesses and in some extend towards international frontiers. The mass participation in physical activities (Herrick, 2011), attendance in sport competitions, production and consumptions of sport related products and services have gained significant considerations. In addition, the competition of nations for organizing sport events in international arenas (Rosner & Shropshire, 2004), sponsorship in sports (Amis & Cornwell, 2005), and the involvement of huge sums of money in sport media (Eitzen, 2001) have created notable economic interests.

Despite these huge substantial contributions of sport to the national economy of countries, sport does not exist in any national and international industrial classifications as an independent sector. Consequently, it creates confusions in estimating the output of the industry, its value added, gross domestic product, the size of its employment, significance, and other industrial aggregates. Similarly, result in exaggeration, overestimations and misunderstanding in adapting the right policies towards sport related issues.

## 1.1 Delineating industries

Industries contribute enormously to well-being of their respective societies through different means. For instance, by producing products and services for final use of households, inputs for other industries, higher incomes by huge outputs, employment, generation of tax income for governments, involvement in exports and import, investment and the like. Weiss (1988) noticed that the spread of the industries is an important part of economic development, creating jobs, new products, trade and investment between countries.

How industries defined, classified, developed, measured and how they contribute to their respective societies and which factors make an individual industry be significant in their national economies are the prime interests of policy makers, governmental institutions, industry observers and researchers in many countries. The OECD (2001) noted that the relation between industry-level and aggregate productivity measures is one of significant interest to analysts and policy-makers because it establishes a link between the micro and macro levels of the economy and helps answer questions about, for example, the contribution of individual industries to overall productivity growth.

Simula (1998) noted that the sectorial contribution of forestry (in Finland) can be measured in terms of such traditional indicators as GDP share, balance-of-payments impacts or export revenue, industrial output, employment or income generation. The Australian Bureau of Statistics (2007) pointed out that one

measure of the importance of an industry is its contribution to the Australian economy. The size of the Australian economy is typically estimated in terms of GDP, and the structure and performance of the economy in terms of industry gross value added.

Deepashree and Agarwa (2006) argued that GDP is one of the most important macroeconomic variables. It measures both a nation's total income and its total output of goods and services, and is one of the best measures of judging an economy's performance. Wessels (1997) suggested that in order to find out how economy is doing, government uses National Income Accounting to measure national output. Francois and Derek (2007) noted that National Accounts (NA) are at the core of a modern system of economic statistics, and they provide the conceptual and actual tool to bring to coherence hundreds of statistical sources available in developed countries. Streitwieser (2010) in the Bureau of Economic Analysis, U.S. Department of Commerce illustrated that the accounts facilitate the study of the internal workings of the U.S. economy. He provided a framework to measure and analyzes the production of goods and services by industry. He showed the flows of goods and services purchased by each industry, the incomes earned, and the distribution of sales for each commodity to industries and final users.

The Statistics Division, Department of Economic and Social Affairs, United Nations (2008) suggested that the International Standard Industrial Classification of All Economic Activities (ISIC) is the international reference classification of productive activities. Its main purpose is to provide a set of activity categories that can be utilized for the collection and reporting of statistics according to such activities. The European Commission (2014) stated that EU level work of 2006, to develop a common European approach for measuring the economic impact of sport had led to an agreement on the Vilnius definition of sport, as a basis for the collection and production of data at national level and serving as a harmonized framework for creating sport satellite accounts (SSAs). Further progress may be achieved by improving the evidence-base on the economic importance of the sector and its potential to contribute to wider policy goals, such as the Europe 2020 strategy.

In defining sport, The Council of Europe (1993) has defined that "Sport" means all forms of physical activity, which through casual or organized participation, aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels. The European Commission (2010) pointed out that the sport sector has been included in the Classification of Economic Activities in the European Communities (NACE). It consists of two sub-sectors, including operation of sports arenas and stadiums (activity 92.61) and other sporting activities (activity 92.62). Breuer (2013) noted that Vilnius definition of sport as statistical, which corresponds with the current NACE category 92.6 (sporting activities) individual-related sport services (e.g. offered by sport facilities, sports clubs, sport federations, professional sport teams) is not covering all areas. He suggested that such narrow definition could be extended to include all products and services, which

are necessary as inputs for doing sport and those which have a direct or indirect relation to any sport activity but without being necessary to do sport (drawn upon sport as an input) for instance sports gambling and sports media.

The European Commission (2015) pointed out that National Accounts are the main reference point for economic policy making on the national macro level and normally maintained by the statistical office of a country. Finland's National Accounts (2004) revealed that Finland's national accounts total 100 industries (including financial intermediation services) at the most detailed accounting level. Finnish National Accounts (2009) noted that in Quarterly National Accounts (QNA) gross value added calculated at the accuracy of 130 industry/sector combinations. Two digit level of NACE 2002 were used for the majority of industries, although for a few industries the calculations were at the 3-digit level. Sector classification is 2-digit level with the exception that in the general government sector central government, local government and compulsory social insurance form sectors of their own. An estimate of change in the value and prices of output and intermediate consumption calculated for each industry/sector combination and value added then obtained as the difference between output and intermediate consumption.

We may trace economic activities in sport in two categories as profit and nonprofit organizations in general. Sport economic activities can also be classified in three categories: voluntary, public and private organization, each of which with different objectives. However, sometimes the borders among these three groups are not clearly defined. The transcending boundaries of conventional classification (Davies, 2004) are shown in figure 1. The boundaries of these categories are blurred and there are critical discussions about the involvement of these organizations in activities of other sectors or the objectives that they pursue. In addition, in Finland, Statistics Finland/ National Accounts (2014) pointed out that there are three types of producers in Finland: market producers, non-market producers, and own-account final producers. Further, in Finnish National Accounts other non-market producers are divided into two sub-groups: General government institutions and non-profit institutions. General government in turn is divided into three sub groups: central government, local government, and social security funds.

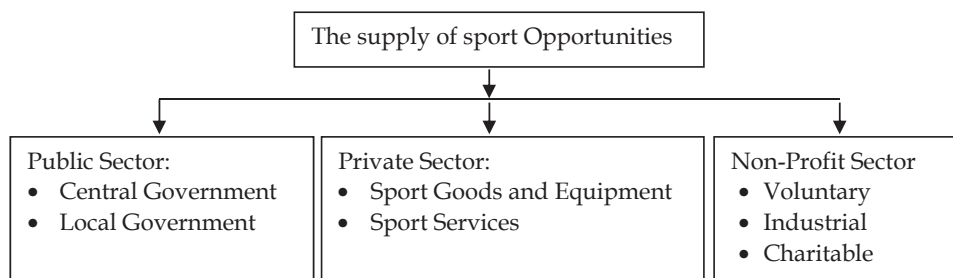


FIGURE 1 Conventional organizational sector in sport

There are some studies indicating the value and size of sport related economic activities in the national economy of countries. For instance, the European Commission (2010) revealed that in 2005, the share of sport-related gross value added of total EU gross value added was 1.13% for the narrow definition and 1.76% for the broad definition of sport. The share of gross value added according to the statistical definition is 0.28%. Therefore, the real share of sport in terms of production and income might be about six times as high as reported in official statistics. In 2005, sport-related gross value added (direct effects) amounted to about one hundred twelve billion Euros according to the narrow definition and one hundred seventy-three billion Euro with respect to the broad definition. For the statistical definition of sport, it was about twenty-eight billion Euros. The direct effects of sport, combined with its multiplier (indirect and induced) effects, added up to 2.98% of overall gross value added in the EU.

Berwert et al. (2007) studied the economic significance of sport in Switzerland and estimated its turnover around fifteen billion CHF and noted that the sports industry generated gross value added worth eight billion CHF in 2005 and contributed 80,300 jobs (full-time equivalents). Sport thus accounts for 1.8% of Switzerland's GDP and 2.5% of the Swiss labor force. Milano and Chelladuri (2011) presented three estimates for the size of the Gross Domestic Sport Product (GDSP) of the United States of America in 2005, conservative estimate of one hundred sixty-eight billion USD, moderate estimate of about one hundred eighty-nine billion, and the liberal estimate of about two hundred seven billion USD. A comparison of the moderate estimate with Meek's 1997 estimate shows that the size of sport industry, in relative terms, actually declined. Sport England (2013) found that in 2010, sport and sport-related activity generated gross value added was about twenty billion GBP, 1-1.9% of the England total. This placed sport within the top 15 industry sectors in England, larger than sale and repair of motor vehicles, insurance, telecoms services, and legal services and accounting.

There were many studies also concerning sport related sectors in general and sports in continental, country, and even in city levels. For instances, an economic analysis of sport performance in Africa (Manuel Luiz & Fadal, 2011), the economic impact and importance of sport in the United Kingdom (Henley Centre for Forecasting & Council, 1986) and sport and economic regeneration in cities (Gratton, Shibli, & Coleman, 2005) can be addressed as examples.

There were many researchers which studied the role of public, private and voluntary sectors in sport in general like (Dower, 1983; Downward, Dawson, & Dejonghe, 2009; Horne, Tomlinson, & Whannel, 1999; Houlihan, 2005; Hughes & Coakley, 1984; Szymanski, 2010). The role of public sector in sport in country level also has been addressed (Boyett, 1997; Gustafsson, 1987; Llewellyn & Tappin, 2003; Rskjaer & Nielsen, 1987; Wollmann, 2001). In addition, Itkonen et al. (2007), Juppi et al. (1987), Valtonen et al. (1993), Vuolle (2004), Panhelainen (1994), and Leväinen (2014) highlighted the role of public sector in sport areas in Finland.

Many issues in voluntary or non-profit sector in general again both in Finland and abroad have been searched, for instance by Evers and Laville (2004) and Klausen and Selle (1996). The role of voluntary sector in Finland also has

been emphasized (Helander & Sundback, 1998; Julkunen, 2000; Siisiäinen, 1999). In addition, the role of voluntary sector in sport was well documented in (Byers, 2009; Harris, Mori, & Collins, 2009; Nichols et al., 2005; Sunnari, 2009). Moreover, many issues in the private sector which can be related to industrial classes of sport as an industry were targeted by many researchers, for instance by (Ball, 2007; Davies, 2002; Malenfant, 1982). Finally in Finland, Rissanen et al. (1989), Jussi and Pilli-Sihvola (1989), Lampinen (2010), Peltola (1980) Puronaho (1989), Gholamzadeh (2001) and Puronaho (2006) conducted sectorial analyses. Nevertheless, the significance of sport sector and its role in the national economy is a new topic and never been searched before in Finland.

## 1.2 Finland as a case study

Finland is a Nordic country situated in the Fennoscandia region of Northern Europe. It has bordered by Sweden in the west, Norway in the north and Russia in the east, while Estonia lies to its south across the Gulf of Finland. It has over five million populations and is the eighth largest country in Europe in terms of area (Symington, 1993; Tan, 2007). Finnish people in general are sport lovers. According to European Commission (Eurobarometer, 2010) citizens of the Nordic-countries take sport the most seriously, with Sweden (72%), Finland (72%) and Denmark (64%) all outstripping the EU average of 40% for people exercising 'regularly' or 'with some regularity'. Palkama and Nieminen (1997) outlined that sport and physical activity mean a great deal to Finns, both as a leisure-time activity and as form of entertainment.

According to the OECD, The International Monetary Fund (IMF), and The European Commission Statistics (Eurostat), Finland's national economy is one of the competitive economies in the world, although it is facing some problems in recent years. According to Ottaviano and Pinelli (2004) the Finnish economy has performed admirably in recent years. The OECD (2006b) outlined that Finland can lay claim to being the world's leading knowledge-based innovation-led economy. On a range of indicators for innovation and education attainment, it is always near to / or at, the top. It also took the first place in the world Economic Forum ranking as the world's most competitive economy (OECD, 2006b). Economic growth in recent years was contributing to a further catching up in GDP per capita towards the slightly higher average level of the other Nordic countries and the significantly higher level of the United States (OECD, 2008).

The OECD (2014) pointed out that in Finland competitiveness has deteriorated and output has fallen recently. The big productivity challenge of the Finnish economy is that since 2007 Finland has lost its leading global positions in the electronics and in the forest sector. On other related statement, the European Parliamentary Technology Assessment (2014) pointed out that Finnish economy is undergoing deep restructuring as the electronics and forest sectors collapsed. Weak household income growth and confidence weigh on private consumption

and residential investment, while low capacity utilization and uncertainty holds back business investment.

Exports and imports also play key roles in the Finnish economy. One of the major changes in the Finnish economy has been the increasing internationalization of Finnish companies in all sectors. Strong integration into the world economy is most obvious in the relation of foreign trade to GDP, which by 2005 had grown with respect to exports to 38 percent of GDP and with respect to imports to 35 percent of GDP (Prime Minister's Office, Valtioneuvoston ennakoitiverkosto., 2010). According to OECD (2003) from one hundred thirty-six billion Euros GDP in 2001, 40.1% allocated to exports of goods and services, while the share of imports was 31.7%. This share was also significant in 2004, while 38.8% of GDP allocated to exports and 35.2% to imports (OECD, 2006a). In 2006, the exports even reached to higher figures and shared 44.8% while imports reached to 40.1% (OECD, 2008). Finnish Prime Minister's Office (2010) indicated that for a small economy, exports open up a larger market. This enables specialization and economies of scale, which generate productivity gains. Imports, in turn, create much more varied consumption opportunities than would otherwise be possible. In addition, imports of machinery and equipment, for instance, bring modern technology to a country. The deregulation of foreign trade and the globalization of world trade during the last few decades have doubled the value of Finnish imports and exports in relation to GDP (Prime Minister's Office, Valtioneuvoston ennakoitiverkosto., 2010).

The private sector also has its notable standing in Finnish national economy. According to Hillary (2000) enterprises are the most important sector of a nation's economy. They provide and create jobs. They are a source of innovation and entrepreneurial spirit; they harness individual creative efforts; they create competition and are the seedbed for business of the future. In short, private firms are important for healthy dynamic market economy. The Finnish government predicted that private services would continue to grow in proportion to total production, from their current standing at some 50% by value. The Prime Minister Office Publications (2010) pointed out that private services employ nearly half of the employed workforce. Ensuring full market competition and promoting international competition in this sector constitute the key measures to facilitate productivity development in the national economy.

Now, with these emphases on sport as an industry, this thesis intended to find out the development, contributions, and significance of the sport sector in Finland during a decade from 2002 until 2011. The study is going to search and estimate the size of the industry in terms of industrial output, value added of the industry, gross domestic product of sport, employment, tax revenue, the number of sport enterprises, exports, imports, and supply and consumption of sport goods and services by using reliable data from Official Statistics of Finland and National Accounts. The study will conduct production approach and input-output matrix tables introduced by National Accounts of Finland in value added, GDP, tax revenues and employment in sectors, which have gaps in presenting their employment from 2002 until 2011.

## 2 THEORETICAL BACKGROUND

The significance of economic involvements in sport related areas which make the sport industry valuable and attracts attentions from different political, social, and economic bodies of sciences are many to name. The high salaries paid to professional athletes and teams (Kennedy & Rosentraub, 2000; Lomax, 2001; McCormick & Tollison, 2001), sponsorships for sporting events and teams at national and international level (Bennett, 1999; Meenaghan, 1991; Speed & Thompson, 2000), millions of dollars for the winners of sports competitions (Klatell & Marcus, 1988; Mason, 1999; Winfree, 2005) highlight the involvement of huge businesses in sports. In addition, the economic impact of sport events such as television contracts, employment, tax income on the regional and national level (Crosset & Hums, 2012; Gibson, McIntyre, MacKay, & Riddington, 2005; Klatell & Marcus, 1988; Preuss, 2005), and the performances of sporting goods corporations (Bick & Chiper, 2007; Smart, 2007; Zadek, 2007) have changed the face of sports. They presented new features for many individuals and organizations to study how these economic aspects are directing sports to new industrial phases.

The emphases on the significance of sport's economic dimensions not only voiced by individual researchers but by countries' high officials and even by high economic unions. At the European level, for instance, the Commission of the European Communities (2007) outlined that sport is a dynamic and fast-growing sector with an underestimated macro-economic impact, which can contribute to growth and job creation. The commission emphasized that sport can serve as a tool for local and urban regeneration and has synergies with tourism which can stimulate the upgrading of infrastructure and the emergence of new partnerships for financing sport and leisure facilities. In the United Kingdom, the British sport historians Holt and Mason (2001) pointed out that sport in England is too important to be left to the sporting, thus, it is not surprising that the attitudes of the British governments (Major and Blair) have been a mixture of the hard-nosed accountant and the fan rather than the consumer. They argued that no government could ignore an industry with the size of sport and leisure, which not only accounts for about ten billion GBP annually of consumer

expenditure but also employs seven hundred fifty thousand workers and recently, pays three and half billion GBP per year in tax revenues.

Sport for a long time has been in the center of attention for its cultural, health, educational, sociological and political aspects. However, its economic benefits for societies did not received proper considerations. In fact, only in recent decades scholars from different academic disciplines started to observe sport's huge economic features in organizational reports and in mass media. Pitts and Stotlar (2007) argued that the estimates vary on how large it is, from one hundred fifty-two billion USD, making it the 11<sup>th</sup> largest industry, to three hundred billion, putting it among the top few industries in the United States of America. Milano and Chelladurai (2011) documented that the rank of sport industry among the top 25 United States industries dropped from 11 in Meek's estimate to a rank of 16, 17 or 19 based on their liberal, moderate and conservative estimates respectively. Clearly, sport in recent decades has shown notable economic performances and in some sectors, these interactions has appeared so significant that brought industrial dimensions to sport and has suggested that sport may perform as an industry and help to revitalization of our local, regional and national economies (Beech & Chadwick, 2004; Shilbury, Quick, & Westerbeek, 2003; Slack, 2004).

In the United States of America, Washington and Karen (2001) noticed that sports constitute a major part of the economy and found out that the expenditures in 1998 for commercial sports totaled seventeen point seven billion USD and an additional of twenty-one point four billion spent on physical fitness, golf, bowling, and sports and recreation clubs. They argued that these numbers do not even include the payments made by television to air sporting events. Humphreys and Ruseski (2006) estimated the size and scope of sport industry in the United States of America by focusing on the economic size of sport participation, sport viewing and the supply and demand side of sport market. By applying aggregate demand and supply, they estimated that the size of the sport industry in United States of America was worth forty-four to seventy-three billion USD in 2005.

According to Watt (2003), the employment in sport related economic activities was above two percent on the employment market in the UK. Cambridge Econometrics (2003) indicated that sport is a valuable part of England's national economy where the consumer expenditure reaches to over fourteen billion GBP and constitutes 2.5% of total expenditure. It also employs more than four hundred thousand and shares one point seven percent of total employment. Sport England (2010) revealed that sport-related economic activity increased from over three billion GBP in 1985 to over thirteen billion GBP million in 2003 and to over sixteen billion GBP in 2008 in England. This represents a real increase of 140% over the period 1985 to 2008. Consumer expenditure on sport in England was over seventeen billion GBP in 2008, an increase from over three billion in 1985. This represents a real increase of 138% over the period 1985 to 2008. Sport-related employment in England estimated at 441,000 in 2008, accounting for 1.8%



of all employment in England and it increased from 304,000 in 1985 to 441,000 in 2008, a 45.1% increase.

By referring to the "Report on GAISF (General Association of International Sports Federations)" the European Commission(1999; 2007) estimated that the sports industry accounts for 3% of world trade and that Europe accounts for 36% of this activity (US 42%). By referring to the "EU Report on Sports and Employment "September 1999" the Commission estimated that 1.5 - 2 million people work in sport in Europe. By referring to the "Federation of the European Sporting Goods Industry Information" the Commission added that sports clothing and equipment accounted for 60,000 jobs in the EU in 1994. Finally, by referring to Gratton "The Economic Importance of Sport" the commission included that in Britain, sport accounted for 1.61% of total employment in 1995.

## **2.1 Gross domestic product as an indicator of significance of sport in national economy**

It is obvious from the literature that the significance of sport in national economy of countries has been expressed by value added, GDP, and the share of industries by these two economic measures in the national level worldwide. The investigators have also used the share of variables like employment, outputs, expenditure and the like in an industry as a percentage in their related aggregates to note their significance in target economies. The European Commission (1999; 2007) evidenced the significance of sport economic activities by referring to some studies like "The EU and Sport", European Commission Information leaflet, and indicated that in Germany, sport accounts for 1.4% of GNP. In addition, the Commission by referring to Gratton "The Economic Importance of Sport" indicated that in the United Kingdom, sport accounted for 1.6% of GNP in 1995, with consumer expenditure on sport amounting to £ 6983 million in 1995.

The European Commission by conducting the Vocational Education and Training related to Sports in Europe (VOCASPORT Research Group, 2004) estimated that sport represents an average of 1.6% of GDP in the European Union (EU) member states, and probably over 2.5% in some of them. The Commission of European Communities (2007) in another study during the Austrian Presidency in 2006 pointed out that sport in a broader sense generated value-added of about four hundred billion USD in 2004, accounting for 3.7% of EU's GDP, and employment for 15 million people or 5.4% of the labor force. Gratton and Henry (2002) revealed that in economic terms sport estimated to represent 3% of GDP in the OECD countries.

Meek (1997) argued that since national output is measured by GDP, the output of the national sports industry should be measured by Gross Domestic Sports Product (GDSP) and should be calculated by using the rules and methodology put forth by the U.S. Department of Commerce. Estimation of the

amount of economic activities supported by the sports industry is possible by using an input/output model of the national economy. The results of this analysis indicate that the size of the sports industry was one hundred fifty-two billion USD in 1995, and supported an additional two hundred fifty-nine billion USD in economic activity.

According to Watt (2003) the information published by the Great Britain Sport Council and searched by the Henley Center indicates that sport has a significant impact on the economic activity of the United Kingdom. In 1990, the gross figure generated by sports activity was eight point twenty-seven billion GBP, equal to 1.7% of the UK GDP. Davies (2002) used the NIA framework to measure the economic importance of sport in city level in Sheffield, UK. He found that the value-added in 1996/97 was over one hundred sixty-five billion GBP or 4.1% of Gross Domestic Product, approximately twice the amount predicted from current national estimates.

Andreff (2006) emphasized the increasing economic significance of sport measured by its economic weight compared to GDP in France. He noted that the sums of the amounts spent by residents and households in sporting goods and services with state government sport budget, sport expenditure by local authorities, sport sponsorship expenses, and TV broadcasting rights raised. According to these data, the said aggregate has risen from 0.5% of GDP in 1991 to 1.77% in 2005 in France, which means thirty point four billion Euros (the same ratio is between 1 and 2% in most developed countries). Bayle, Durand and Nikonoff (2008) commented that in the light of such statistics, sport in France has evidently become a significant economic sector in its own right. They referred to Andreff and Nys (2002) where they stated that up to 350,000 jobs in France are associated to sport development; over 200,000 of these are in sport itself. In total, sport related spending in France amounts to an annual of over twenty four point six billion Euros, or 1.7% of GDP of this total, more than ten billion Euros, is public money, mainly at the level of the commune.

Nana et al. (2002) found that the direct economic impact of sport in Hong Kong was a contribution of twenty one billion HKD to GDP per year. They added that this was just over 1.5% of GDP, and reflected over 61,000 jobs, or nearly 2% of employment in Hong Kong. The total economic impact of sport in Hong Kong including the direct, indirect and induced economic effects was estimated at over twenty six billion HKD in GDP per year, which was 2.1% of GDP and total contribution to employment was 80,000 jobs or 2.5% of total employment. Berwert et al. (2007) found that with an estimated turnover of around fifteen billion CHF, the sports industry generated gross value added worth eight billion CHF in 2005 in Switzerland and contributed a total of 80,300 jobs (full-time equivalents). They concluded that sport accounts for 1.8% of Switzerland's GDP and 2.5% of the Swiss labor.

Moreover, Bach (1968) commented that to understand and regulate the behaviour of enormously complex economy, we need measures of its performance. We need measures of the nation's total output of goods and services, and total income received by all, its people. Burda and Wyplosz (2012) noted

that the most frequently used measure of a nation's economic well-being is its output and income, the GDP. Krugman (2008) pointed out that of the central concern to macroeconomics analysis is a country's GNP, the value of all final goods and services produced by its factors of production and sold on the market in a given time period. They revealed that most countries other than United States have long reported GDP rather than GNP as their primary measure of national activity, though in 1991, the United States began to follow this practice as well. Baumohl (2012) pointed out that GDP, are the most-known initials in economics and stands for GDP. Brezina (2011) suggested that the GDP is the most important measure of a nation's economy and when economists discuss a nation's economic health and progress, they are more likely to refer to the GDP than any other statistical figure. Although, GDP is one of the best indicators to measure the growth or decline of the industry has some problems too. For instance, O'Neill (2014) stated that the basic problem is that GDP does not distinguish between good and bad economic activity, but counts all activity the same. At the same time, GDP does not count many beneficial activities, such as household and volunteer work. A further problem is that GDP provides no information on income distribution.

Mankiw (2013) suggested that economists use many types of data to measure the performance of an economy. Three macroeconomic variables are especially important: real GDP, the inflation rate, and the unemployment rate. He noted that GDP is often considered the best measure of how well the economy is performing. He suggested that there are two ways to view this statistic. One way to view GDP is as the total income of everyone in the economy; another way is as the total expenditure on the economy's output of goods and services. Felderer, Bernhard and Homburg (1992) pointed out that the contemporary system of product and income accounts as used in the United States and, in similar form, in all other countries emerged as the synthesis of two distinct lines of research: First, the analysis of circular flows and, second, national income accounting. While the former approach aims at representing the full extent of economic interdependence, referred to as the "circular flow", the later seeks to determine the value of annual national income.

Gärtner (1997) stated that total production or aggregate output, the value of all goods and services produced by firms, may be measured either by adding up all incomes, or by adding up all expenditures. The expenditure approach measures aggregate output as the sum of all spending. The income approach adds up all incomes instead. Gärtner (1997) noted that modern economies measure their total income (or output) by means of a concept called GDP. Parkin, Powell and Matthews (2002) suggested that GDP is the value of aggregate or total production of goods and services in a country during a given time period, usually a year. To measure GDP, the National Statistics Offices uses three approaches: Expenditure approach, Factor income approach, and Output approach.

The expenditure approach measures GDP by collecting data on consumption expenditure, investment, government purchases of goods and services and net exports. To measure GDP using expenditure approach, researchers add all together these individual components as personal consumption expenditure (final expenditure), gross domestic investment plus stock building, government purchases of goods and services and statistical discrepancy, minus intermediate goods and services, second hand goods and financial securities.

The factor income approaches measures GDP by summing all the incomes paid by firms to households for the services of the factors of the production they hire- wages for labour, interest for capital, rent for land and profits paid for entrepreneurship. Factors incomes are divided into four categories: (1). Compensation of employees, (2). Rent, (3). Gross trading profits and surplus, and (4). Income from self-employment. The output approach measures the contribution that an industry makes to GDP. But to measure the value of production of an individual industry, we must be careful to count only the value added by that industry. Value added is the value of a firm's production minus the value of the intermediate goods and services bought from other firms. Equivalently, it is the sum of the incomes (including profits) paid to the factors of production used by the firm to produce its output.

Arnold (2008) commented that GDP is the total market value of all final goods and services produced annually within a country's border and economists use three approaches to compute GDP: the expenditure approach, the income approach, and the value-added approach. To compute GDP using the value-added approach, we should find the sum of the values added at all the stages of production. Hall and Lieberman (2012) also noted that in the value added approach, GDP is the sum of the value added by all firms in the economy.

Statistics Finland/National Accounts (2004) outlines three approaches to calculate GDP in Finland, the production, income and expenditure approach. When preparing Finland's national accounts, the production approach is primary in calculating GDP. Gross value added at basic prices is equal to the total of gross values added by industry. Definitive figures are calculated and balanced in the supply and use tables on a product-by-product basis. When taxes on products added to and subsidies on products deducted from gross value added at basic prices, gross value added at market prices or GDP obtained. The income approach denotes calculation of GDP as the addition of its various components, consisting of compensation of employees, gross operating surplus (including consumption of fixed capital) and other taxes on production less other subsidies on production. In Finland's National Accounts, GDP is not popular to calculate by using the income approach because gross operating surplus is not reliable enough as an independent estimate. In the expenditure approach, GDP is calculated as the total of its expenditure components, or as the total of demand items. These items consist of final consumption expenditure, investments, change in inventories and exports of goods and services, less imports of goods and services.

Mankiw (2013) commented that to understand the meaning of GDP more carefully, we turn to NIA, the accounting system used to measure GDP and many related statistics. Bach (1968) mentioned that over the past half century, the United States and most other economically developed nations have developed detailed sets of “national income accounts” to provide such measures. The UN Statistical Division (2008) pointed out that the System of National Accounts (SNA) is the internationally agreed standard set of recommendations on how to compile measures of economic activity. The SNA describes a coherent, consistent and integrated set of macroeconomic accounts in the context of a set of internationally agreed concepts, definitions, classifications and accounting rules. Consequently, the national accounts are one of the building blocks of macroeconomic statistics forming a basis for economic analysis and policy formulation.

Statistics Finland, National Accounts (2014a) noted that National Accounts is a statistical system that describes Finland’s national economy comprehensively, systematically and precisely. It based on the European System of Accounts ESA95, which complies with the worldwide SNA93 (System of National Accounts) recommendations for national accounts. Statistics Finland, National Accounts (2014a) stated that the system of national accounts currently in use in the Member States of the European Union ESA 95, which is based on the worldwide SNA 93 recommendation, was mainly adopted in 1999. Since then, globalization and new economic phenomena have caused needs for reviewing national accounts. The review of the worldwide SNA system started in 2002 and at the same time, the revision work for the ESA system began within the EU. The new SNA 2008 approved in 2009, after which many countries have initiated the transition process towards the new system.

The European Commission (2015) pointed out that the European system of national and regional accounts, abbreviated as ESA95 or sometimes 1995 ESA, collects comparable, up-to-date and reliable information on the structure and developments of the economy of the Member States of the EU and their respective regions. By providing an internationally compatible accounting framework, ESA95 makes it possible to describe the total economy of a region, country or group of countries, its components and its relation to other total economies.

The author provided this information to acknowledge how researchers, experts, economic and governmental organizations consider the significance of sport as an industry. The study followed to find how they consider the contributions of the sport sector to their respective countries and what factors and tools they use to measure them in national level. Consequently, gather and use the best collection of ideas and methods.

## 2.2 Background hypotheses

In the introductory chapter, author refers to statements of some politicians like (Prime Minister's Office, Economic Council, 2001; The Office of the Chancellery of Austria, 2007) and organization such as (The Commission of the European Communities, 2007). In addition, I note on the statements of sport historians like Holt and Mason (2001), researchers and industry observers like (Fort & Fizeel, 2004; Meek, 1997; Nana et al., 2002; Watt, 2003). They highlighted that sport can be considered economically significant in a country's national economy and may perform as an industry to help to revitalize local and national economies with its dynamic sectors by creating direct economic benefits through employment, revenues, consumables and taxations.

If it is true and sport is economically significant in national economy of some countries, it should reveal significant performances in some aspects of these countries' national economies. At the same time, this contribution should be measurable somehow by economic tools and be comparable with other main industries in the respected national economy of studied country by reliable internationally accepted data. By using production and expenditure approaches we can measure the value added and GDP of an individual industry and compare it with other industries, thus the study will take value added and GDP as such measures to identify sport sector's significance.

On the other hand, according to Statistics of Finland, Finland's national economy composed of 22 main head groupings in industrial classification in TOL 2008. They categorized as, A, including agriculture, forestry and fishing, B, mining and quarrying and C, manufacturing. The D group includes electricity, gas, steam and air conditioning supply, E, water supply, sewerage, waste management and remediation activities while F covers construction and G includes wholesale and retail trade, repair of motor vehicles and motorcycles. The H includes transportation and storage, I, accommodation and food service activities and J includes information and communication. The K head grouping includes financial and insurance activities, L, real estate activities, M, professional, scientific and technical activities, N, administrative and support services activities while O includes public administration and defense and P covers education. The head grouping in Q covers Human health and social work activities and R includes arts, entertainment and recreation while S covers other service activities and T covers activities of households as employers. The head grouping in U covers activities of extraterritorial organizations and bodies while X includes industry unknown. Thus, by investigating the value added or GDP of sport sector and comparing it with other sectors or their share (percentage) in value added of total industries in Finland we can estimate sport sector's significance in the country. Therefore, in our first hypothesis, we assume that theoretically, sports sector may be considered as one of the above 22 main head-grouping industries in Finland's national economy, if its generation of value added or GDP is among these main 22 sectors in Finland's national economy.

There are many studies and reports concerning the shift from manufacturing to services in European countries. According to European Commission (2014) the long-term shift from manufacturing to services is continuing. Market services have grown to a point where they account for nearly half of EU gross value added. The share of non-market services has also increased, to 23% in 2012. Conversely, manufacturing activities declined to around 15% of overall gross value added in 2012. The studies concerning this issue take two variables into account, output and employment. Therefore in our second hypothesis, we focus on the sport sector itself and we assume that there is a structural shift in the sport's industrial sectors in Finland and the services sectors in the sport sector are growing larger than manufacturing sectors. Thus, the sectors in sport services should offer more shares in total industrial outputs and employment. The study will find the size and consider the general tendency to note that if there are increases in study's variables as in number of enterprises in sport, employment, production output, value added and GDP, total supply, consumption and it will study in which sectors of the sport these variables are developing and in which they are declining.

### **2.3 The purposes and aims of the research**

The relation between industry-level and aggregate productivities measures is one of significant interest to analysts and policy-makers because it establishes a link between the micro and macro levels of the economy and helps answer questions about, for example, the contribution of individual industries to overall productivity growth. If (1) growth in our incomes and material standard of living stems from higher productivity, and (2) productivity in a society is the process of formation and development of industries. (3) the developmental sequence of industries moves along with economic growth and has a leading effect on a national economy, the acquisition of knowledge about sport industry, which is one of new industries in world and Finland, is going to be one of the great interests for many national organizations, policy makers, industry observers and sport business activists.

There have been many efforts in perusing these relationships in many countries. Perhaps, the contribution of Meek (1997) in United States of America, Nada et al. (2002) in Hong Kong and European Commission in 2003 by Vocasport project and Vilnius definition of sport in 2006 created more grounds for industry researcher and policy makers to focus on the significance and contribution of economic features of sport as an industry. Therefore, with regard to sport industry definition and industrial coverage of sport by European Commission in hardcore and upstream in (VOCASPORT Research Group, 2004), statistical and narrow definition by European Commission (2010) in Vilnius definition of sport which is comparable to conservative and moderate forecasts of Meek (1997), Milano and Chelladuri (2011), and direct and indirect estimates of Nada et al. (2002). This study applied quantitative methodology, production

approach and input-output matrices put forward by Statistics Finland, to estimate the size, significance and development of sport sector from 2002 until 2011 in Finland.

The main purpose of this research is to find out the economic size, significance and development of sport sector as an industry and its contribution to the national economy of Finland from 2002 until 2011. The study aims to find out and estimate the size of the industry and its sub-sectors in terms of production output, aggregate number of employment, aggregate number of sport enterprises, monetary value of exports and imports, tax revenues, value added of the industry, sport GDP, supply and consumption. It will consider the share of these variables in national economy of Finland to find out if sport sector constitutes a significant share in the Finnish economy. Moreover, it considers how far this significance extended. The results of these variables in sport sector will be compared with other industries in Finland's national economy and with related aggregates in national level to find out sport sector's significance. The study will also consider nominal and real growth in these variables to find out real changes in the trends and developments in these areas.

## 2.4 Statement of the research problems

The real economic value of sport has been in the center of attentions for a long time among the experts. Although there is conscious knowledge about the significance of sport economic contributions to national economy, its real economic values needed clarifications. The lack of academic research in some countries and outlines of some limited research in this field has raised many concerns among researchers, academic disciplines, politicians and industry observers all around the world. The adaptation of the right policies and industrial planning surrounding this industry needs comprehensive knowledge about the actual value of this industry, its contributions and effects on the national economy of countries. The studies that come up with some generalizations and estimations about economic impacts of sport or studies, which targeted only some sectors in the industry, brought some exaggerations, over-estimations and sometimes ignorance and disagreements about the actual value of the industry. In addition, sport as an industry has never been searched in Finland to understand the real economic performances of sport services and manufacturing sectors and their role in the national economy of Finland.

There are some key areas in every industry, which need explorations and every research has to provide answers to the most important questions surrounding the target industry. Thus, this study will attempt to provide answers to the following questions, which highlights the most important areas in the sport sector of the country. 1) What is the structure of sport industry in Finland? 2) What is the number of sport enterprises in industry and its sub-sectors? 3) What is the size and number of employees in the industry and in sport industrial sectors? 4) What is the size of production output? 5) Is there growth or de-



cline in whole industry and its subsectors? 6) What is the size of value added, sport GDP, tax income and their shares in the national economy? 7) What is the size of monetary value of imports of sport goods and its share in foreign trade? 8) What is the monetary value of exports of sport goods and its share in foreign trade, the balance in foreign trade of sport goods and the gain of surplus in this trade? 9) What is the total supply of sport services and goods? 10) What is the size of consumption of sport services and goods in Finland?

## **2.5 Implemented plan of the research**

### **2.5.1 Outline of the research approach and framework**

The study will apply production approach and its framework to calculate and estimate the value added and GDP of sport in Finland. Gross value added of sport as an industry at basic prices is equal to the total of gross value added by sectors of all industries involved in sport economic activities. When taxes on products added to and subsidies on products deducted from gross value added at basic prices in every sub sectors, the sum of gross value added at market prices of sports or GDP obtained.

In Finland's National Accounts, gross value added, calculated at the accuracy of 138 industry/sector combinations. The 2-digit level of NACE 2002 used for the majority of industries, although for a few industries the calculation done at the 3-digit level. The sector classification is the 2-digit level with the exception of the general government sector, central government, local government and compulsory social insurance which form own sectors.

There were only 1 out of 100 or 138 industries in two digits related to sport, though it was not covering all sport related activities. By 3 and 4-digits level, there were some sectors revealing data on sports, still lacking in covering all areas, therefore, we used 8-digits in production of sport goods and services in other related industrial sectors according to NACE (Rev, 2008).

When all the production and generation of income accounts of sport related activities among related sectors of industries are collected, the result is the output or production value of the sector. The value added of all related sectors will be added and their sum will be named as the value added of the sport industry. By adding taxes on products and deducting subsidies on products from this value, sport's GDP at market prices will be obtained. When imports of goods and services from foreign trade calculations are added to GDP at market prices, the aggregate supply is obtained, therefore:

Output by industry, or Output with respect to an industry = Intermediate consumption + value added. Gross Value Added is linked as a measurement to GDP, as both are measures of output. The relationship is,  $GVA + \text{taxes on products} - \text{subsidies on products} = \text{GDP}$

### 2.5.1.1 Industrial classification

Statistics Finland/National Accounts (2004) outlines Finland's national accounts totally in 100 industries (incl. financial intermediation services) at the most detailed accounting level. Production and generation of income accounts compile by industry. Roughly, 100 industries are in the preliminary calculations. In addition to classification by industry, use also made of a classification by producer type based on establishments. There are three main types of producers: market producers, non-market producers and own-account final producers. Other non-market producers further divided in Finnish national accounts into two sub-groups: general government institutions and non-profit institutions.

Finnish Quarterly National Accounts (2008) pointed out that in QNA gross value added calculated at the accuracy of 138 industry/sector combinations. The 2-digit level of NACE 2002 is used for the majority of industries, although for a few industries the calculation is done at the 3-digit level. The sector classification is the 2-digit level with the exception that in the general government sector central government, local government and compulsory social insurance form sectors of their own. In Finland's national Statistics, industries contain data on value added by activity at the accuracy of 12 industries (code of TOL2002/NACE industrial classification). They include: Agriculture (A, excluding hunting, etc., 015), Forestry, (B) Total industry (C, D, E), Manufacturing (D), Wood and paper industry (20-21), Metal industry (27-35), Other manufacturing (15-19, 22-26, 36-37), Construction (F), Trade (G), Transport, storage and communication (I), Real estate, renting and business activities (K) Other activities (H, J, L, M, N, O, P). There were 947 primary products and 5 combination products that facilitate balancing. The classification of industries was a little more detail oriented than preliminary accounting – as far as manufacturing was concerned, the 8-digit NACE classification were used, based on which the total number of industries is 184.

The study's main sources are secondary data from Statistics of Finland and according to Statistics Finland, the main data sources of the production approach for market producers and own-account producers are structural business statistics and the Business Register used to calculate the various industries. Also in used calculations, there are many information sources proper to each industry. The main data sources in other non-market production are consolidated accounting data and the Financial Statement and Report, and local government financial statistics.

The main classification is the standard industrial classification of the EU, NACE Rev. 2. At the commodity level, the producer price indices use the 6-digit Finnish version of the EU's activity-oriented Classification of Products by Activities (CPA), classification of goods and services. In addition, commodities classified to main industrial groupings (MIGS): energy products, raw materials and producer's goods, investment goods, and durable and other consumer goods. The SITC (Standard International Trade Classification) used in indices whose base year is 1949. In addition, the ISIC was used in the producer price index for

manufactured products 1949=100. The number of price data items exceeds 5,000 overall, but varies by index.

### 2.5.2 The scope of the research areas

The Council of Europe (2001) has defined that "Sport" means all forms of physical activity, which, through casual or organized participation, aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels. However, the studies that conducted to reach and define sport as an industry covered different areas in sport. Shannon (1999) commented that there are some questions concerning the actual size of the sports industry today. Estimates of spending in this industry are varied and diverse. Much of this diversity is created by an unclear definition of just what all is included in the sports industry. Slack (2004) suggested that estimating the size of the commercial interest in sport is an inexact science. There is no Standard Industrial Classification (SIC) code for sport business, while related activities that commonly recognized as being part of the sport industry recorded under variety of SIC codes. Nike for example is listed in the footwear SIC and Russell under 'apparel'. Zibbalist (2010) argued while the examples change, the environments mutate, and the dollars grow, the basic dilemmas and dynamics of the sport industry remain very much the same.

The European commission (2007) commented that although sound and comparable data on the economic weight of sport are generally lacking, its importance confirmed by studies and analyses of National Accounts, the economics of large-scale sporting events, and physical activity costs. Miller (1997) suggested that entrepreneurial success, however, may greatly enhanced by conducting thorough analysis of industry segment. Michael Porter's industry analysis model provides much inside into the viability of any particular industry, including the sport industry.

Lowerson (1995) suggested that in the context of regional economies the impact of the sports industry was inevitably larger. He notes the horserace meeting on Tees-side, Highland Games gathering in Scotland and municipal golf courses in places like Bournemouth. He adds that the manufacture of cycles and golf equipment in Coventry and the impact of commercial sport in cities like Glasgow, historians have frequently argued that the rise of the sports industry had significant, material benefits for the communities in which it was most concentrated.

Hone (2005) noted the increasing importance placed on the economic evaluation of sporting events, which has been associated with a burgeoning literature on sport economics and specifically on the principles surrounding economic evaluations of sporting events. He suggested that the consensus among these studies should assess the net economic impact on the target economy. In his context, net economic impact usually taken to mean the expansion in the total level of goods and services produced in the target economy as measured by increases in total expenditure.

Despite above notions, it seems that there were three lines of approaches in studying sport industry's coverage economic areas. Some studies targeted only professional sports and its surrounding activities as sport industry as it appears from their comments, they do not go farther than professional sports and its related economic boundaries. For instance, Hendricks (1997) reviewed the economics of sports only in two categories, in professional sports and in collegiate sports. Leeds and Allmen (2004) defined sport industry in four categories in major professional sports (baseball, hockey, football and basketball), in individual sport such as golf and tennis, in intercollegiate sports and in Olympic events. Kahn (2000) also took professional sports as sport industry where he commented that professional sports offer a unique opportunity for labor market research. There is no research setting other than sports where we know the name, face, and life history of every production worker and supervisor in the industry. Total compensation packages and performance statistics for each individual are widely available, and we have a complete data set of worker-employer matches over the career of each production worker and supervisor in the industry. O'Hara (1999) commented that one could argue that four main themes have attracted the attention of economists in sports. These are (a) the impact and the causes of restrictions on players' mobility, (b) whether or not sport teams maximize profits, (c) exploitation of players, salary discrimination and entry discrimination, and (d) the economic impact of franchises in professional sports.

According to Avgerinou (2007), the study of professional team sports economics in the last decades has expanded in response to substantial increases in the demand and supply of professional team sports. He noted that there are factors to describe the new reality in the world of professional team sports. His factors include the televising of events, the free movement of players after the Bosman ruling in Europe, the abolition of the reserve clause in the USA, the increasing sports globalization and commodification of sports, the financial challenges of clubs, and the economic disconnection between American professional sports and the traditional fan base. Berry and Wong (1986) suggested that economics of professional sports includes player salaries, leagues, clubs economic profiles, and broadcast revenues. They also viewed the development of the sport industries in constituencies within the industries that included leagues or associations, clubs and owners, commissioners, player's associations, sport attorneys and agents and players. Masteralexis et al. (2011) divided sport businesses as; amateur sport industry, collegiate sports, international sport, professional sport industry and sport industry support systems.

In second line, some researchers expanded their vision beyond professional sport and brought in more economic areas into sport industry. For instance, Sanderson et al. (2000) argued that the sport industry is not so visible, as its sales and purchases come from a range of other industries, such as the manufacture of sports clothing, the operation of sports facilities and venues, and the services provided by sports professionals. These sales and purchases are not recorded separately in the official figures of any economy. In consequence, a

dedicated investigation of all the industries that make up the sport and active recreation sector is required in order to measure the type and scale of economic benefits from sport.

Robinson (2003) argued that the sport industry is arguably one of the most complex to be found as it incorporates the voluntary, public and private sectors and can be broken down into manufacturing, retailing, entertainment and service segments, each containing specialized subfield. Sage (2000) argued that the professional sport industry creates a market for associated goods and services, so numerous businesses accumulate capital indirectly by providing those goods and services. Some examples of this are the sporting goods industry (mostly manufacturers and retailers), the sport component of mass media (including television, newspapers and magazines), businesses that benefit from sport events (hotels, airlines, restaurants) and advertisers (those buying advertising or sponsoring events).

Yiannakis and Melnick (2001) argued that corporations in the sport industry (manufacturers of sporting goods, professional sport franchises) are only small divisions of industrial and financial conglomerates integrated into the global market, conglomerates that flourish regardless of national structure of accumulation. Slack (2004) commented that the emergence of academic interest in the business and management of sport has been concerned directly or indirectly with sports goods, services, athletes, employers, sponsors, and spectators alike. Parks et al. (2011) commented that sport industry is composed of sub-industries such as professional sports, collegiate athletics, facility management, health and fitness, and sporting goods industry.

In third line, in the VOCASPORT project by the European Commission (2004), the author witnessed a complete structure of sport industry by the authors where they divided sport industry into 3 categories. In upstream they put construction of sport facilities, manufacture of sports goods and the distribution of sport goods, in the hard core, they set supervision of sporting activities and operation of sport facilities, and in the downstream they mentioned sport medicine, physiotherapy, dietetics for sportsmen and sport journalism.

Camy (2006), same as the VOCASPORT project by the European Commission in 2003, defined sport industry in central and peripheral activities in 3 major streams as, upstream, hard core and downstream. Parks et al. (2011) suggested three different categories for studying sport industry, which included (1) settings in which sports found, (2) different types of sports, and third, models of sport industry segments. They suggested 16 settings within sport industry. The sittings cover school and college sport programs, professional sport, amateur sport organizations, private sport clubs, other commercialized sport establishments (bowling alleys), arenas, coliseums, civic centers, and stadia, and community recreation programs. It include also industrial sport programs, sport programs in social agencies (associations), military sport programs, sport marketing and consulting firms, developmental programs for sport (national golf foundations), corporate sponsors, sporting goods industry, the sport news media, and academic programs in sport management.

Hums et al. (1999) pointed out that the sport industry includes segments such as professional sport, intercollegiate athletics, health and fitness, recreational sport and facility management. Taylor and Gratton (2002) noticed elite sport, TV rights, government, paying spectators, sponsorship, mass participation sports, voluntary sector (time and organization), government facilities, sport shoes, sport clothing, government taxation, travel, sports equipment as the economic areas related to sports.

Pitts and Stotlar (2007) noted that the sport industry consists of several different segments including sport tourism, sporting goods (manufacturing and retailers), sports apparel, amateur participation sports, professional sports, recreation, high school and college athletics, outdoor sports, sport business such as sport marketing firms, the sport sponsorship industry and sport governing bodies. Wang (1998) pointed out that the major components of the sports industry consist of commercial competition, sports lottery tickets, TV broadcast, souvenirs, patent products, athlete images and the kind of intangible capital. Vuori et al. (1995) suggested 10 areas in studying sport industry which includes; 1) financing of sport, 2) sport consumption, 3) sport participation, 4) sport management, 5) voluntary sector, 6) employment, 7) sport facilities and sport events, 8) sport industry, 9) sport and mass media, and 10) foreign trade and investment.

Cafferata (2004) argued that the business market in sports consisted of manufacturers of goods for professionals and amateurs, advertising agencies, newspaper and publishing companies, multimedia and other information service providers, facility suppliers and a large number of companies operating in a variety of commercial and industrial sectors that provide the support and sponsorship necessary for sports activities. These third-party companies avail themselves of sports' professional activities and most importantly compete to reach the public in order to increase their brand and product market penetration. McPherson et al. (1989) viewed different industries in sport. They named the sporting goods industry, construction industry, souvenir and concession industry, tourism industry, the advertising, entertainment and promotion industry as industries involved in sports.

The above reviews reveal that how the industry is diverse and the opinions of experts differ in the coverage of sport related sectors in this field. In fact, countries differ for doing sport activities and in consequences generation of incomes in these activities by many reasons. For instance, winter sports in countries with high temperature in Africa or Asia, or active sport sectors like college leagues sport in USA. Therefore, the active sectors in every country, which generate income, compose the structure of the industry in respected countries. Thus our research relies on those sport industrial sectors, which generated income and we selected them from the most reliable country's Official Statistics where it collects the generated incomes in these areas.

### 2.5.2.1 Coverage of industrial Sectors in sport by their related coding groups

Finland's national economy covers its industrial sectors' economic performances according to international classifications. One of the most internationally recognized classification is International Standard Industrial Classification (TOL). As this study aims to cover 10 years data collections and this classification revised during 2002 and 2008, therefore the study has to follow the codes and categories' changes in both of them. Classifications consist of headings, or names of groups, of codes given to them, i.e. numerical or alphabetical codes, and of descriptions of groups, i.e. definitions. Classification refers to dividing individual items of information present in statistical data according to certain features into different groups where each unit belongs to only one group. In the classification, the groups named and codes issued to them. These industrial sectors in Standard Industrial Classifications in Finland according TOL 2002 and 2008 are presented in appendices 1 and 2.

The study traced and collected its secondary official economic activities data related to sport in industrial sectors as in manufacturing, construction, wholesale and retail trade, transportation, real estate activities, education and in arts, entertainment and recreation. Their related codes and changes in their codification presented in below 14 categories.

The manufacture of textiles and textile products includes manufacture of other wearing apparel and accessories n.e.c. with coding groups 1824 in Tol 2002. And the same manufacturing groups with new title and coding groups (14) manufacturing of wearing apparel in manufacture of other wearing apparel and accessories with coding 1419 in Tol 2008 involved in production activities in sport tracksuits, ski suits and sports swimwear etc.

The Manufacture of leather and leather products includes coding groups 19 in Tol 2002. The manufacture of footwear with coding groups 193 and the same manufacturing group with new code 15 under manufacture of leather and related products, manufacture of footwear with coding groups 152 involved in producing sports footwear with rubber or plastic. They cover outer soles and textile uppers (including tennis shoes, basketball shoes, gym shoes, training shoes and the like, and - other sports footwear, except snow ski footwear and skating boots).

The manufacturing of machinery and equipment n.e.c. with coding groups 29 in Tol 2002 covers manufacturing of weapons and ammunition with code groups 296. It revised in Tol 2008 to manufacture of fabricated metal products, except machinery and equipment with new coding groups 25. The manufacturers of weapons and ammunition with code 2540 are producers of sporting guns and weapons. They include sporting, hunting, target-shooting shotguns, single-barrelled, smooth bore (excl. muzzleloading firearms and spring, air or gas guns), sporting, hunting or target-shooting shotguns, with one or two smooth bore combined with a rifled bore and double-barrelled smooth bore shotguns,

sporting, hunting and target-shooting shotguns with one or more rifled bores (other than spring, air or gas guns).

The manufacture of motor vehicles, trailers and semi-trailers with coding groups (34) in Tol 2002 and the same manufacturing with new manufacturing code (29), under its manufacturing group with code (2910), manufacture of motor vehicles produced golf carts, and amphibious vehicles. The manufacture of transport equipment with coding group (35) in Tol 2002, under its manufacturing groups of manufacturing of bicycles with code (35421051), (52), (53), (54), (55) and (56) are producers of bicycles. Their codes which has been changed to manufacture of other transport equipment by new code (30), under manufacturing of bicycles and invalid carriages with new code (3092) is involved in production of bicycles including sport bicycles, racing, mountain, trek and cross bikes.

The manufacture of transport equipment with code (35), under its manufacturing groups with code (351), building and repairing of ships and boats under its sub manufacturing with code (3512) building and repairing of pleasure and sporting boats presented in Tol 2002. By new coding, the manufacture of other transport equipment (30), under its manufacturing of building ships and boats with new code 301 presents manufacturing groups of building of pleasure and sporting boats with code (3512) in Tol 2008. It involved in the production of inflatable boats and rafts, building of sailboats with or without auxiliary motor, building of motor boats, building of recreation-type hovercraft, manufacture of personal watercraft, manufacture of other pleasure and sporting boats like canoes, kayaks, rowing boats and skiff.

The manufacture of other transport equipment, again under its manufacturing group (manufacture of air and spacecraft and related machinery with code (3030), under its sub manufacturing groups with code (303020) was involved in production of balloons and dirigibles. They produce gliders, hang gliders and other non-powered aircraft, gliders, without motor and not capable of being fitted with a motor, and hang gliders; balloons, dirigibles (excl. party balloons) and kites and other non-powered aircraft (excl. gliders, hang gliders, balloons and children's kites).

In manufacturing groups, the manufacturing of sports goods with code (364), under manufacturing groups of manufacturing of furniture; manufacturing n.e.c. with coding groups (36) in Tol 2002, which has been changed to other manufacturing with new code (32) in Tol 2008, by new code as (323) is involved in production of sporting and athletic goods (except apparel and footwear). The manufacturing produce articles and equipment for sports, outdoor and indoor games, of any material: hard, soft and inflatable balls, rackets, bats and clubs, skis, bindings and poles, ski-boots, sailboards and surfboards, requisites for sport fishing. Moreover, it involved in production of landing nets, requisites for hunting, mountain climbing etc., leather sports gloves and sports headgear, basins for swimming and padding pools etc., ice skates, roller skates etc., bows and crossbows, gymnasium, and fitness center or athletic equipment.



In construction, section F under (45) coding groups, sport facilities has been categorized and coded under the title of construction of motorway, roads, airfields, and sport facilities and codified as (45230) in Tol 2002. In Tol 2008, in construction of buildings with code (41), the construction of residential and non-residential buildings with code (4120) also involved in constructing of indoor sport facilities. The construction groups in other civil engineering projects n.e.c. with coding groups (4299) involved in construction of outdoor sport facilities. The construction groups in (4399) also involved in construction of outdoor swimming pools.

In G section, the wholesale of sport goods with coding groups (51478) categorized under wholesale of other household goods household goods with code (5147) under category of wholesale of household goods with code (514). While in Tol 2008, in G section it categorized under wholesale trade, except of motor vehicles and motorcycles with coding group (46), under wholesale of household goods with code (464), under wholesale of other household goods with coding groups (4649) as wholesale of sport goods with code (46493).

In G section of Tol 2002, code (52) presents the retail trade, except of motor vehicles and motorcycles; repair of personal and household goods. Other retail sale of new goods in specialized stores by code (524), and further, the retail sale of sports and leisure goods with (5248) involved in sale of sport goods. While in Tol 2008 the category with new code (47), retail trade, except of motor vehicles and motorcycles and code (4764) under title of retail sale of sporting goods by 2 new codes, (47641) presents the retail sale of sports equipment and bicycles and (47642) presents the retail sale of boats and boating accessories.

In Tol 2008 Section N, Administrative and Support Service Activities, the division by code (77) rental and leasing activities, under its sub sector by code (772) renting and leasing of personal and household goods under its subdivision (7721) records renting and leasing of recreational and sports goods. While in Tol 2002 these activities has been placed in K section under, real estate, renting and business activities with code (71), under its subsector of renting of personal and household goods n.e.c. with code (714), and the renting of sports equipment was recorded by code (71402).

In Tol 2002, sport related businesses in education categorized in M section by code (80) under sub division of other educational institutions by code groups (80429). While in Tol 2008, these activities recorded under P section, education by code (85), and its subdivision, other education by code (855). In this subdivision, the coding groups (8551) presents sport and recreation education. This division includes sports instruction (baseball, basketball, cricket, football, etc), camps, sports instruction, gymnastics instruction, riding instruction, academies or schools, swimming instruction, professional sports instructors, teachers, coaches, martial arts instruction, card game instruction (such as bridge) and yoga instruction.

In Tol 2002 in Section O under the title of, other community, social and personal service activities, coding groups of (92), recreational, cultural and sporting activities under its subsectors of sporting activities by code (926) pre-

sents business activities in operation of sport arenas and stadiums with coding of (9261) and other sporting activities with code (9262). While, in Tol 2008, the R section, Arts, entertainment and recreations under its subdivision by coding groups (93) presents economic activities in, sports activities and amusement and recreation activities.

### **2.5.3 Research methods**

The study adopted quantitative methodology to collect its numerical data by direct and computational technics, to describe and analyze its results and theorize its findings. Quantitative research aimed to test research questions and involve in the analysis of numerical data to describe characteristics of the Finnish sporty industry. This quantitative research uses statistical formulas by collection of data based on study's main questions, and measurement of the sectors in the industry is the means by which observations are expressed numerically. The numerical factors such as the percent of elements (share or percent) and the time, which is fixed, make the situations and results quantitative (Balnaves & Caputi, 2001). Therefore, our quantitative research refers to the systematic empirical investigation of quantitative properties of the industry and their relationships.

The study's quantitative method design in these variables is descriptive which establishes only associations among variables. The study measures things, as there are (observe the subjects without otherwise intervening) and notices changes in the variables (Parasuraman, Grewal, & Krishnan, 2006) from 2002 until 2011. Most of our basic data for our variables, which we collected and compared, are generally already present in the group (industry) or in population as national economy of Finland in Statistics of Finland.

The study used descriptive statistics as a tool for depicting or summarizing our data to comprehend them (Blaikie, 2003). The author used also ranking, ordering and assigned averages. In considering the number of enterprises and employment in the industry we used numeral value while in studying monetary values of production, imports, exports, value added, sport GDP and taxes we used the European currency € to measure and express the changes in their characteristics values to nominal scale to describe them. The increments in prices during the reference years collected from Finnish Statistics Office were applied to the results to find out real increases.

#### **2.5.3.1 Data collection**

In order to find and collect the relevant data for the study, that is, the aggregate number of enterprises, the aggregate number of employment, the production value or output, imports, exports, value added, GDP, taxes, supply, consumption and related aggregates in the national economy direct and indirect methods were used.

The data related to some objectives of the study were collected directly from official statistics in sport related segments where they were present as in

variables like the number of sport enterprises, the production output of the industrial classes, imports, exports of sport goods and services and related aggregates in national economy. On the other hand, for some variables such as the aggregate number of employment, some classes did not preset data and we used their production output in input-output tables provided by Statistic of Finland to fill in the gaps to estimate and add possible employment in these sectors. Results of other variables like value added, sport GDP and taxes provided by conduction of input-output tables introduced by Finland's Statistics Office (National Accounts) for these purposes. In aggregate supply and consumption, we relied on our findings on production (domestic supply), imports (foreign supply) and exports to estimate these variables. At first, the study focused on the collection and analysis of numerical data and statistics, aiming to determine the relationship between sport industry and its related sectors in aggregate number of sport enterprises, employment, monetary production value, monetary values of imports and exports of sport goods and their share in national economy of Finland.

The study attempted to collect data for ten distinctive periods 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010 and 2011 as reference years. Our data in all variables in this study organized for the purpose of the present study because of its reliability, simplicity, general applicability, usefulness and international comparability. These registered data, which author have collected; do not require additional statistical calculations and adjustments. The study's methods for obtaining related data is statistical registered data in official organizations (Statistic Finland and in European Union (Eurostat). Although the applications of the statistical formulas in all our variables were the same, the materials for every variable were different, and the collection of the related data from the mentioned material (see materials) differed slightly.

One of the reliable sources in collecting secondary data in national and international level for conducting industrial studies is industrial statistics. Prepared by the UN Statistics Division with a view to establish a uniform pattern for the measurement of economic activities on a comparable basis, international recommendations have been formulated by the UN for collection of statistics on a number of economic activities. International recommendations for industrial statistics were first formulated in 1953 and revised from time to time, last being in 1983.

Since the 1950s, the UN has published international recommendations for industrial statistics of which the first was issued in 1953 (UN 1953) and subsequently revised in 1960 (UN 1960), 1968 (UN 1968a) and 1983 (UN 1983). The purpose of developing these international recommendations was to establish a coherent and uniform measurement of industrial activities for national and international dissemination (United Nations & Department of Economic and Social Affairs, 2008). Therefore, the study used ISIC categories.

The study conducted input-output tables to get result in variables in value added, taxes and GDP from 2002 until 2011. It also applied input-output table for filling the gaps for some industry segments, which had production in sport

areas but did not present data in employment from 2002 until 2011. Supply and use tables and the input-output tables based on them describe in detail product flows in the national economy. They are suited for analyzing production activity structures and interdependencies between industries. The tables add detail to national accounts and form a coherent framework for describing product flows in the accounts. The actual, symmetrical input-output tables provide a picture of interdependencies between industries, while analysis tables derived from them indicate the importance of the production and final use of different industries to the production and employment in the whole economy.

The input-output tables formed from the supply and use tables examine the use of the outputs of industries as intermediate product inputs and for final use in other industries. Thus, the input-output tables provide a picture of the structure of production activity and the interdependencies between industries. Based on these interdependencies, input-output models, compiled to study structural changes in the national economy and to evaluate the impact of the changes on, for example production, imports, inflation and employment.

The industrial classification used for supply, use, and input-output tables' was adapted from Finland's National Accounts. The first starting from 2000 to 2007 based on TOL 2002, and the second based on TOL 2008. In addition, the product classification is from the EU's industry-specific product classification CPA 2008. From 2002 until 2011, the input co-efficiency by year and industry were by 95 industry group ratios. We applied these ratios in; 1) Industry groups 18, the manufacture of wearing apparel; dressing and dyeing of fur for sport apparel. 2) Industry groups 19, the manufacturing of tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear for sport footwear. 3) Industry group 29, the manufacture of machinery and equipment n.e.c. for sport ammunition. 4) Industry group 34, the manufacture of motor vehicles, trailers and semi-trailers for sport related motor vehicles, trailers and semi-trailers. 5) Industry group 35, the manufacture of other transport equipment for sport bikes and bicycles. 6) Industry group 30, the manufacture of other transport equipment for sport and pleasure boats. 7) Industry group 36, the manufacture of furniture; manufacturing n.e.c. for sport goods

In sport related services, we applied the input co-efficiency by year and industry to; 1) Industry group 51, the wholesale trade and commission trade, except of motor vehicles and motorcycles for wholesale of sport goods. 2) Industry group 52, the retail trade, except of motor vehicles, repair of personal and household goods for retail sale of sport goods. 3) In industry group 71, the renting of machinery and equipment without operator and of personal and household goods for rental and leasing activities of sport equipment. 4) Industry group 80, Education for sport related education. 5) Industry group 93, to sport, amusement and recreation activities for sport services. 6) Industry group 45, construction for sport construction. Although the number of industry groups faced some changes in classification TOL 2008. We compared it with

TOL 2002 and followed the related sectors to apply right and related ratios from 2008 until 2011.

In sport enterprises and employment, according to the Official Statistics of Finland, Suomen Yritykset in 2002, there were 294,325 corporate enterprises and personal business in Finland in 2002 which rose to 322,232 in 2011. They covered agriculture, hunting, forestry and fishing, manufacturing, electricity, gas and water supply, mining and quarrying, consumer goods industries, manufacture of forest industry products and furniture, publishing, printing and reproduction of recorded media, metal industries, construction, trade, hotels and restaurants. They included also wholesale trade and commission trade, retail trade, transport, storage and communication, telecommunications, financial intermediation; real estate, renting and business activities public and other services; public administration and defense, education, health activities, social work activities and industry unknown. The Study investigated all these enterprises in manufacturing and services industries to find out if any industrial classes of these manufacturing and services were active in sport related economic areas. The related enterprises and their characteristics such as numbers and employments collected from 2002 until 2011.

The study found out that the manufacturing of building and repairing of pleasure and sporting boats, the manufacture of bicycles, manufacturing of sports goods were involved in producing sport goods. The wholesale trade services of sports goods, retail trade services of sports goods, renting of sports equipment, ballrooms and dance instructors' services, operation of sports arenas and stadiums, and other sporting activities were involved in economic activities in sports services. Nevertheless, there were no independent enterprises in manufacturing like sport weapons and ammunitions, sport textile, footwear and sport air craft equipment.

Enterprises have been extracted from the Statistics Finland, the Official Statistics of Finland, Suomen Yritykset 2002 till 2011. According to methodology used in Suomen Yritykset publications from 2002 until 2011, enterprises whose activity has lasted more than six months in the examined year were included in the statistics. In addition, the enterprise must employ more than one-half of a person or generate a turnover of a certain minimum amount. The definition of an enterprise was based on an EU regulation concerning statistical units (EEC 1993/696) and on a regulation concerning Business Registers (EEC 1993/2186). There were also some conceptual terms in this part of the study needed to define.

According to Finland's Statistics, (Suomen Yritykset) a business enterprise is an economic unit that covers its expenditure fully or at least mainly with income from sales, interests, dividends or insurance premiums. The principal objective of a business enterprise is to produce goods or services for sales on the market at prices that cover their production costs or to serve business enterprises engaged in such activity. An enterprise refers to an economic activity carried out by one or more persons for profit-making purposes. Enterprises are natural persons carrying on a business, trade or profession in their own name or in the

name of a registered firm (self- employed persons), legal persons (e.g. limited companies, co-operative societies, saving banks or economic associations), public financial institutions, unincorporated central government enterprises or housing corporations.

In production value (output) of sport goods and services, the sport goods items of this variable includes those categories which have been collected from 4530 products categories introduced by the classifications of Statistics of Finland and Statistics of EU in 2002. The author controlled categories in 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010 and 2011 to consider if any new sport categories have been adapted or perished from these general product categories. The categories including sport items categorized by the author according to eight manufacturing areas. They include the manufacturing of sport textile, manufacturing of sport footwear, manufacturing of sport weapons and ammunition, manufacturing of other sport transport equipment, manufacturing of building and repairing of pleasure and sporting boats, manufacturing of aircraft and spacecraft (gliders and hang gliders), manufacturing of sport bicycles, and manufacturing of sporting goods.

The data include the Statistics on the Production of Manufactured Goods consisted of the European and Finland Industrial statistics on manufacturing, whole country 1995-2011, Classification TOL (National industrial classification) 2002 and 2008. The 8-digit codes used in the list based on the 6-digit CPA headings and hence the 4-digit (NACE) Rev 1.1 Combined Nomenclature (CN) headings.

The monetary production values of sport goods related to every eight manufacturing have been collected to find out their production value per year, and the sum of these eight manufacturing production values per year have been collected to find out Finland's production value of sport goods per year. Although, the manufacturing of building of pleasure and sporting boats, sporting goods and bicycles presented their production values independently, the manufacturing of aircraft and spacecraft (gliders and hang gliders) did not reveal any production value.

The share of these manufacturing in total sport related production value obtained year by year. The share of total value of sport related goods production considered in total production value of all Finnish manufacturing of all items in the country in very year of this study. The production value of 2002 based for identification of the growth and decline. Ten years production values has been collected and divided to 10 to obtain an average. The production value of sport services in sport construction collected from construction of sport facilities in construction industry except for 2010 and 2011, which were collected from supply and use tables from National accounts. The sport services and sport education presented their production or output independently during these ten years. While the production of sport wholesale trade, sport retail trade and sport renting goods have been collected from their turnover and considered with total output of the related sector's, other subsectors and their share in

total output, and slightly additional share has been added to turnover of these sectors.

In imports of sport goods, the import of sport related goods collected from the (CN) and countries of origin from 2002 until 2011, which published by the National Board of Customs (Statistics Unit), Foreign Trade of Finland. There were 16,987 categories in the foreign trade of Finland which sport related items were selected and the data related to these categories have been collected. There were about 100 sport goods categories in the foreign trade, imports section, of Finland from 2002 until 2011.

The monetary value of sport categories for every related manufacturing per year have collected to find out the value of imports of sport goods for every manufacturing, and the monetary value of every manufacturing summed up to find out the value of imports of sport goods per year. The monetary value of imports in every sport related manufacturing in total imports of sport goods derived to find out their share in the imports of sport goods. The share of imports of sport goods in total imports of all goods in Finland considered finding out how many percent of imports of all goods allocated to the import of sport goods per year. The value of the imports of sport goods from different countries compared with each other to find out the main exporter countries to Finland. The year 2002 was considered as a base for comparison to identify gross or decline in the amounts of imports of sport goods in this context, for years 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010 and 2011.

In exports of sport goods, the categories and values of the exports of sport related goods has been adapted from the CN and countries of origin from 2002 till 2011, which were published by the National Board of Customs, Statistics Unit, Foreign Trade of Finland. There were 16,435 categories in the foreign trade of Finland which sport and sport related items were selected and the data related to these categories have been collected. There were 96 sport goods categories in the foreign trade of exports of sport goods, 4 less categories than imports, from 2002 until 2011.

The sum of the monetary value of the sport goods related to every manufacturing have been collected to find out the value of sport goods for every manufacturing per year, the sum of the monetary value of the 8 manufacturing have been collected to find out the monetary value of exports of sport goods per year in Finland. The share of exports of sport goods per manufacturing considered in total exports of sport goods per year. The monetary value of exports of sport goods considered in total exports of all goods in Finland to find out the share of sport goods in total exports of Finland. The monetary value of exports of sport goods to different countries have been compared to each other to find out major attractive markets for Finnish sport products. The year 2002 considered as base for finding growth or decline in the exports of sport goods in this study.

The collected data for the value added, sport GDP and taxes are the results of the application of input-output tables in ten years. The input-output matrix tables had different ratios for every industry segments, therefore we applied 15

different input-output for every year meaning more than 150 input-output matrixes during these 10 years. In total supply and consumption, the production of the sectors noticed as domestic supply. We considered total supply by adding the imports to domestic supply, while by deducting the exports from aggregate supply we reached to consumption.

### **2.5.3.2 Data Description**

The study will describe its related data both numerically and graphically. In describing its related numerical measures, the study will use a measure the arithmetic mean or average as a measure of central tendency. In all the relevant variables in employment, output, number of sport enterprises, exports, imports, GDP, value-added and aggregate supply during ten years, there is a need to measure the center of distribution, the mean or average size of these variables. Measures of variability were used to describe the spread of the distribution in all the above variables. The measures of rank were used to describe the largest and smaller sectors in industry also in describing the industry significance among Finnish major industries at the national level. Percentiles were used to express the proportion to indicate the size of sport industry's related variables in all related national aggregates and to express the changes over times among percentages.

After categorization of our variables, the author used many graphical methods to describe and analyze them. The author used frequency distribution tables and graphs like bar charts, pie charts, univariate, bivariate and multivariate graphs. The author used sectors as classes to construct frequency distribution tables of a categorical variable and years (10 continues years) to show frequencies or number of observations for each class. The researcher used bar charts to reveals the sizes of our variables and pie charts to reveal the share of each sector during ten years. Univariate charts applied to reveal the sizes and the trends in the variables during these ten years. While the bivariate graphs used to analyze the differences of two variables for instance the nominal and real growth in our variables, multivariate graphs used to reveal the size and trends among some related variables for instance, domestic supply, imports, exports, aggregate supply and aggregate consumption in the industry.

### **2.5.3.3 Data interpretation**

By the time that the data collection was completed, categorized and related statistical formulas and technical computations applied, we give meaning to our findings. Interpretation chapter was divided into several main components or topics, each of which titled according to the study's hypotheses statements and sub-questions. In analyzing and interpreting data, we point out those that are consistent with our theory presented in the study's theoretical framework. The findings are compared and contrasted with those of same aggregates in national level and interpretations are made thereof. The study's results in measuring the size of value added and sport GDP is going to be compared with these men-



tioned head groupings sizes on one hand and one hundred thirty-five major industries on the other hand to reveal if the sport sector's values are among them. If it does so then study's theory would be supported and we theorize our conclusions. One of the hypotheses concerns with shift in the industry from manufacturing towards services, while the sizes of the related sectors in terms of their value in Euros and numbers will be revealed, we tie them in two categories as manufacturing and services to obtain their total values. Then we consider their share, as how many percent was in 2002 and how it developed during a decade. If we notice any shift, we conclude that this phenomenon is happening in sport industry in Finland and discuss it. Otherwise, we reject it.

Another concern of the study covers the development in industry. While, we obtained the sizes of our variables for instance in employment, output, exports, imports and others in 2002, we consider the changes in these variables in a decade, if the general tendency in these variables is upwards then we conclude that there is a growth in these variables otherwise we consider it has declined. Then we may theorize that if our industry is growing or declining. The study also introduced ten main questions and it aimed to find out the size of 10 variables (industrial outputs, exports, imports, tax revenue, value added, GDP, aggregate supply and consumption) of sport industry in Finland in Euros. The sizes and aggregate numbers of two variables (employment and number sport enterprises) were in numbers and others in Euros. Percentiles will be used to measure the percentage of these variables in related aggregate to conclude how many percent of these aggregates allocated to sport to point out the share and significance of these variables in Finnish national economy.

Finding these sizes was first goal, but to measure real growth need to consider the effects of prices in our variables to see if these growths were real and not due to the changes in prices. The Finnish Statistic office publishes changes in price indices per every year in manufacturing, service producer prices and related areas for instance GDP ratios. Therefore, the author applied these indices to our needed variables to consider if there were real growth. Then, we conclude and theorize these issues in our conclusions. The collected data processed to obtain the distribution of the related sectors in the industry to find out which sectors are the largest.

#### **2.5.4 The objectives of the study**

The present study has chosen 10 objectives to analyze:

1. Sport enterprises: Enterprises have been extracted from the Statistics Finland, the Official Statistics of Finland, Suomen Yritykset from 2002 till 2011. According to methodology used in Suomen Yritykset publications from 2002 until 2011, enterprises whose activity has lasted more than six months in the examined year were included in the statistics. In addition, the enterprise must employ more than one-half of a person or generate a turnover of a certain minimum amount. The threshold for turnover during this period was EUR 9,134. The threshold reviewed annually against

the price index of GDP at market prices. The definition of an enterprise based on an EU regulation concerning statistical units (EEC 1993/696) and on a regulation concerning Business Registers (EEC 1993/2186). There were also some conceptual terms in this part of the study needed to define such as; Enterprises owned by the state, municipalities, joint municipal boards and the Region of Åland. State-owned enterprises governed by the Act on State Enterprises (1987/627). The activities and tasks of the enterprises prescribed in legislation concerning each individual enterprise. State-owned enterprises defined as enterprises. Enterprises owned by municipalities and joint municipal boards are public corporations and are not included in statistics on enterprises. However, they entered into the Register of Enterprises and Establishments. Enterprises owned by the Region of Åland not entered into the Register of Enterprises and Establishments.

2. Employment: Employees refer to wage and salary earners and self-employed persons. Employees converted to annual full-time employees (FTEs) so that, for example, employees working half-time represents one-half of a person and two employees working half time for one year represent one annual full-time employee. With regard to self-employed persons, the labor input of a self-employed person is the input the owner of an enterprise or his/her family member has made into the enterprise without actual remuneration. For enterprises not included in the surveys of the Register of Enterprises and Establishments, numbers of employees estimated from data on wages and salaries.
3. Production value and output: The statistics on industrial output contain data on sold and total outputs by commodity heading. The data collected annually from enterprises or their establishments in the industry classes. In the statistics on manufacturing commodities, sold output refers to the output manufactured by an enterprise or its establishment and sold outside the enterprise during the calendar year irrespective of the date of production. Sold output also includes sale from stock. The value or quantity of sold output does not include selling of such goods that sold as such, without further processing, to other enterprises (merchandise). Output at basic prices consists of the products, which produced in the accounting period. Three categories of output are distinguished: market output, output for own final use, and other non-market output. Output is to be recorded and valued when it generated by the production process. With the exception of some variables concerning population and labor, the system shows all flows and stocks in monetary terms. The system does not attempt to determine the utility of flows and stocks. Instead, flows and stocks measured according to their exchange value, i.e. the value at which flows and stocks are in fact, or could be, exchanged for cash. Market prices are thus the basic reference for valuation in the national accounts.

4. Imports: Imports of goods and services consist of transactions in goods and services (purchases, barter, gifts or grants) from non-residents to residents.
5. Exports of goods and services: Exports of goods and services consist of transactions in goods and services (sales, barter, gifts or grants) from residents to non-residents.
6. Value added: Value added (gross) refers to the value generated by any unit engaged in a production activity. In market production, it is calculated by deducting from the unit's output the intermediates (goods and services) used in the production process and in non-market production by adding up compensation of employees, consumption of fixed capital and possible taxes on production and imports.
7. Gross domestic product: GDP at market prices is the final-result of the production activity of resident producer units. It can be defined in three ways: first as the sum of gross value added of the various institutional sectors or the various industries plus taxes and less subsidies on products. Secondly as sum of final uses of goods and services by resident institutional units (final consumption, gross capital formation, exports minus imports); and thirdly as the sum of uses in the total economy generation of income account (compensation of employees, taxes on production and imports less subsidies, gross operating surplus and gross mixed income).
8. Taxes on production and imports: Taxes on production and imports consist of compulsory, unrequited payments. It can be in cash or in kind which are levied by general government, or by the Institutions of the EU, in respect of the production and importation of goods and services, the employment of labor, the ownership or use of land, buildings or other assets used in production. These taxes are payable whether or not profits are made. Taxes on production and imports divided in: (1) Value added type taxes (VAT) (D.211), (2) Taxes and duties on imports excluding VAT (D.212) – import duties (D.2121) – Taxes on imports excluding VAT and import duties (D.2122), (3) Taxes on products, except VAT and import taxes (D.214), b) Other taxes on production (D.29)
9. Supply of sport goods and services: the supply of sport goods and services is the production of all related sectors in sport goods and services in Finland plus the imports of sport goods and services at the same period from abroad.
10. Consumption of sport goods and services: the consumption of sport goods and services is the deduction of exports of sport goods and services from total supply of sport goods and services, which might be consumed, stored or used for other purposes.

The units, which constitute the Finnish economy, are those units that have a center of economic interest on the economic territory of Finland. Economic units categorized as non-financial corporations (financial corporations, general gov-

ernment, households and non-profit institutions serving households. Main aggregates of all objectives selected by this study collected from Finland's National Account from 1975 until 2013 in national level that provides perfect comparison of the results of this study with national aggregate like value added, GNP, employment, exports and import, taxes and the like.

### 2.5.5 Research materials

The initial materials for conducting data collection include five groups of distinct statistical yearbooks from 2002 until 2011 published by Official Statistics of Finland. Ten yearbooks from Official Statistics of Finland, under the title of "Suomen Yritykset" cover our data from 2002 until 2011 in sport enterprises and employment (Statistics Finland, 2016b; 1999-2008). The publication in 2004 covers the related data for 2002, therefore the data for 2011 published in 2013. The data for exports and imports of sport goods collected from ten publications of National Board of Customs, Statistics Unit, in foreign trade of Finland. The Statistics of Finland published the data for 2002 in (CD ROM) 2004 and the data for 2011 presented in 2013 (Statistics Finland). Ten yearbooks by Statistics of Finland under title of "Bulletin of Statistics" cover the main aggregates in the national economy (Statistics Finland, 2016a). The main aggregates in national level collected to compare all our sport related variables with those in national levels. The yearbook of Bulletin of Statistics in 2004 covers data for 2002, therefore the data for 2011 presented in the yearbook of 2013. The materials for registered data in the production value of sport goods and services collected from Finland's Industrial Statistics on Manufacturing and services, whole country 1995-2013 which cover our data from 2002 until 2011. We compared these with the publications of Statistical Office of the European Communities, EU Industrial Output, RAMON, (Statistical Office of the European Communities, Eurostat, 2013).

The data for aggregate supply and consumption comes from our calculations while we had domestic production and foreign supply in all our related sectors. Therefore, by adding foreign supply in every sector to domestic supply, we obtained aggregate supply and by deducting exports from aggregate supply, we reached to consumptions per every year from 2002 until 2011. The data for our variables in value added, GDP and taxes are the result of our application by input-output matrices. The Finnish Statistic Office, National Accounts publishes input-output tables for these purposes (Statistics Finland, 2014b). The tables adapted from their webpages from 2004 until 2013 and applied to obtain related data. Finally, we arranged study's references according to the ref-works system introduced by the University of Jyväskylä.

### 2.5.6 The timetable

The study aimed to collect ten distinctive periods from 2002 until 2011, already a decade, as reference years because of two reasons. The previous studies in country level mentioned in the theoretical part of this study covered their relat-

ed data only in one year due to huge mountain of statistic in sport's industrial segments. The researcher believe that although even one study year may cover the performance of the industry in question to reveal its significance, international events such Olympics Games, Football World Cup and the like for instance may affect considerably the study's variables like total output and employment. To avoid such arguments and to have strong and more reliable outcomes, the author relied on ten continues years and noted that if there is any sign of significance of industry in question in Finland.

The beginning year 2002 was adapted, because from 2002 to 2008, the industries classification was based on the TOL 2002 industries classification of the business register of the Statistics Finland, and from 2008, it is based on the TOL 2008. It also was the beginning years of the study. According to Statistic Finland (2008) in the Member States of the EU, statistics by industry must be compiled using NACE or a national classification derived from it. From the statistical year 2003 onwards, an updated version of that classification, NACE 2002, Rev.1.1 was used, as well as a national industrial classification based on it, TOL 2002 (Staistics Finland, 2015).

### **3 INTRODUCTION TO SPORT INDUSTRIAL DIMENSIONS**

#### **3.1 Economic involvement in sports**

Physical activities and sports never happened without economic efforts throughout the human history as all needed devoted time, people, equipment and place to carry out and practice. However, the extent, purpose and the degree of the economic values involved in these activities were not somehow significant to attract different academic disciplines for evaluation.

Economic issues were always involved and followed physical activities and sports, supposedly, even the Greeks who organized the initial sport competitions should have applied some economic values for the medals, accommodations, referees, preparation of the arenas and other involved factors as volunteer or non-volunteers. According to Westerbeek and Smith (2002) despite the rampant and vigorous commercialization of sport common in the new millennium, sport has never been entirely free from the vagaries of business, even as early as 78 BC, Gaius Maecenas warned of the dangers of 'misusing' vast sums of money to provide sporting infrastructure.

Barros et al. (2002) commented that economics and sports were uneasy companions. Many people, including those involved in running and organizing sporting competition saw little or no role for the application of economic logic to those activities. Although, nowadays sports are a worldwide economic phenomenon and the vast sums of money generated by sport have meant that the laws of economics have an important role to play in the organization and regulation of this industry (Fort & Fizek, 2004).

In search for initial economic studies in this field, professional sport was one of the starting points. As Sloane (2006) noticed that Simon Rottenberg's seminal article in 1956 was generally accepted as the starting point for the development of the economics of sport, while he recognized certain features of professional sports leagues were unusual and saw little reason to treat this industry any differently from other conventional industries.

According to O'Hara (1999), economists attracted to the economics of sport are labor economists. On the other hand, economists from continental Europe usually rely on the descriptive statistics, with the consumption of various ratios. Although they are also concerned with the implications of professional teams, continental Europeans mainly study the economics of amateur, recreational sport and the economics of the sport industry. Allmen (2005) commented that serious economic analysis of professional sports is a relatively new endeavor within the larger sphere of applied microeconomics. Although a smattering of articles appeared before 1980, most of the existing literature is much more recent. On the other hand, these new resources and literature in professional sports economics made Slack and Parent (2007) to argue that apart from the intrinsic in sport and its high profile, it is an industry that is highly competitive, data-rich and very transparent to the outside observers. They noticed that the industry offers a mountain of statistics on the current performance and career histories of employees (i.e. players) and managers (i.e. coaches) as well as regular observations on the production process (i.e. games) and its outputs (i.e. wins and losses). In addition, there is detailed information on the number of consumers (e.g. gate attendances and TV viewing figures) and the usual financial information on revenues, costs, profits, assets, and liabilities.

Downward and Dawson (2000) suggested that the production of team sports per se is not in itself something that naturally leads itself to economic analysis. What matters as well, is that money changes hands in the production, distribution and consumption of the sport. Downward et al. (2009) commented that the characteristics such as the production, distribution and consumption of other goods and services, professional sport viewed as an economic process. Inputs or factors of production, such as labor are combining with capital to produce, along with another team in the league, a product that sold to consumers typically in a stadium, or via broadcast media.

### **3.2 Sports developments towards business**

It seems that four main processes have played a substantial role in the development of sport as an industry. The world of sport has witnessed the modernization of sport many years ago, then sports became internationalized, latter, professionalization of sports happened and now, sports were commercialized. Whether the modernization, internalization, professionalization and commercialization of sports, result to the industrialization of sport depends on many factors. And any literature in this regard cannot ignore the importance of these factors in the development of industrial aspects of sports and has to address these issues especially the commercialization of modern sports as Slack (2004) commented that one of the most visible aspects of modern sport is its strong links to commercial enterprise.

It is obvious for us in the sport sciences nowadays that there is a clear need for studying and understanding the nature of sport economy and its value

to the economy as whole as Heinemann (1986) pointed out, if the science of sport is going to achieve a prominent standing, new problems must be face. Sport is developing into an open system in which its boundaries to other fields such economy and media, and to other forms of spare-time activity (e.g. tourism, entertainment) have become blurred. Heikkala et al. (1999) suggested that there is a constant cultural and social development inducing a continuous change and demand on sports, thus, the providing of sports must follow the lead of revolution, alternation and live up to people's expectations and desires. Horne (2006) suggested that while many leisure activities have become job generators and the number of jobs in 'sport and recreation' has continued to grow, there is no longer much reticence about discussing the economics or marketing of sport as a business or an industry.

Sport has played many roles in different societies throughout human history as Cashmore (2010) pointed out that at various points in history sports have held practical, military, industrial and commercial values. According to Jarvie (2013), sport in different parts of the world was often associated with community building, social welfare, social capital and stereotypical notions, making contribution to working class communities. Miller et al. (2001) argued that sport has long been a crucial component of the government of everyday life. Whether thorough the formalization of sporting holidays by the states across Europe in the eighteenth and nineteenth centuries, or early twentieth-century rational-recreation movement in public education, or the uptake of physical education by state-socialist and capitalist countries throughout the latter part of the twentieth century. Moreover, Chappelet and Bayle (2005) noted that the role of sport as a force within education, health, economic development, labor market, social issues, national cohesion and identity is increasingly taking the form of a tool for development on an educational, social, economic, urban planning, and image level for nations. Chappelet and Theodoraki (2006) suggested that the state of sport today examined according to the four main reasons for promoting sport: to maintain good health; to contribute towards education and the social agenda; for economic performance; and for sustainable development.

Sports, but faced major changes recently and its developments towards business and industrial areas got substantial weight. According to Shilbury et al. (2003) what was once a clearly defined stable activity is now a highly complex and constantly, changing industry and sport in 2000s is multi-faced, multimedia industry. Rosen and Sanderson (2001) argued that what was always a business has now become a much bigger business, with players' salaries, franchise values, and stadium costs all shifted by orders of magnitude. McPherson et al. (1989) argued that sport become a commodity to be produced, marketed and sold to the public. As a result, amateur and professional sports embedded in the local and national economies of most industrialized and developing nations. Houlihan (2007) noticed that during the past few decades, sport has developed from a relaxing weekend activity into a complex industry, whereas in the 1960s sport was primarily an important social phenomenon; today it is, in addition, an important economic phenomenon.



Miller et al. (2001) noted that sport increasingly shaped by the media, spectacularized by commerce, employed to deliver audiences to sponsors, and intimately linked to the technological opportunities afforded by various media delivery forms. It crosses languages and countries to captivate spectators and participants, as both professional business and a pastime. Maguire (2004) argued that there is both a consolidation of globally mediated, commodified and technologized sport and, simultaneously, recurrent challenges to modern achievement-sport forms. He noted that commodified sport products embedded in a complex political economy that reflects the interests of the West in general and Trans National Corporations in particular.

According to Philipp (1995) physical activity, play and sport are rapidly gaining international importance. Correspondingly, sport related professional fields such as administration, commerce, mass media, recreation, tourism, and health services have expanded and formed another category in sport. Russell et al. (2006) commented that sport employs many millions of people around the globe, is played or watched by the majority of the world's population, and at the elite level, has moved from being an amateur pastime to a significant industry. Slack (2004) commented that while sport has always had links to business, the number, frequency and intensity of the links between the two have increased considerably over the past decades. He pointed out that athletes in the major spectator sports are marketable commodities, sports teams traded on the stock market, sponsorship rights at major events can cost millions of dollars, network television stations pay large fees to broadcast games, and the merchandising and licensing of sporting goods is a major multi-national business.

Tomlinson (2005) commented that sport has transformed in ways that has increased its profile in everyday life and its importance as social, cultural, political and economic presences. Beech and Chadiwick (2004) argued that as the sport develops an overtly business context, external organizations see the opportunity of using sport for their own purposes, typically marketing in the forms of sponsorship involve in governing bodies, leagues and clubs, and endorsement of involved players. With the expanding popularity and the grate publicity of elite sport as a form of mass entertainment, business proper also became interested in sport as the potential market for commercial exploitation (Heinilä, 1989). Eber (2003) noted that these processes are mostly happening in developed countries where sporting activities involve a large part of the population and have nontrivial economic effects. These developments were in such importance, which made Westerbeek and Smith (2002) to comment that if sport's inherent significance is unquestioned; its economic importance should be noteworthy.

Thoma and Chalip (1996) even expanded their vision and suggested that international sport has become a significant feature of the international economic, political and social landscape. Silk et al. (2005) noted that many sports, which rooted in particular histories, traditions and cultures, and in many cases seen as the embodiment of political values and a national identity, remade in the image of burgeoning international economy and a rapidly expanding global commu-

nications infrastructure. According to Enjolras (2002), these substantial major changes in important aspects of sport are, related to general changes in society and characterized as postindustrial structural changes in the manufacturing economy. Smart (2007) argued that the development of modern sport is bound up with processes of economic and cultural transformation associated with the global diffusion of capitalist forms of consumption, where, Nixon (1974) commented that modern sport is just reflecting its complex, formal, corporate-like organization. In Maguire (2004) view, these features of global sport reinforced by and reflected in the assumptions and practices of the sports-industrial complex.

The economic aspects of sport has expended to such a high level that some believe sport should take another notion. According to Heinemann (1986) until a few years ago neither economists nor social or sport scientists has dealt intensively with the economic aspects of sport in the Federal Republic of Germany. Ibrahim (1975) argued that sometimes one feels that pro football and other professional teams belong to the entertainment world and we should not deal with it as sport. This is particularly true since professional sport promoters are able to keep the courts from dealing with their business as a business. Sewart (1987) noted that this controversy has centered on whether the nature of modern sport has become debauched as it subsumed to the logic of the marketplace. It suggested that puerility has come to dominate sport as modern culture, become and administered as a commodity. Sport is thus, viewed in terms of the tensions between its emancipatory potential and its function as a commodity for social consumption.

Wang (1998) pointed out that the modern sport has greatly gone beyond the scope of athletics. It injected the concept of industry and participated in the management of commercial capital. As economy is developing, the scale enlarged, with a correspondingly expanding commercial value, ending up as an abundant gold mine. McPherson et al. (1989) commented that sport has become an increasingly profitable commodity, especially in North America. Many organizations (e.g., equipment manufacturers, retailers of sport paraphernalia, universities) gain revenue from their association with sport. Clearly, the economic significance of sport affects sport practices and the people involved.

### **3.3 Commercialization of sports**

Most of the researchers in field of sport and economy have highlighted different subjects in connection with the commercialization of sport and studying them. The commercialization of sports, Olympic Games, Football World Cup, the related organizations, the role of media in this process got substantial attentions, yet, magnitude and the degree, time, level, social structure, specific countries and the reasons of commercialization in sport comprised other attentions. Szymanski (2003) noted that the study of sports economics has expanded rapidly in response to significantly increased demand for sport itself and for economic

analysis relevant to commercial litigation in sports. According to Coakley (2001), the commercialization of sport studied with respect to elite sport; the degree to which various mass-sporting activities affected has received little attention. Heinilä (1989) suggested that the increasing popularity of sport as mass entertainment of the public at large has been the prime condition for the gradual growth of commercialism in sport. The intervention of business with its flow of money has provided the material prerequisites for professionalization of sport. Slack (2004) argued that in no previous time have we seen the type of growth in the commercialization of sport that we have seen in the last two decades. Houlihan (2007) suggested that the impact of commercialization in sport gave greater weight to the significance of business for contemporary sport. Business has always been involved in sport, but the intensity and ubiquity of the business presence in sport is phenomenon of the late twentieth century.

Frey and Eitzen (1991) noted on the evolution of sport from a playful, participation-oriented activity to one that resembles a corporate form guided by the principles of commercialism and entertainment. Heinilä and Digel (2006) confirmed the idea and noted that the increasing popularity of elite sport and its commercial potentialities were the main forces behind the development of the sport business market with its demand and supply and flow of money. Houlihan (2007) stated that in the past two decades, sport has moved from being a past time to a business. Due to of the process of commercialization, it led sports managers and organizations to become concerned with business principles. Robinson (2003) argued that it is apparent that commercialization of sport has been the driving force behind the development of sport as a business, resulting in an industry that provide revenue for national and local economies through event revenue, taxes, employment, tourism and sponsorship. Slack (2004) pointed out that the commercialization of sports happened in areas like athletes in the major spectator sports, sports teams, sponsorship rights at major events, network television stations payments, the merchandising and licensing of sporting goods, sport events, professional and amateur sports.

The process of commercialization was not limited to some special countries; the Scandinavians also followed the road. Enjolras (2002) commented on the commercialization of sport in Norway and noted that the most commercialized organizations are those that are particularly oriented toward competitions and most dedicated to team sports. Rskjaer and Nielsen (1987) pointed out that in Denmark, sport always organized as a voluntary sector, but this pattern in Denmark has changed significantly during the last decades. They noted that traditional position between market and state affected by changes in the financial structure and particularly by increasing public subsidies. Kalevi Kivistö, the Ministry of Education's director general in Finland in an interview pointed out that the European sports system, which organized on an ideological basis, and the American model, which springs from the assumptions of business have begun to converge in recent years. He outlined that the commercially based model has come ashore in Europe and in Finland, it is however, marginal in quantitative terms, but it is dominant in terms of media visibility (Wuolio, 2003).

Lobmeyer and Weidinger (1992) took another approach to societal structure of sport and pointed out that the development of the commercialism can be trace back to the societal structure in the United States. A liberal attitude and enormous urbanization in the 19th century helped create a society, which was conducive to a profit-orientated sports system. According to Enjolras (2002) there is a change in the general ideology encompassing sport from that of a collective right to that of an individual option and increasing adherence to the principle of "let the user pay" which is changing the increased "marketization" (or commercialization) of sport. Nixon and Frey (1996) argued that sport today has a corporate structure as well as formal or bureaucratic one. Although the corporate organization of sport has many dimensions, the commercial or business dimension is most important. Corporate sport organized to make money. In this conception of sport, sports contests, participants, and paraphernalia are commodities to produce, market, and sell. Seifart (1984) argued that the economic instrumentalization of sport leads to a new identity and interdependence of athletes, reporters, promoters, sponsors and the media. Major sporting events can no longer be staged without financial support from television and inevitably become part of the advertising for the "McDonald's mass culture".

### **3.4 The commercialization of Olympic Games and modern sports**

The wave of commercialization were not limited only to pervious links, it targeted also modern sports like American football, European soccer and most importantly the Olympic Games. Modern sports entered the twentieth century largely as new social strata born of industrialization and urbanization. It was a social innovation, confined to national boundaries, which had its roots in the emergence of new forms of sociability. Engendered thus by private initiative, the new sports associations and clubs pursued goals that were essentially commercial and hedonistic (Kruger & Riordan, 1999). According to Guttmann (1994), modern sports do not refer merely to recent innovations like soccer and baseball. Modern sports best defined not by some specific chronology but rather by the presence or absence of a distinctive set of systematically interrelated formal-structural characteristics.

The origin of the modern Olympic Games has established through relentless efforts of Baron Pierre de Coubertin and today they considered by many to be the most important of all international athletic events (Graham & Ueberhorst, 1976). Christensen (2004) suggested that the Olympic Games can be read as one of the few cultural forms that bound (to a degree, at least) the world's peoples together. The universal nature of the rules and records of sport make the Olympics a global phenomenon par excellence. According to Real (1996) the millennium of continuous ancient games from 776 B.C. to 393 A.D. coincided with the intellectual birth of modernism in classical Athenian Greece, just as the century-long run of the modern games has coincided with the intellectual birth of post-modernism. The end of the 19th century found Baron Pierre de Coubertin

preaching the modernist gospel of classical values as the intellectual and mythical foundation of the modern games. Since then, the huge growth of media technology and television rights fees has changed them.

Throughout its history, the Games increased in tandem with expansion of organizational variety. Although only 13 IOC members are mentioned in the first Bulletin of the IOC, that number increased over time to 69 in 1925, 81 in 1980, 113 in 2000 and 124 in 2004. In Athens 2004, the Olympic system comprised 202 NOCs, 28 International Summer Sport Federations (IFs) and the entire structure of the Paralympics and the Olympic Winter Games (Preuss, 2000).

The Olympic spirit, as envisaged by Baron de Coubertin in his speech to international sport leaders in Paris in 1894, barely survived the transformation from Athens in 1896 to Los Angeles in 1996. The first Olympic of modern times was a parochial affair with only 14 competing nations and less than 250 athletes. A century later, the games had grown into a vast commercial undertaking, featuring thousands of athletes from all over the world (Buckley, 2000). According to Toohey and Veal (2007), the Olympic Games are no longer, if they ever were, just a sporting event: they are a cultural, political and economic phenomenon. Particular interests see them as a media event, a tourism attraction, a marketing opportunity, a catalyst for urban development and renewal, a city image creator and booster, a vehicle for "sport for all" campaigns, an inspiration for youth and a force for peace and international understanding. Buckley (2000) argued that with some 10 500 athletes competing in 28 sports at 33 different venues, with a global TV and Internet audience of billions, with vast sums spent on sponsorships and product endorsement, the Olympic Games has developed unstoppable commercial momentum.

According to Toohey and Veal (2007), today there is no longer a philosophical argument about whether or not there should be commercialism in the Games, but rather debate centered on the extent of such commercial involvement and the ramifications for Olympic athletes and officials. Lenskyj (2000) noted the Olympic Games as an enterprise and commented that the entire enterprise is swathed in tinsel layers of marketing and hype- by international Olympic Committee, by NOCs, by transnational corporations who pay millions of dollars to sponsor and broadcast them, by host cities and national governments who have invested hundreds of millions of taxpayers' dollars. Seifart (1984) pointed out that the Los Angeles Olympics 1984 showed a culmination in the interrelationship of sport and economy. The "commodity" sport marketed and exploited. American enterprises spent almost \$ 900 million on sponsoring and television advertising. The private organizers made a surplus of \$ 162 million. The American Broadcasting Company (ABC) received about \$ 650 million from advertising. Heinilä and Digel (2006) noticed that the Olympic Movement, which used to stand as the sacred institution of immanent humanism and noble ideals, has exposed to total metamorphosis and became the most successful business and profit making enterprise.

These developments in modern sports were not accomplished without the influence of another player, namely sport media, which played an important

role in shaping the commercialization of sport in modern era. Hui (1998) suggested that mass media has made great contributions to the modern Olympic movement since its early establishment and has become an important factor in promoting the development of Olympic movement. Whiston (1998) suggested that these relations were mutual and argued that it is not only that the media gave free publicity to the professional leagues simply by reporting their games as news. Equally important is that the popularity of sports coverage demonstrated the potential of sport to attract large and predictable audiences for advertisers.

According to Buckley (2000), television and Internet have changed the climate for professional sports, bringing in vast new wealth, new competitive pressures and an ever-closer relationship with media. Larson and Park (1993) noted that global television established itself during the 1970s, matured further in the 1980s, and over these two decades, became a principal catalyst in international relations generally including sport and the Olympic movement. Other aspects of this mega-event include the \$ 407 million sale of television rights to the Olympics, with NBC making up the largest single part of this record-setting total, while over 10 000 accredited broadcast personnel were in Seoul in 1988. Real (1998) commented that the huge scale of media sports appears in audience sizes of millions for televised sporting events and media contracts for billions of dollars. The scale is there in the explosion of sport talk radio, sport magazines, Internet Sport sites, and consequent global sport marketing, inflated salaries and endorsement contracts.

Larson and Park (1993) pointed out that television came to the Olympics in 1936, with coverage of the Games outside of the Olympic stadium. A first glimpse of the present global scope of television came in 1964, when Tokyo Olympics featured the first satellite relay over the Pacific. However, it was in Rome in 1960, which television rights first became an important consideration for the Olympic movement. The large increases in revenue from television rights took place in the 1970s and 1980s and mirrored the growth.

Wenner (1989) noted on the startling numbers of the money involved in advertising and pointed out that in 1988, the million-dollar minute seemed almost a bargain, as it cost \$ 675,000 seconds of commercial time on ABC's broadcast of the championship game of American professional football- the Super Bowl. Yet, Madrigal et al. (2005) commented on how Olympics and FIFA World Cup used to enhance global brand equity. They argued about the attraction of sporting events which are particularly attractive option for global brand sponsorship and referred to IOC President Jacques Rogge, where he highlight that approximately 3.9 billion people tuned in to watch parts of the 2004 Athens Olympics, with the cumulative television audience estimated to be 40 billion. They noted that the 2002 FIFA World Cup games played in South Korea and Japan generated a massive television audience. According to the official Television Report for the 2002 FIFA World cup, over 41,100 hours of dedicated programming in 213 countries generated a cumulative audience of 28.8 billion

viewers for the most prominent brands like Coca-Cola, Kodak, McDonald's, Samsung, Adidas, Budweiser and Fujifilm.

### **3.5 Developments of economic interests in professionalization of sports**

Professionalization of sport was the other important factor, which brought high involvement of economic interest to sport and this revolution covered all sport aspects. Professionalism in sport always accompanied by amateurism, a concept, that sport is still concerned with it, for a long time. Toohey and Veal (2007) argued that linked to the view of the purity of the amateur athlete is the larger issue of the role of commercialism in the games of the modern era. Again, the nexus between sport and money, the time in the form of commerce, believed to degrade the former. Glader (1978) believes that the meaning, purpose and values of amateurism in sports, as well as the implications of classifying some competition as amateur, have been subjects of controversy since the development of modern amateurism in the nineteenth century. According to Buckley (2000), the 'fair play' ethos of the amateur overtaken by an overriding urge to win-pushing competitors towards professionalism, performance-enhancing drugs, and, in some sports, cheating and violent tactics. He argues that there is too much at stake for "noble amateurism" to re-emerge as the norm for competitors or organizers.

On the other hand, Heinilä (2006) stated that in sport, the common usage of the term "professionalization" usually refers to the changing roles of athletes. Because of high performance demands today's elite sport is more like an industrial enterprise committed to the production of high performance. In this joint venture, it is not only the prime role of athletes but also the increasing number of auxiliary roles that tend to become professional. Beamish et al. (1988) noted that the term "professional sport" implies an employee/employer relationship. In the world of sport, however, such a relationship was not always the case. It was only between 1850 and 1910, when Canada and the United States underwent rapid industrialization and urbanization, that the structural conditions favored the development of professional sport.

Macintosh and Whitson (1990) argued that although professional sport as entertainment was becoming an accepted part of the business world in some Western countries. However, it was the conclusion of World War II, when the Soviet Union, perhaps in anticipation of the Cold War, began to conceive of sport as a means of demonstrating the achievements of its socialist society and of achieving good will in non-aligned and third world countries. Initially, this movement resisted by western industrialized countries, but soon, most of the Western and some third world countries followed the Soviet Union and commenced to support and train a corps of elite international athletes. De Bosscher et al. (2008) suggested that over the last few decades the power struggle be-

tween nations to win medals in major international competitions has intensified. This has led to national sport organizations and government throughout the world spending increasingly sums of money on elite sport. In their quest for international success in a globalizing world, the elite sports systems of leading nations have become increasingly homogenous.

Mason (1999) commented on the purpose of professionalization in sport and argued that professional sports teams unite to produce a league product that sold to four distinct groups: first, fans, second, television and other media companies, third, communities which build facilities and support local clubs; and fourth, corporations which support leagues and clubs. Heinilä and Digel (2006) noticed that partnership with business was carried out not only by selling the visible sport to the advertisement business but particularly by means of sponsorship contracts with individual athletes, teams, particular sport events, or sport federation and also by means of pool contracts with sport industry.

Kern (2000) pointed out that we are now witness to professional athletes' long term contracts of over millions, cities demand for sport for professional sports franchises, willingness of spectators for extra payments for tickets, market power in pro sports, the impact of sport teams and facilities in neighborhood economies, income level of sport fans, finance and economic issues in NBA. Camy (2006) pointed out that professional sport's focus is to produce events. He argued that professional football occupies a dominant position in Europe, well ahead of other sports. Although professional sport only accounts for around 50,000 workers and about 2,000 businesses, it has high visibility because of its media coverage and its high degree of international appeal.

Watt (2003) argued that commercial pressure in many sports are such that money is a, if not the, major consideration, and it seems inevitable that performers will demand their share of this money increasingly as time goes on. Rosen and Sanderson (2001) noted that free agency and revenue sharing in varying degrees have come to professional sports in the United States and elsewhere, as have players' agents and associations (unions), strikes and lockouts, restrictions on players' salaries, and methods to constrain competition and improve competitive balance among teams. Sheehan (2000) noted that sports have undergone a dramatic increase in professionalization over the past few decades. In the early 1980s schools appearing on the national television received approximately \$ 600,000 per game, and the National Collegiate Athletic Association took over women's sports by offering them a better economic deal in the short run.

Kelly and Hickey (2008) commented that in an era when games at the elite level are sports entertainment businesses many of the elite performers in different industries have evolved into celebrities: they exist as images, icons and brands whose every thought, action, change of style or partner is commodified and consumed. Holt and Mason (2001) pointed out that the incessant growth of media interest in sport created a celebrity cult around top players and made many of them very rich. Shannon (1999) argued that the growing interest in professional sports has continued this focus on sports as big business. With



multi-million dollar payrolls, newer and more extravagant facilities, and the costs of sports franchises escalating into the hundreds of millions of dollars, there is no doubt that sports is, truly, a business venture. Lobmeyer and Weidinger (1992) argued that the popular professional sports of football, basketball, and boxing are clearly profit orientated and show a remarkable financial breadth.

Digel (1988) noticed that many factors are of fundamental importance for the future development of top-level competitive sport and for providing this future a change of thought in many spheres (e.g. professionalization), becomes necessary. Berry and Wong (1986) pointed out that the problems each sports faces today may be peculiar to that sport, and the economic potentials, among different sports, vary significantly. O'Reilly and Nadeau (2006) commented on the factors that contribute to the revenue generation ability of major professional sport teams. They identified eight factors significantly related to revenue generation; namely home game experience, heritage, market support, winning, competition, market characteristics, market age and radio appeal. Results suggest that product and place considerations are most important in achieving revenue while promotion and price considerations play only a minor role. El-Hodiri and Qurik (1971) noticed the need for legislation in professional sports and argued that many of which would constraints of trade in almost any other industry are not generally enforceable in the courts to professional sports. Instead, maintained through blacklists and/or other sanctions within the industry.

In Finland, Merikoski and Henry (2006) pointed out that elite sports have always played an important role in the Finnish Society. From the beginning of the 1920's until the 1952 home Olympic Games, Finland unquestionably belonged to the absolute sport elite in the world. This success was an important factor in the development of the society in general as well as in the development of Finland as a world-wide recognized country. Olin and Penttilä (2013) pointed out that in Scandinavian countries like Finland professionalization is still a quite new phenomenon even in most advanced sports like ice hockey, soccer, basketball and volleyball. There are grounds for stating that we should better describe these sports as semi-professional, because work outside sport still plays a significant role.

### **3.6 Areas of the economic research in sport industry**

There were many economic issues in sports' industrial sectors which attracted economic interests. The researchers took many different topics into consideration in their analyses in sport goods, events, participation, construction, consumption, clubs, sponsorship, employment, volunteering and the like.

### 3.6.1 Sport goods

“Sport goods” is one the other most important segments of sport industry, which sometimes in many articles and comments in mass media appears as a sporting goods industry. There are many well-known manufacturing world-wide involved in the production line of hundreds of different sport goods ranging from sport boats, sporting guns, sport shoes and clothing up to the fishing equipment. There are also other departments involved in the promotions, sales, and marketing activities of sport items all around the world. The literature in this field is huge and covers many areas from giant sporting goods manufacturers, changes of production line in low cost countries, international trade of sporting items, size and trends in different markets up to product performance, brands, value, price, technology, purchasing power, retailing, sales, quality, material and design in this sector.

With a long history behind it, the sporting goods industry has come of age. It steeped in tradition and confidentiality from the mid-1800s until the early 1980s. During that period, no one except insiders knew anything about the industry. Only widely recognized brand names such as Wilson, Spalding, Rawlings, and Titleist were popular in the public sphere (Lipsey, 2006). According to Gems and Pfister (2009) the last 20 years have brought remarkable growth and change to the sporting goods industry. The term “sporting goods” once comprised only equipment like golf clubs, basketballs and tennis rackets, with the recent explosion in apparel and footwear sales, the industry has moved far beyond equipment manufacturing. Skyrocketing marketing budgets have resulted in top-name athletic endorsements and relentless branding, and athletic companies’ logos are now easily among the most recognizable corporate trademarks in the world. Horne (2006) pointed out that one measure of the contemporary global economic significance of sport is sports retail sales figures. In Horne’s views, the huge retail sales of sport goods in United States of America, Germany, United Kingdom, Japan and other advance countries is an indication of the economic importance of sport goods in the world.

Andreff and Andreff (2007) pointed out that in the 1950s and 1960s, most sports goods produced and consumed in developed countries, generating a significant trade across themselves with only a tiny flow of international trade with developing countries. Concisely, developed economies were specialized in production and trade of nearly all sports goods while most developing countries were specialized in none of them. Now, According to Hanzl and Urban (2000) the shape of sporting goods sector is strongly determined by globalization and easy relocation of production to low-cost countries, such as South-East Asia and China and it is still a labor-intensive industry, with production taking place mostly in small and medium-sized enterprises. Lipsey (2006) commented that within the sporting goods industry, it has become a fact of life since the mid-1970s that nearly all production of athletic apparel and footwear, and a significant amount of production of sporting goods equipment, is done in for-

eign countries, primarily in the Far East-Taiwan, China, South Korea, Japan and India representing the primary sources.

According to Harvey and Houle (1994) the sporting goods manufacturing industry is largely composed of multinational firms that not only aim at growing shares of a world market but also adopt global strategies of production, such as delocalization. They noted that upscale (technology-intensive) products manufactured in industrialized countries, while downscale (labor-intensive) products manufactured in southeastern countries. Donnelly (2000) argued that all the "New World Order" to corporate giants like athletic shoemakers really means that they now have the green light to accelerate long-standing industry practices. They indicated that between 1982 and 1989 the United States lost 58,500 jobs in footwear to cities like Pusan. Carr (2003b) pointed out that in the 1950s, many of the apparel manufacturing jobs shifted from the North to low-cost production in the South. Twenty years later, New England lost its footwear manufacturing jobs to Korea.

Sage (2000) commented that sporting goods and equipment corporations in developed countries have turned to the third world because an endless supply of cheap labor and trade policies which provide the corporations with financial incentives. In the sporting goods and equipment industry, manufacturers who produced all of their products domestically are now a minority in an industry that increasingly dominated by imports. Business Wire, editorial (2007) pointed out that due to the abundant labor resources, huge market potentials and favorable policies, Chinese sporting goods has developed, within more than 50 years, from small to large, imitation to creation, planning to market and from closed self-support to the international markets.

Major exporter countries of sporting goods are China, Hong Kong, the United States and France, and major importers are the United States, Japan, Germany, France, United Kingdom and Italy (M. Andreff & Andreff, 2007). Gholamzadeh (2001) found that the trade of sporting goods accounted for more than 0.20% of total world trade and the main exporters and importers of sporting goods were the industrialized and developing countries. His study revealed that sporting goods trade was a growing area in Finland's foreign trade and accounted for more than 0.20% of Finnish exports and imports. Business Wire, editorial (2006) commented that the retail sporting goods industry in the United States includes about 20,000 companies with combined annual revenue of \$25 billion. Large chain operators include Sports Authority; REI (a members' cooperative); and Hibbett Sporting Goods. The journal stated that the industry is highly fragmented: the 50 largest companies hold less than 50% of the market and only about 150 companies have more than five stores. Won and Kitamura (2007) commented that according to Korean Sports White Papers, the size of the South Korean sports markets was \$ 14.75 billion, amounting to 2.04% of the GDP in 2002 while according to Japanese Leisure White Papers, the size of Japanese sport market estimated to be \$ 41.45 billion in 2002. Smith and Chamorand (2004) commented that during the last 25 years, the number of sport and

leisure stores in France has doubled, and two giants (Sports de France and Go Sport) dominated the sector.

Sullivan (2003) commented that Adidas, Reebok and Nike have spent an aggregate of close to \$1 billion over the past three decades to build their brands. They have run TV ads, put their shoes and logos on the best athletes in the world, and purchased enough pages of magazine advertising to wallpaper every building in a major city. Ryan (2003) commented on the sport goods companies' policies on advertisements, as they need ads to make sure that their brand remains relevant, their equity remains undiminished, and their market share protected and profits enhanced. Carr (2003c) pointed out that it took time for the US sport brands to realize the importance of a logo in front of a TV camera.

There are many studies concerning issues, which are important inside the sporting goods manufacturing and surrounding their markets. The new designs (Bhonslay, 2003), value and technology (Griffin, 2003), product's performance (Jacobsen, 2003; Leand, Walzer, Griffin, & Ryan, 2003), technical fabrications (Walzer, 2003), prices and quality (Holcomb, 2003), and market segmentations (Herek, 2003). Severe labor shortage (Herek, 2002), fight over product and pricing (Powell, 2003), boosted product deliveries and inventive leasing programs (Bhonslay, 2003) are other hot topics in the industry. Issues as peers influences (Yoh, 2005), consumer's lifestyle trends (Bhonslay, 2003), the consumer's taste (Hudson, 1998) were other core concerns of the sport goods sector of sport industry's experts.

Industry observers also were concerned about the factors which had negative effects on the industry such as international political tensions (Carr, 2003a), unemployment, tax rebates and saving (T. J. Ryan, 2003), weather, fires and drought (Journal of Sporting Goods Business, Editorial, 2003), poor economy (Jones, 2009), and weather and winter sports (Bhonslay, 2002). Tranter (1998) counted the reasons which caused the declination of sport goods in United Kingdom and argued that the persistence of outdated handicraft techniques, the limited size of the domestic market, the additional costs imposed by the tax, competition from larger and more efficient firms, insufficient to large scale and machine based production methods hampered sporting goods manufactures in UK.

### **3.6.2 Sport events and arenas**

Sport infrastructures and sport events are other important topics in the sport related areas. The role of sport events and sport arenas, and their positive and negative economic contributions to the society has been concerned many researchers for a long time. According to Schimmel (2006) sport has been linked to the dominant discourse of urban growth and regeneration in ways that are as powerful as they are problematic. These linkages are both material and symbolic and involve both fixed and circulating capital. The material dimension includes the reconstitution of urban space and the use of public funds for the purpose of sport-related infrastructure development and mega-projects such as stadia. Levermore (2008) noted that sport used to help in the building of physi-

cal, social and community infrastructures, and regarded by many as essential factors for development to succeed. Sports events can contribute to reinvigorating the physical infrastructure of a region through building of roads, hotels and the creation of new jobs.

According to Kennedy and Rosenttraub (2000) across the past 15 years, governments in the United States have invested more than \$10 billion in the playing facilities used by professional sports teams to produce a set of tangible and intangible benefits. Zimmerman (1996) commented that American public policy cloaked in many myths. Encompassing such issues as public subsidies to sports stadia, enterprise zones, and welfare migration, there are many ideas recycled from government to government over time with little thought given to the evidence supporting their empirical assumptions or their prospects for success. Matheson and Baade (2004) argued that these sport events put the country (or city) on the map and provide significant international exposure to the host. These events seen as political events that serve to display the economic, political and cultural power of the host country or as a signal that a country has arrived as a major figure on the international scene. Ahlert (2001) noted that the World Cup infrastructural investments as well as the additional demand caused by World Cup tourism in Germany during the year of the World Cup would create further income spreading over several periods of decreasing waves into the whole economy. It supposed to create more than 2400 jobs in annual average each year and more than 7000 jobs in the year of the World Cup.

Baade and Dye (1988) examined a number of types of benefits asserted by proponents of subsidies direct municipal revenues from stadium events and concluded that measurable economic benefits to area residents are not large enough to justify stadium subsidies end that the debate must turn to immeasurable intangible benefits like fan identification and civic pride. Broudehoux (2007) argued that acting as a developmental engine legitimating large-scale urban transformations; the Olympics have helped concentrate economic and political power in the hands of a coalition of government leaders and private investors and allowed their interests to dominate the planning agenda. Gratton et al. (2005) pointed out that investment in sporting infrastructure in cities over the past 20 years was not primarily aim at getting the local community involved in sport, but was instead aim at attracting tourists, encouraging inward investment and changing the image of the city. Noll and Zimbalist (1997) pointed out that a stadium can spur economic growth if sport is a significant export industry, and, if it attracts outsiders to buy the local product and if it results in the sale of certain rights (broadcasting and product licensing) to national firms. Nevertheless, in reality, sport has little effect on regional net exports.

In Finland, Carlsson and Walden (1995) commented on the political controversies in their hometown, Turku, for the optimal location of a grand, new ice-hockey arena, which become the main venue of the 1991 world championships in ice hockey. They outlined that the political process rarely recognizes optimal decisions; it can be politically convenient to make inconsistent decisions. Kalevi Kivistö, the Ministry of Education's director general in Finland in

an interview with Wuolio (2003) pointed out that this year, government will contribute €13.6 million towards the construction of recreational sports facilities. Recreational sports organizations receive € 26 million in support for their activities. Salo (1997) commented on how the Neste 1000 Lake Rally affected the sales increases in different branches of business, the monetary value and the publicity of the region. He found that spectators spent a total of FIM 39-48 million on accommodation, food and drinks. The sales reported by the companies during the rally were FIM 22 million higher than normal times. The average extra sales achieved by the companies which replied were FIM 100,000 over the two weeks around the event. The Rally employed 80 persons directly and 180-230 indirectly. Kurtzman (2005) admired the Finnish talent for their innovations in attracting tourists to Finland and commented that we have earlier noted unique games as one aspect of sports tourism; the creation of Ice Golf and Snow Ball Fighting Championship in Finland were some concrete examples of the uniqueness of sports tourism activities in Finland.

### 3.6.3 Sport consumption

Sport consumption is not sport industry's segments but the issues related to consumers like consumption behaviors, consumer numbers and their spending, their purchasing power and other related topics are the prime concern of the industry. Edwards (1981) analyzed all aspects of recreation spending in the European Community and found that expenditure related to participant sports had been one of the fastest growing areas of leisure expenditure throughout the European Economic Community. Vuori et al. (1995) pointed out that public expenditure on sport amounts to between 0.18% and 0.61% of the GDP of the studied European countries. Depending on the country, the total financing of sport is from 0.56% up to 3.47% of the GDP. The results differ in detail but in most countries, almost 2% of the overall consumer expenses categorized as sport-related.

Ahlert (2001) noted that the German citizens spent almost 40.6 billion DM on sport in 1998. This is nearly 1.9% of the overall household consumption. General government with its regional administrative bodies (federal, state and local governments) provided nearly 11.5 billion DM for sport, free of charge for their citizens. This means that 1.5% of the overall consumption of general government allocated to sport. Ramwell (2004) pointed out that sport related expenditure accounts for £13 billion of consumer expenditure in the UK, with over 435,000 individuals in sport-related employment. Takala (1995) pointed out that the researches on consumption in Finland based their studies entirely on the consumption function approach. Viitanen (2004) pointed out that the total private consumption expenditure form over half of the GDP. Therefore, to explain the economic fluctuations, it is important to understand the fluctuations in (aggregate) private consumption expenditures.

Kotro et al. (2005) pointed out that four groups of activities seem to dominate the leisure consumption cluster in terms of increasing time use in Finland. After television, radio and reading (books, newspaper and magazines), doing

things around the home, the third group, sports and outdoor activities take up about half an hour of Finnish population time-use. Huhtala (2004) suggested that basic services in Finnish national parks and state-owned recreation arenas traditionally financed by public and was free of charge for users. Since the benefits of public recreation not captured by market demand, government spending on recreation services must be motivated in some other way. Seppänen et al. (1989) argued that the main source of sports finance in Finland has traditionally been the extensive voluntary work of local sport clubs. The role of government support, however, greatly expanded during recent decades.

Trail et al. (2008) suggested that there were significant and meaningful differences by gender in sport consumption behavior. Males perceived that the opportunity for other sport entertainment, and lack of team success, were greater constraints to attending games than females. Females felt that poor weather was a bigger constraint than males. Kotro et al. (Kotro et al., 2005) commented that there are also still significant differences between men and women in spending on sports and physical activities in Finland: women spent an average of about €180–200 per year and men, about € 220–190. Women also spent their money more on services such as fitness, dance and riding classes, camps and clothing, whereas men spent more money on sports equipment, footwear, travel and tickets to sports events.

Barros (2006) estimated the willingness to pay for a sporting event, the Euro 2004 Soccer Championships in Portugal. He concluded that there was a small proportion of the population, who prepared to pay for the event, due to low household income. The results give rise to the conclusion that the Euro 2004 is not a Pareto improvement of the public good, since the aggregated willingness-to-pay is lower than the estimated total costs. Won and Kitamura (2007) found out that Koreans were significantly higher in motivation related to family, player and drama where Japanese were significantly higher in motivation related to the sport (physical skill, entertainment and team identification. Ferson and Constantinides (1991) argued that there are internal and external effects in consumption. The internal effect means that the consumer's own consumption history, namely, habit persistence and durability of durables, affects as a substance level to his present consumption expenditures. The external effect says that the consumer is envious and has some reference consumption level to which he relates his own consumption.

#### **3.6.4 Sport participation**

Sport participation same as sport consumption is not sport industry segment but its related issues considered important factors in the industry. Participation in outdoor, indoor activities, sport events and in voluntary sport activities play significant role in the industry. According to European Commission (2004), the rate of those who reported no vigorous physical activity in the last 7 days in member states ranged from a low of 43.3% in the Netherlands to a high of 71.7% in Spain. Lower than average rates of non-participation in vigorous physical activity in the past week reported in Germany (45.2%), Luxembourg (51.3%),

and Finland (51.4%). In Finland (27.7%), the Netherlands (25.8%), Luxemburg (23.8%), and Sweden (23.5%) more than 23% of the populations reported bouts of less than 60 minutes when they were engaged in vigorous physical activity. The lowest rates of non-participation in moderate physical activity in the last 7 days found in the Netherlands by 7.5%, Portugal 26.2%, Germany 28.6%, Denmark 30.6%, Luxembourg 33.9% and Finland 35.9%. Highest rates of non-participation reported in France (52.8%), Spain (51.3%), and Italy (50%).

Euro barometer (2004) revealed that EU citizens watch television and surf the Internet more often than they do sports. The organization reported that 88% of EU citizens watch television 3 times a week or more and 19% of them surf the Internet regularly. The sport comes third with 15% just before the video games (6%) and cultural activities (4%). Euro barometer concluded that Northern Europeans tend to do more sport than the South, 70% of Finnish and Swedish, 53% of Danish, 47% of Irish and 43% of Netherlands population participate in sport at least once a week, while, the rate is only 19% in Greece, 22% in Portugal, 31% in Italy and 32% in France and Spain. Finns, Swedes and Austrians are among the EU citizens, which their participation in sports not regulated in where to do sports. The Greeks and Spaniards are more likely interested to make sport in a fitness center (38% and 31% respectively). In the Netherlands and Italy, it is rather in a club (43%) and (30%) respectively.

The European Commission (Eurobarometer, 2004) suggested that the level of physical activity performed by the respondents varies very sharply from one country to another in Europe. Only 3% of citizens in Bulgaria, 4% of Italians and 5% of Greeks declared that they had performed a lot of physical activity by way of sport, recreational or leisure activities over the last 7 days, while the corresponding percentage is around a quarter or respondents in Luxembourg 26%, in Finland 24% and Germany 24%. Ramwell (2004) pointed out that in Britain sports participation rates have remained low and relatively stable over the last 30 years despite significant investment. Only 46% of the population participated in sport more than 12 times a year compared to 70% in Sweden and almost 80% in Finland. When this definition widened to cover all physical activity the contrast is just as stark with only 32% of adults in England taking 30 minutes of moderate exercise five times a week compared to 70% of Finns. Ruuskanen (2004) commented that of total amount of leisure both genders spend greater part was on active leisure. However, leisure activities have not changed solely towards passive forms of leisure. Interestingly, the time used for sports and outdoor activities has increased during 1990's.

Sievänen et al. (2003) indicated that almost half of the Finnish population participates in boating annually and many have an access to a boat on a regular basis. In her study, the boaters classified into five groups: boaters using a rowing boat, a small motorboat, a canoe or a kayak, a large motor boat with beds and a large sailing boat with beds. Helakorpi et al. (2005) also indicated that one in ten Finnish adults do physical exercise every day, and almost half do some exercise at least twice a week. According to Sievänen et al. (Sievänen, Pouta, & Kopperoinen, 2000), 96% of Finns have participated in outdoor recreation dur-



ing the previous 12-month period in 87 activities, which 94% were close to home visits and 40% consisted of nature trips. Kotro et al. (2005) indicated that the most popular outdoor activities include walking, swimming in natural waters, spending time at the summer cottage, picking berries, biking, fishing, boating, picking mushrooms and tanning on the beach.

According to Korhonen et al. (2008), 97% of Finnish urban and 95% of Finnish rural population participate in outdoor recreation. They pointed out that future outdoor recreation changes with younger generations: as harvesting activities are declining among both rural and urban younger generations and activities related to pure enjoyment are increasing. They suggested that motorized activities are increasing and differences in participation among urban and rural younger generations relate to available recreational opportunities, and differences still exist. Telama et al. (1994) pointed out that among young women (24 and 27 years of age) in Finland, physical activity is more common than it is among men. Girls have stepped up their participation in organized sport during the past decade. The best predictors are the school grade for physical education and participation in organized sport. Children's physical activity correlates with the social status of the family and the parents' interest in physical activity as well as the environment in which the subjects live.

Veal (2005) suggests two ways of measuring participation by using General Household Survey Data. The most common measure is 'Participation Rate', the proportion of the population that participates in a given time period. This is easy enough to calculate as the total number recording participation in the activity over the total number of adults responding to the question. However, he prefers the alternative, the engagements per 1,000 adult populations per annum. Thus, the engagements measure is a better indicator of quantity demanded since it combines both aspects of demand, participation and its frequency.

Cicchetti et al. (1969) used regression analysis, to obtain statistical estimates of the demand model. They used a two-step procedure in their regression analysis. In the first step, the dependent variable is one if the individual participates and zero if he, or she, does not. This equation then allows the estimation of the conditional probability of participation. The second step is an equation where the dependent variable is the number of days of participation for those who did participate. To complete such regression model though, we need to establish which explanatory variables to include on the right-hand side. Humphreys and Ruseski (2006) examined the economic determinants of participation in physical activity by developing and analyzing a consumer choice model of participation and concluded that the economic factors that affect these two decisions work in opposite directions; factors that increase the likelihood of participation generally decrease the amount of time spent in participating.

### 3.6.5 Sport sponsorship

Sponsorships of sport events, clubs, teams, professional athletes and sport organizations are one of the major topics in the sport industry. Walliser (2003) argued that sponsorship clearly understood as a communications instrument

and is therefore, considered a commercial investment. While sports and arts remain the most important areas, social and environmental sponsorship have gained in importance. Major advances made over the past six years concerning the evaluation of sponsorship effects and strategic sponsorship management, but the most positive development of all may be the shift towards a better understanding of sponsorship perception by the final receiver.

McCarville and Copeland (1994) pointed out that public, not-for-profit, and private sector sport groups are increasingly exploring innovative means of generating funds. Sponsorship represents one promising revenue alternative. It suggested that partners choose sponsorship opportunities that offer the most valued rewards with the greatest probability of success and those past successes may dictate future sponsorship decisions. According to Kurtzman (2005) sport is a multi-billion dollar industry and has become a dominant and defining force in the lives of millions of persons globally; to some extent it is considered to be universally compelling. An example of its value is the fact that global sports sponsorship has reached \$20 billion.

Corporate sponsorship is growing in importance as an element of the communications mix. The number of companies participating in sponsorship, as well as corporate expenditures for sponsoring events, is on the rise as organizations seek new ways to reach audiences and enhance their image (Javalgi, Traylor, Gross, & Lampman, 1994). Amis et al. (1999) suggested that it is important not to regard sponsorship as being a unidimensional purveyor of an association between the sponsor and the sponsored. The ways of exploiting the relationship are in limitation only by a manager's imagination. Nike, for example, a company, which grew rapidly during the 1970s but by 1984 its market share, was declining, turned to a young basketball player on the verge of turning professional during his senior year at North Carolina State University. He concluded that customer value will likely increase, temporarily, if a firm or brand is associated with a celebrity endorser, individual, team, or event, which appeals to the firm's target market. Mitre and Ordonez (2009) noted that the prominent brands sponsor the most important sports clubs and form a strategic alliance to achieve results in cooperation that is mutually beneficial for both sides. In an interview with Robinson (2008), Rick Burton, Chief marketing officer of US Olympic Committee, comments on the battlegrounds in UEFA and Beijing summer Olympic Games among official sponsors, ambush marketers and rogue marketers in sports in UEFA and IOC. The top-level sponsors like Kodak, Lenovo, Johnson and Johnson, Budweiser are concerned about the challenges of the new comers.

Farrelly et al. (1997) revealed that 63.9% of North American companies and 41.3% of Australian companies had been involved in sports sponsorship for more than ten years and that 22.2% of North American companies and 25% of Australian companies had been involved in it for a period of five to ten years. Of the Australian respondents, 13.8% of companies had less than two years experiences in sports sponsorship, while none of the North American respondents indicated experience of less than two years. Copeland (1996) found that Cana-

dian Corporations with advertising budgets in excess of \$50,000 CDN, valued sport sponsorship as an important form of marketing communication but supplemented sponsorship initiatives with a variety of other communication measures.

Itkonen et al (2009) noted that in Finland, the private sectors have risen to an important position in sport sponsorship, in addition to voluntary work and public administration. They reported that two out of three Finnish companies practice sponsoring and sports are the most favored target of sponsorship. Team sports receive the most sponsoring and doping viewed the greatest threat to sport sponsoring. Olkkonen (2001) noticed that in 1998, Nokia Mobile Phones and International Ski Federation signed a three-year sponsorship agreement, after which NMP became the title sponsor for the FIS Snowboard World Cup. Nokia Mobile Phones is a part of the global Nokia Corporation headquartered in Finland. FIS is the body governing the different winter sports disciplines. In addition to international snowboard competitions, FIS also governs international alpine skiing, Nordic skiing (cross-country, ski jumping, Nordic combined) and freestyle competitions which rang races for beginners and Olympic Game.

### 3.6.6 Sport clubs

There are considerable numbers of sport clubs all around world. Some of them are internationally well known for not only in popular sports but also for their outstanding economic performances. Meanwhile here in Finland, Tervo (2002) believed that sport gained an important social and political role, as it became a tool for convincing the world of the civilized and developed state of the Finnish nation. Seppänen et al. (1989) argued that the origin of modern sports in Finland dates back to the second half of the last century, when the first sports clubs founded. Chaker (1999) indicated that in Finland, physical education was one of the core subjects in the first basic education programs in the mid-1980s. The first sport clubs established in 1860, and the first sport organizations began their activities at the end of the nineteenth century. Richardson (2007) argued that after the civil war many Finns only undertook sporting activities among those with whom they shared an ideology. Most of the Finnish sport club's names come from their location and their political orientation and most of the Finnish clubs formed in the inter-war years, when national identity formed and the scars of the civil war were slow to heal. Sport clubs and sport associations like Valo, Koskenpojat, Kotkan Työväen Palloilijat, FC Haka, TUL, Keuruu, MyPa, KeuTo, TamU and Jaro are some examples. Moreover, Koski (1999) indicated that in Finland sports club activities have a dominant position in the leisure-time activities of adults, children and adolescents. Approximately 40% of children and adolescents participate in sports club activities. The Finnish sports system consists of 38 national level sports and physical activity organizations, 75 sports federations and 6000–7800 sport clubs.

Three environmental factors are the basic importance in the case of Finnish society: Northern location, Geo-political position and Scandinavian cultural heritage. The roots of Finnish sports are in the natural conditions of the country: long and cold winter for winter sports and hunting, the numerous lakes and sea and the long coastline for fishing, boating and rowing (Seppänen et al., 1989). Finland has adopted a non-interventionist sports legislation model supported by a basic law on sport. The sport act in 1979 establishes the state's "funding jurisdiction" over sport and sets out the basic government structure and responsibilities for sport. The sphere of activity of each level of government (national, regional and municipal) outlined in the act. The government presented a new sport act to parliament in early 1998, which redefines some of the funding responsibilities within the Ministry of Education (Chaker, 1999).

Kalevi Kivistö, the Ministry of Education's director general in Finland in an interview with Wuolio (2003) pointed out that competitive sports constitute Finland's broadest popular movement. The country has 7800 sports clubs, with more than a million members. Eight hundred athletes in Finland earn their primary income from competitive sports. Six hundred of them are Finns. The number of semiprofessionals is at 700. A total of 200 clubs or businesses pay the athletes' salaries. Kokko et al. (2006) pointed out that Finnish sports clubs have both obligations and opportunities. The main obligation arises of the financial support that sports federations and clubs receive from the state and municipalities. As compensation for such financial support, the public administration can expect that sports federations and clubs participate in health promotion.

### 3.6.7 Sport employments

Employment is one of the contributions, which sport industry offers to the national economy. Davies (2002) commented in Europe, while there has been a growth in literature relating to the specific economic impacts of sports-led development, including professional sports facilities, teams and sports events, limited research has been undertaken on the contribution of the whole sports sector to output and employment. According to Madella (2003) data on sports employment are sparse in most European countries, being limited to one or two categories of national labor force surveys, and being combined in broad categories. The European Observatory on Sports Employment (EOSE), set up in 1996, seeks to improve this situation for both research and policy purposes.

Shank and Lyberger (2014) suggested that another way to explore the growth of sport industry is to look at the number of the people the industry employs. The Sports Market Place Registry, an industry directory, has more than 24,000 listings for sport people and organizations. According to him, a USA Today report estimates that there are 4.5 million sport related jobs in marketing, entrepreneurship, administration, representation, and media. In addition to the United States, The United Kingdom employs some 400,000 people in their \$ 6 billion a year sport industry. Theodoraki (1999) pointed out that an element of the growth in service-sector is the growth in sport-related employ-

ment, estimated by the Sport Council in 1993 as 467,000 representing a growth rate since 1985 of 22.4%.

Ahlert (2001) noted that through the sport-related activities covered in the input and output table of sport in Germany, more than 783,000 people, or 2.4% of all employees, employed in the category of sports in 1998. Noll (2006) emphasized that in 2002 in United States of America there were 40,000 people employed by sport teams, 441,000 by fitness centers, 82,000 by bowling alleys and 311,000 by golf courses. Camy (2006) estimated that 7,951,282 were employed in sport sectors in EU which was 8.7% of total population. In Finland the figure reached to 11,290 which comprised 0.44% of Finnish population. The rate was 7,516 in 1990 which declined to 6,967 in 1998 in Finland and declined by -7%. The part-time employment in the sports sector in Finland was 1,400 in 1990 while it declined to 1,200 in 1998. According to this study, the number of women in the sports sector in Finland in 1998 was 3,800 which were 54.8% of total employment in sport sector. The number of self-employed workers in the sports sector in Finland was 800 in 1990 which increased to 1,200 in 1998.

Kannus and Parkkari (2000) pointed out that Finland has six sports and exercise medicine research centers funded by the Ministry of Education. Each has a staff of between five and eight full time workers and a varying number of part time workers such as consulting doctors. Today, Finland has over 40 doctors who specialize in sports and exercise medicine, working in universities, research centers, sports institutes, health centers, private clinics, and the Finnish army.

Mules and Dwyer (2005) argued that sport events are not likely to generate lasting employment effects because of their 'one off' or short-term nature. Employment multipliers based on input-output tables tend to exaggerate the amount of employment generated. Coates and Humphreys (2003) results' suggested that professional sports has a small positive effect on earnings per employee in the amusements and recreation sector, but that this positive effect is offset by a decrease in both earnings and employment in other sectors of the economy. Hagn and Maennig (2008) argued that our estimates, on the bases of four different estimation approaches, conclude that the 1974 Football World Cup held in Germany was not able, neither in the short nor in the long term, to generate employment effects in the host cities that were significantly positively different from zero.

### **3.6.8 Sport volunteers**

The voluntary sector has been widely recognized important to society, the economy and perhaps most importantly to individuals. Voluntary sport organizations provide ample opportunity for people to engage in volunteering and to contribute to a valuable sector of the sport management field (Byers, 2009). Angermann and Sittermann (2010) argued that volunteering is perceived as playing an important role in a good number of areas, which logically include solidarity and humanitarian aid, but also social life, health, education and the environment. There are multiple perceived benefits of volunteering: it is seen to

benefit society as a whole (strengthening social cohesion, promoting the values of solidarity within the EU) as well as the individual (personal development and fulfilment of volunteer workers, professional development). Australian sport commission (2011) outlined that volunteers support almost every part of the sporting pathway in roles as diverse as coaches, officials, team managers, administrators, board and committee members, with many individuals filling multiple roles. Volunteer coaches and officials are critical to ensuring a strong development pathway, one that supports the progress of our future champions from grassroots to high performance, by allowing them to develop the skills and confidence required to achieve success.

European council has defined volunteering as referring to “all types of voluntary activity, whether formal, non-formal or informal which are undertaken of a person’s own free will, choice and motivation, and is without concern for financial gain” (The European Council, 2015a). Finnish volunteering agency Citizen Forum has defined volunteering as “all activity carried out for the public good, which is based on civic movement and voluntary action and is not paid for” (The European Council, 2015b). Itkonen, Ilmanen and Matilainen (2009) commented that from the historical point of view, in Finland the market and media oriented sports culture is a new phenomenon. Even though athletes have received monetary rewards since the 19th century, most of the Finnish sports culture has leaned on the principals of amateurism and volunteerism. This Scandinavian model of voluntarism has had its effects on the national sports culture, as a large portion of sports activities are still organized using volunteers in Finland. The work in sports clubs by civic voluntary workers is still the basis on which even the professional sports culture is built on. Purohaho (2007) commented that the special features of Finnish sport culture, as well as Finnish football, are active volunteers, non-profit sports clubs and higher demand than supply in sport clubs.

Van Bottenburg et al. (2005) noted that volunteering is in no field as extensive in Dutch society as in sport, 12% as a percentage of total population in 2002 were volunteers in sport. Seippel (2002) noted that the empirical results in Norway show that voluntary work still is the foundation of most sport organizations, but that there are large differences between various types of organizations, and that voluntary work functions in complex interaction with other important economic and structural features of these organizations. Angermann and Sittermann (2010) commented that involvement in volunteering is very widespread in the Netherlands, where more than half the respondents carry out a voluntary activity (57%), 31% on a regular basis. This is also the case in Denmark (43%, 21% on a regular basis). More than one-third of respondents are involved in a voluntary activity in Finland (39%), Austria (37%), Luxembourg (35%), Germany (34%) and Slovenia (34%).

Australian sport commission (2011) commented that the economic assessment of volunteering has typically focused on quantifying the market replacement cost of volunteers. However, such analysis does not distinguish costs from benefits, the economy-wide impact of volunteering, or the effects of volun-

teering on less tangible community outcomes such as productivity and individual wellbeing. Cuskelly et al. (2004) noted that the dependability of volunteers in completing work assignments can impact upon the financial and operational success of major sport events and presents a significant challenge for event organizers. Surujlal and Dhurup (2008) commented that volunteers from an integral part of the sport industry. The operation and financial success of many major sport events is highly dependent on the benevolent contribution of volunteers. The present study used production approach to study the production value of the sport related enterprises in Finland and the economic value of volunteers included in the enterprises production outputs. However, further research can be conducted to identify the economic values of sport volunteers in country level as in Finland.

## **4 RESULTS OF THE RESEARCH**

The author arranged the structure of the result chapter in accordance with the order of study's objectives. The results in enterprises precedes other objectives as they are the basic units of the production, employment, and responsible for other economic activities. The results in employment, industrial output, exports, imports, taxes on production, value added, GDP, and supply and consumption will follow to make consistent steps towards study's purposes.

### **4.1 Structure of sport industrial sectors in Finland**

The research attempt to find the active numbers of sport related enterprises among all enterprises in Finland's enterprises registration data resulted in finding the number of different industrial classes perusing economic activities in sport areas in Finland. The author categorizes them according to their related sectors and presents the structure of sport industry as: 1) Manufacturing of sport apparel, 2) Manufacturing of sport footwear, 3) Manufacturing of sport weapons and ammunition, 4) Building and repairing of pleasure and sporting boats, 5) Manufacture of bicycles, 6) Manufacturing of sport aircraft equipment, 7) Manufacturing of other sport transport equipment, 8) Manufacture of sports goods and 9) Manufacturing of toys and games were in manufacturing. While, the 10) Wholesale trade services of sports goods, including bicycles, 11) Retail trade services of sports goods, including bicycles, 12) Renting of sports equipment, 13) Sport education, 14) Operation of sports arenas and stadiums, 15) Other sporting activities, and 16) Sport construction were in services.

Some of these sectors in manufacturing appeared to be active in production, exports, imports and employment while some such as the manufacturing of sport aircraft equipment and manufacturing of games and toys did not offer any data in production and employment while they were active in imports. Some, due to the types of their businesses didn't get involve in imports and exports for instance rental services of sport goods, retail and wholesale trade of



sporting goods, operation of arenas and stadiums, sport education and sport construction.

## 4.2 Developments in the number of sport enterprises from 2002 until 2011

From the 16 industrial sectors of sport, 6 sectors (the manufacturing of sport apparel, manufacturing of sport footwear, manufacturing of sport weapons and ammunition, manufacturing of sport aircraft equipment and manufacturing of toys and games in manufacturing sector, and sport construction in sport services) did not present data concerning enterprises. Meanwhile, our data covers four sectors in manufacturing as building and repairing of pleasure and sporting boats, manufacture of bicycles, manufacturing of other sport transport equipment and manufacture of sports goods. In addition, six sectors as wholesale trade services of sports goods, including bicycles, retail trade services of sports goods, including bicycles, renting of sports equipment, ballrooms and dance instructors' services (sport education), operation of sports arenas and stadiums and other sporting activities sector constitute sport services. Our results of 10 years investigation about the aggregate number of sport enterprises in different industrial sectors in Finland presented in Table 1 from 2002 until 2011.

TABLE 1 Aggregate number of sport enterprises in industrial sectors

Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1. The manufacturing of sporting boats	410	428	423	423	441	516	517	515	506	500
2. The sporting goods manufacturing	150	150	154	154	156	165	160	145	142	140
3. Other sport transport equipment	14	12	10	11	14	14	16	14	15	15
4. Manufacturing of bicycles	5	4	4	3	5	12	12	13	11	12
5. Wholesale trade services of sport goods	354	361	355	371	384	388	392	383	371	377
6. Retail services of sport goods	959	963	946	993	1002	1153	1177	1199	1159	1146
7. Renting of sports equipment	59	60	60	59	62	66	59	59	63	58
8. Ballrooms and dance instructors'	241	253	252	261	280	281	340	381	424	476
9. Operation of sport arenas and stadiums	588	596	615	634	638	700	1102	988	1005	1048
10. Other sporting services	1172	1263	1308	1341	1466	1611	1319	1453	1481	1545
Aggregate number of sport enterprises	3952	4090	4127	4250	4448	4906	5094	5150	5177	5317

However the highest increases happened in 2007 while the increases soared to 10.2% increases over previous year and 11.4% increases over 2002, while the lowest increases was in 2010 by 27 enterprises.

The study found that the highest number of sport enterprises was in other sporting activities sector in 2002, which also had the highest number in 2011 while the retail trade services of sport goods was the second by in 2002 and 2011. The operation of sports arenas and stadiums sector was the third largest while the manufacturing of building and repairing of sport had the fourth highest enterprises in industry although it had the highest enterprises among manufacturing sectors. The wholesale trade services of sport goods was the fifth biggest sector, and the ballrooms and dance instructors' sector, which in classification 2008 titled as sport education was in sixth place while the seventh place and eighth place allocated to manufacturing of sporting goods and renting of sports equipment respectively. The other sport transport equipment was in ninth place while the manufacturing of bicycles was the smallest sector in this regard.

The opening and closure of new enterprises resulted in the creation of 460 new enterprises in the sector of operation of sport arenas and stadium, which become the most attractive sector for entrepreneurs in business activities of sport in the country from 2002 until 2011. The other sporting services sector attracted 373 new enterprises in the industry while sport education enticed 235 new enterprises in the third place. Retail service of sporting goods kept 187 newcomers while the manufacturing of sport boats got 90 additional enterprises during these ten years. There were 23 additional enterprises in wholesale trade of sporting goods while manufacturing of bicycles added 7 more enterprises to their manufacturing groups during these ten years. The eighth most attractive sector by only one additional enterprise was other sport transport equipment manufacturing while the opening and closure of enterprises in renting of sport equipment and manufacturing of sport goods resulted to losing one enterprise in renting and 10 enterprises in sporting goods manufacturing from 2002 until 2011.

#### **4.2.1 Developments of enterprises in sport manufacturing and service sectors**

One of the evidences in the evolution of the sport industry, structural changes from manufacturing towards services, which the author has introduced in study's second hypotheses, may be supported here, from analyzing the increases in the number of sport enterprises in services compared to the manufacturing.

There were 3,952 sport related enterprises in both sport manufacturing and sport services in Finland in 2002. Sport services comprised 3,373 enterprises, already 5.8 folds larger than sport related manufacturing which had 579. The number of enterprises in industry was growing averagely by 3.8% per year, but the increases in manufacturing was about 1% by average during these ten years, while in service sectors it was about 3%. Despite the sharp increases in 2007 by about 12% in manufacturing over 2006, the sector faced slight decreases from

2009 until 2011 while the services sectors revealed steady increases during all years of the study. Our results in aggregate number of sport enterprises in both manufacturing and services indicate that there is a shift of concentration or a trend in the increases of the number of enterprises in service sectors, and more increases in services is going to turn sport industry to more service direction rather than manufacturing. We may evidence that the overall share of the manufacturing of sport enterprises was 14% during these ten years while it was 15% in 2002 and 2003, which decreased to 14% in 2004, 2005, 2006 and 2007, and continued to decrease to 13% in 2008, 2009, 2010 and 2011.

#### **4.2.2 The share of sport enterprises in total number of enterprises in national level**

There were a total of 294,325 corporate enterprises and personal businesses in Finland in 2002 of which 3,952 enterprises were involved in sport businesses. The total sport related enterprises shared 1.4% of the total aggregate number of Finland's corporate and personal businesses in 2002. In 2011 the total number of enterprises in Finland increased to 322,232 of which 5,317 were involved in sport related manufacturing and services, and the sport related enterprises shared 1.7% of total aggregate of Finnish enterprises in this year. The overall average share of sport enterprises in total number of enterprises in the country was 1.5% during these ten years where it revealed increases from 1.4% in 2002 to 1.7% in 2011.

### **4.3 Employment and its developments in the sport industry**

The search for employment resulted in finding direct number of employment in sport enterprises in 10 industrial classes and indirect number of employment in 5 sectors by applying input-output tables. Table 2 and 3 present employments in Finnish sport enterprises from 2002 until 2011.

TABLE 2 Number of direct employment in industrial sector of sport industry in Finland

Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Building of sporting boats	2184	2254	2301	2549	2820	3431	3608	2614	2629	2502
The sporting goods manufacturing	1229	1214	1265	1217	1166	1028	971	873	909	903
The other sport transport equipment	76	73	71	72	296	169	160	151	144	145
Manufacturing of bicycles	295	284	272	107	157	113	116	108	83	78
Wholesale trade services of sport goods	889	904	1087	1156	1193	1134	1125	1087	1057	1097
Retail services of sport goods	2836	2762	2893	3001	3231	3972	3814	3890	3925	4123
Renting of sports equipment	89	88	133	130	132	116	70	61	68	78
Ballrooms and dance instructors	346	375	408	421	452	655	597	674	725	820
Operation of sport arenas and stadiums	2212	2315	2524	2692	3063	5300	4628	4911	5137	5487
Other sporting services	1697	2204	2329	2502	2710	811	1565	1605	1631	1806
Direct number of employment	11853	12473	13283	13847	15220	16729	16654	15974	16308	17039

In spite of the above sectors that presented their number of employment directly, there were also production activities in five sectors of manufacturing which their employment were not presented but they had production values therefore the study applied input-output tables to estimate their possible employees according to their production outputs. Table 3 presents the indirect number of employment in five manufacturing sectors from 2002 until 2011.

TABLE 3 Aggregate number of indirect employment in sport sector in Finland

Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Manufacturing of sport apparel	652	370	315	200	139	118	106	78	95	117
Manufacturing sport footwear	121	43	37	1	1	1	1	1	1	0
Manufacturing of sport Ammunition	147	148	155	181	147	124	179	256	284	225
Manufacturing of sport related motor vehicles, trailers and semi-..	467	588	365	551	521	506	603	522	742	112
Sport construction	327	323	322	345	348	321	117	130	520	180
Indirect number of employment	1714	1472	1194	1278	1156	1070	1006	987	1642	634

### 4.3.1 The share of industrial sectors in aggregate employment of sport sector

The results indicated that the operation of sport arenas and stadiums was the biggest sector in offering employment among industrial sectors of sport. The sector averagely gained 24% of share per year during these ten years and its share increased from 16% in 2002 to 31% in 2011. The second biggest sector, the retail services of sport goods shared 21% of total employment in this regard as its share increased from 21% in 2002 to 23% in 2011. The manufacturing of building and repairing of pleasure and sport boats was the third by 17% while its share decreased from 16% in 2002 to 14% in 2011. The fourth biggest sector was other sporting services sector by 12% while its share decreased from 12% in 2002 to 10% in 2011.

The fifth sector with highest employment was the sporting goods manufacturing by 7% while its share decreased from 9% in 2002 to 5% in 2011. Wholesale trade of sport goods by 7% was the sixth biggest which its share declined from 7% in 2002 to 6% in 2001, followed by the ballrooms and dance instructors' which later changed its title to sport education in seventh place by 3% while its share increased from 3% in 2002 to 5% in 2011. The manufacturing of sport related motor vehicles was in eighth place by 3% although its share declined from 3% in 2002 to just 1% in 2011. Sport construction became the ninth sector in this regard and its share of total employment among sport sectors during these ten years was 2%.

The tenth, eleventh, twelfth and thirteenth highest employment were allocated to the manufacturing of sport ammunition, manufacturing of sport apparel, sport transport equipment and the manufacturing of bicycle by 1% for each sector respectively. The manufacturing of sport weapons and ammunition shared 1% of total employment in sport sectors from 2002 until 2007, and although its share increased to 2% in 2008 and 2010 but declined to 1% again in 2011. The manufacturing of sport apparel lost 5% and 3% of its share in 2002 and 2003 to 0% and 1% in 2010 and 2011 respectively. The manufacturing of bicycles faced declination of its 2% shares in 2002 and 2003 to 0% and 1% in 2010 and 2011 respectively. On the other hand, the manufacturing of other sport transport equipment, which shared 1% of total employment in 2002 and 0% in 2003, 2004 and 2005, improved its shares to 1% in the following years of the study. The renting of sport equipment was fourteen as it lost its 1% share of employment in sport in 2002, 2003, 2004 and 2005 to 0% in the following years. The sport footwear become the smallest sector for employment among sport sectors and lost its 1% share in 2002 to 0% in all other 9 years of the study.

### 4.3.2 The developments of employment in manufacturing and services sectors

The fifteen sectors of sport offered all together 13,567 jobs in 2002 where seven sport services sectors produced 8,396 and 8 sport manufacturing sectors provided 5,171 jobs in 2002, indicating that 62% of this employment produced by service sectors and 38% by sport manufacturing. The service sectors increased

its employment by 575 employees in 2003 and reached to 8,971 while the manufacturing lost 197 jobs, which caused the share of service sectors to advance to 64% and the manufacturing to decline to 36%. The manufacturing faced decreases again in 2004 by 193 jobs and its employment declined from 4,974 in 2003 to 4,781 while the service sectors employed 725 more and raised their employees to 9,696 improving their share to 67% where the share of manufacturing declined to 33%.

The aggregate employment reached to 15,125 in all sport sector in 2005 of which 10,247 was devoted to service sectors and 4,878 to manufacturing sectors. The number of employment increased by 551 in service sector and its share reached to 68% while the employment in manufacturing increased by 97 although its share decreased to 32%. Both manufacturing and service sectors faced increases in 2006. The services sectors increased their employment by 882 employees in this year and the number of employment reached to 11,129 persons and shared 68% of total employment in sport sectors while the manufacturing sectors increased their employment by 369 jobs and reached to 5,247 and shared 32% of total employment of sport.

The biggest increases in the aggregate number of employment in sport sectors happened in 2007 by 1,423 employees. Of which the service sectors improved their employment by 1,180 and raised their employment to 12,309 and shared 69% of total employment in sport sector, while the manufacturing sector faced increases by 243 and reached to 5,490 and shared 31% of total employment. The line of increases in sport sector interrupted in 2008 and the industry faced decreases by 139 jobs, although there were increases by 254 employees in manufacturing sectors and the number employment rose to 5,744, the service sectors lost 393 jobs and declined their employment to 11,916. The manufacturing sectors improved their share in the industry to 33% while the service sectors share declined to 67%.

The biggest drop in employment in sport sectors happened in 2009. The industry lost 699 jobs in this year although the service sectors had increases by 442 and increased their employees to 12,358, the manufacturing sectors faced the biggest decline during these ten years of study by 1,141 persons and their employment decreased to 4,603. The sharp decreases in manufacturing sectors caused the share of manufacturing in the industry to fall to 27% and raised the services sectors share to 73%. Both manufacturing and service sectors experienced increases in 2010. The service sectors of sport by 705 increases raised its employment number to 12,358 and claimed again 73% of total employment in sport while manufacturing sectors raised their employment number by 284 and reached to 4,887 gaining again 27% share of total employment. The industry lost 277 employees in 2011 and its aggregate number of employment declined from 17,950 in 2010 to 17,623. Despite of lose in industry, the services sector increased their number of employment by 528 and raised their number from 13,063 in 2010 to 13,591 in 2011 but the loss of 805 jobs in manufacturing caused the industry's decline. The increases in the number of employment in service sectors made the share of this sector to rise to 77% and to fall the manufacturing share

to 23%. Figure 2 presents the developments in employment in sport manufacturing and service sectors in Finland from 2002 until 2011.

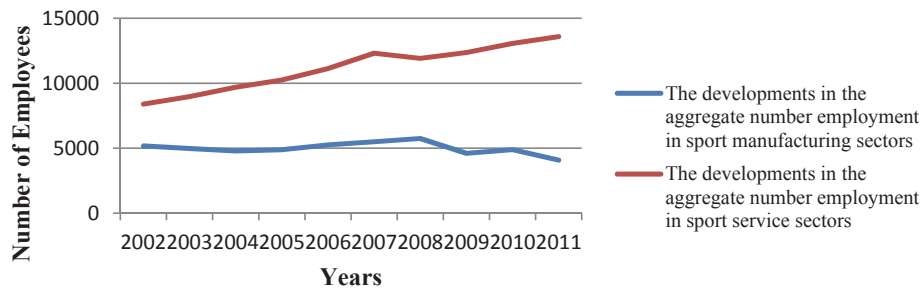


FIGURE 2 Developments in aggregate number employment in sport manufacturing and service sectors in Finland, 2002-2011

The results of the shares of sport manufacturing and service sectors also indicated that the second hypothesis of the study where the study claimed that there is a shift from manufacturing towards more services in Finland was supported.

Despite nominal increases in the number employment, and the share of manufacturing and services sectors, it is better to mention that the size of service sectors also increased from 1.8 folds in 2002 to over two folds in rest of the study and become 3.3 folds larger over manufacturing sector in 2011. The growth rate also indicated that the service sectors except the year 2008 was growing over industry growth rate, while manufacturing growth line except the year 2008 and 2010 was advancing under the industry's growth rate, indicating that in fact it is the service sector which is the driving force behind industry developments. Meanwhile, the operation of sport arenas and stadiums was the most attractive sector for labor among sport related sectors from 2002 until 2011 in Finland as it employed 3,275 employees. The sector averagely employed 364 per year during these ten years and its highest employment happened in 2007 while it attracted 2,237. Its biggest drop happened in 2008 when the sector lost 627 of its labor. The second attractive sector in this regard was the retail sector of sporting goods, which was averagely offering 143 job opportunities for labor. It gained 1,287 additional employees during these ten years and its peak was in 2007 while it employed 741 employees and its highest loss happened in 2008 when 158 employees left the sector. Sport education was the third sector, which added 474 employees to its labor. The sector's best year was 2007 where it offered 203 jobs and average employment in the sector was 53 personnel per year.

The manufacturing of pleasure and sport boats was the fourth biggest among 15 sport sectors, but the first among manufacturing sectors. It added 318 personnel to its labor during these ten years and the sector's best year was 2007 while it offered 611 jobs to labor market and the biggest loss happened in 2009 where 994 jobs vanished in the sector. The wholesale of sport goods was the

fifth biggest sector for employment where it added 208 more employees to its labor by average employment of 23 employees per year. Following the top five, other sporting service sector became the sixth most attractive sector for employment in sport, where it added 109 more employees to its labor. The manufacturing of sport guns and ammunition employed additional 78 personnel during these ten years while the other sport transport equipment attracted only 69. The labor market in seven remaining sectors was disappointing and about 1,712 jobs vanished in these sectors during these ten years. The manufacturing of sport apparel had the highest loss by 535 of its employees followed by the manufacturing of sport related motor vehicles by 355, manufacturing of sport goods by 326, manufacturing of bicycles by 217, sport construction by 147, manufacturing of sport foot wear by 121 and renting of sport equipment by 11 personnel.

#### **4.3.3 The share and significance of sport industrial employment in Finland**

The share of employment in sport enterprises indicated increases in total number of all Finnish enterprises from 2002 until 2011. The result indicated that it increased from 1.03% in 2002 to 1.07% in 2003, to 1.10% in 2004, to 1.14% in 2005, to 1.19% in 2006 and to 1.20% in 2007. It although declined to 1.18% and 1.17% in 2008 and 2009 respectively, increased to 1.24% in 2010 and to 1.19% in 2011.

#### **4.3.4 The average size of sport enterprises by employment in Finland**

The average size of sport enterprises was quite small in terms of employment especially in service sectors. All manufacturing sectors presented higher enterprise sizes than services sectors. The highest size from 2002 until 2011 noticed in manufacturing of bicycles by average of 30.7 employees per enterprise in the industry followed by the other sport transport equipment by 9.8. The sporting goods manufacturing was in third place by 7.1 while the manufacturing of building and repairing of sport boats comprised 5.7 personnel for an enterprise. The fifth and first biggest size of enterprises in service sectors was in operation of sport arenas and stadiums where the average size was 4.8 employees for every enterprise. The retail trade of sport goods sector by 3.2 employees per enterprise was in the seventh rank in industry followed by sport education by 1.7, renting of sport equipment sector by 1.6 and other sporting services by 1.4 personnel for every enterprise during these ten years. The average sizes of sport enterprises by employment presented in appendix 4.

### **4.4 Production output of sport sector**

In this part of the result chapter, the author presents the output of the sport industry and its related industrial sectors. The author is going to compare the developments in nominal and real output to consider that the change in prices is not the reason for increases. The sectors' output will be accessed and compared



to find out the share of the sectors and developments in their output. The study will also present the second evidence for structural shift from manufacturing towards services.

#### **4.4.1 Nominal and real increases in output of private sector of sport**

The production of sport related products and services recorded on thirteen sectors out of sixteen. There were production in manufacturing sectors in sport apparel, sport footwear, sport weapons and ammunition, sport related motor vehicles, bicycles, sport and pleasure boats, and sport goods while in sport services there were in sectors in wholesale of sport goods, retail sale of sport goods, rental services of sport equipment, sport related education, sport services and in sport construction. There was no data on the production of sport aircraft equipment and billiards in manufacturing of games and toys. The production in operation of sport arenas and stadiums, and other sporting services combined in one sector as sport services.

The industrial output was growing by 4.1% averagely per year but the average growth in sport services was 4.8% while in manufacturing it was - 3%. Results in both nominal and real data calculations revealed growth in output of sport sector over previous years, from 2002 until 2011 except the years 2006 and 2009 in nominal data and decline in 2005, 2006 and 2010 in real calculations. Nevertheless, overall results proved huge increases in the industry's output as the production in nominal and real data increased from about 3 billion € in 2002 to over 4 billion € in 2011. The real output by applying price indices, raised from 3,177,028,980 € in 2002 to 3,412,828,318 € in 2003 and to 3,884,783,194 € in 2004, then declined slightly to 3,872,491,245 € in 2005 and to 3,698,017,381 € in 2006. It moderately advanced to 3,951,608,145 € in 2007, to 4,204,239,113 € in 2008 and to 4,425,580,388 € in 2009 respectively. It later declined to 4,289,154,675 € in 2010 but recovered to over 4,328,944,239 € in 2011.

At the same time the index changes in producer prices (basic price index for domestic supply) was minus 1.2 in 2002 and 0.1 in 2003, which increased to 1.6 in 2004, to 3.6 in 2005 and to 5.9 in 2006 respectively. Later it declined to 4 in 2007, to 5 in 2008, and again declined to minus 6.1 in 2009 but sharply increased to 5 and 6.7 in 2010 and 2011 respectively. Figure 3 presents nominal and real increases in production of private sector of sport in Finland from 2002 until 2011.

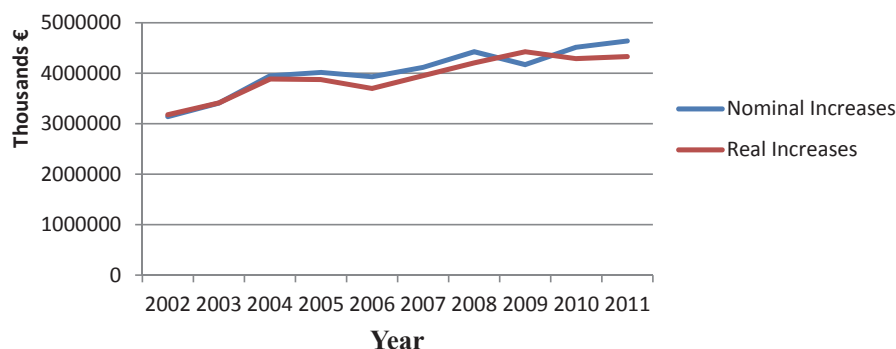


FIGURE 3 Nominal and real growth in production value of sport sector in Finland, 2002-2011

#### 4.4.2 Share of sport related sectors in production of sport outputs

The largest sector among sport sectors, which produced the highest output, was sporting services by 39% of total output during these ten years. The output in the sector increased steadily over ten years of the study and reached from 1,198,000,000 € in 2002 to over 1,818,000,000 € in 2010 and to 1,926,000,000 in 2011. The second sector in this regard was the retail trade of sporting goods by 19%, while its output increased during all years of the study over previous years except 2009 and reached from 517,545,000 € in 2002 to over 1,038,077,000 € in 2010 and to 1,066,511,000 € in 2011. Sport related education by 15% share of total output was in the third place. The sector's output increased from 558,004,700 € in 2002 to over 603,949,657 € in 2010 and to 637,864,617 € in 2011. The wholesale trade of sporting goods shared 13% of total output as the fourth largest sector and raised its output from 357,404,000 € in 2002 to 510,228,000 € in 2010 and to 544,204,000 € in 2011. The fifth largest sector was the manufacturing of sport and pleasure boats which shared 6% of total output and its output increased from 193,936,000 € in 2002 to 197,508,000 € in 2010 and to 236,210,000 € in 2011.

The manufacturing of sport goods by 3% of total output was the sixth largest sector although its output increased from 103,750,000 € in 2002 to 105,477,000 € in 2003, to 126,065,000 € in 2004, to 130,064,000 € in 2005 started to decline in the next following years of the study. It even lost a digit in its production and reached to 90,728,000 € in 2010 and 85,992,000 € in 2011. The sport related motor vehicles shared 2% of total output and became the seventh. It increased its production during all years of the study except the year 2009 and 2011, which faced sharp reductions. The manufacturing output reached from 69,943,000 € in 2002 to 114,204,000 € in 2009 and to 114,204,000 € in 2010 but sharply declined to 17,292,000 € in 2011.

The manufacturing of bicycles, sport constructions and sport weapons and ammunitions shared 1% of total output of the industry each, but the manufacturing of bicycles output was higher than other two sectors. The output of

eighth major sector, the bicycles decreased from 46,783,000 € in 2002 to 45 120,000 € in 2003 then sharply increased to over 82 million € in 2004 but declined to over 59 million € in 2005 and over 52 million in 2006 €. Again it sharply declined to over 46 million € in 2007 and to 55 million € in 2008 then faced another sharp decreases to over 33 million € and 42 million € in 2009 and 2010 respectively but the manufacturing recovered to 57,677,000 € in 2011. The sport construction services sector was the ninth in this regard. Its output was over 28,000,000 € in 2002 and 2003 which increased to over 30 million € in 2004, 2005, 2006 and 2007 but sharply declined to over 13 million € in 2009 and 2010 but recovered to over 52,000,000 € in 2010 and again declined to 20,000,000 € in 2011.

The manufacturing of sport guns and ammunitions was the tenth major sector in the industry. It increased its output from 16,150,000 € in 2002, to 16,654,000 € in 2003, to over 19,000,000 € in 2004, to 23,689,000 € in 2005 and to 21,137,000 € in 2006. Its output draped to 19,597,000 € in 2007 but reached to 22,400,000 € in 2008, to over 27 million € in 2009, to over 29 million € in 2010 and to over 26,500,000 € in 2011. The share of the manufacturing of sport apparel, rental services of sport equipment and sport footwear was 0% of total output. However, the manufacturing of sport apparel output was more than others thus became the eleventh sector in this regard. The manufacturing made decreases year by year, during all years of the study and declined from 37,289,000 € in 2002 to 8,687,000 € in 2011 while the rental services of sport equipment, the twelfth major sector, increased its output from 6,743,000 € in 2002 to 12,852,000 € in 2011. The output of the manufacturing of sport footwear, the last sector, draped year by year from 8,395,000 € in 2002 to 22,000 € in 2011.

#### **4.4.3 Developments in the output of the manufacturing and services sectors of sport**

There were thirteen sectors active in production of sport services and goods, of which seven sectors, the manufacturing of sport apparel, sport footwear, sport weapons and ammunitions, sport related motor vehicles, bicycles, sport and pleasure boats, and sport goods categorized in manufacturing sectors. Moreover, six sectors as the wholesale trade of sport goods, retail sale of sport goods, rental services of sport equipment, sport related education, sport services and sport construction were involved in providing sport services in Finland from 2002 until 2011. The results revealed that in production the sport industry is heading to be more service oriented than manufacturing. The service sectors production output was 2,666,110,700 € in 2002 while the manufacturing output reached to 473,246,000 € in this year, indicating that sport service sectors production was 5.6 folds larger than manufacturing sectors and service sectors produced 85% of total industry's output.

The service sectors output reached to 2,931,338,900 € in 2003 while the manufacturing output increased to 478,080,000 € and the difference grew to 6.1 folds where service sectors produced 86% of total output of the industry. In year 2004, the service sectors output increased to 6.6 folds more than manufacturing sectors and produced 87% of total output of the industry. The differences

draped to 6.2 folds in 2005, to 5.3 folds in 2006, to 5.4 folds in 2007 and to 5.9 folds in 2008 while sport services produced 86% in 2005, 84% in 2006 and 2007, and 85% of total output of the industry respectively. The services sectors faced dramatic boost in 2009 and continued its increases until 2011.

In year 2009 the services sectors produced 91% of total output of the industry and its output reached to 3,776,023,800 € while the manufacturing output was 395,117,000 € which shared only 9% of total output and the services sectors output was 9.6 folds more than manufacturing. The movement toward service orientation continued in 2010. The services sectors produced 89% of total output in the industry and its production reached to 4,033,205,657 € in this year which was 8.4 folds more than manufacturing sectors. The production share of sport services increased again to 91% in 2011 by 4,207,431,617 € which was 9.7 folds larger than manufacturing sectors. The results in production output confirmed that there is a shift in sport industry in Finland towards more service production than manufacturing. Figure 4 presents the developments in production output of sport services and manufacturing in Finland from 2002 until 2011.

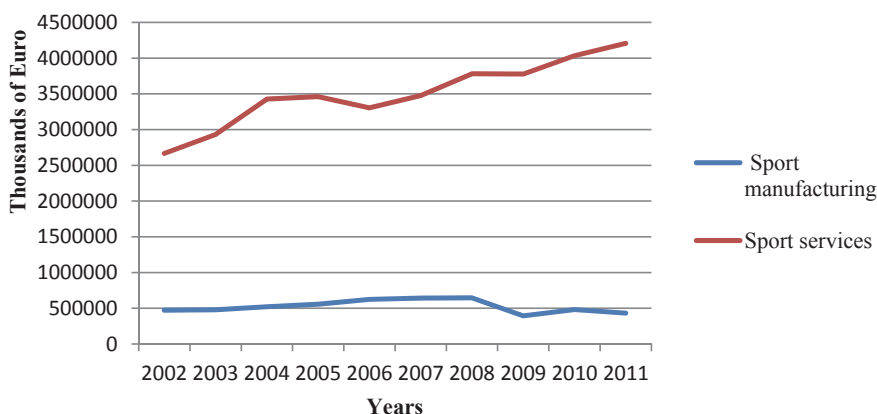


FIGURE 4 Developments in production of sport services and manufacturing sectors in Finland, 2002-2011

#### 4.4.4 The significance and share of sport output in Finland's total output

The output of all industries in Finnish National Account recorded also as output at basic prices and expressed at current and prices. As our data on sport sector output also collected at basic prices at current prices, therefore the study applied the same prices to obtain the correct results. The average share of sport private sectors in Finland's total industries output was 1.25% from 2002 until 2011 although it faced gradual fluctuations during these ten years. It increased from 1.18% in 2002 to 1.26% in 2003 and to 1.38% in 2004, then declined to 1.33% in 2005, to 1.19% in 2006, to 1.16% in 2007, and to 1.19% in 2008, again it started to increase to 1.26% in 2009, to 1.29% in 2010 and to 1.23% in 2011.

## **4.5 Exports of sport goods and services**

### **4.5.1 Developments in exports of sport sector in Finland from 2002 until 2011**

The annual publication of Finnish Foreign Trade contains detailed basic statistics on foreign trade in accordance with the CN. The data contains the most important time series on foreign trade according to countries and goods categories, annual statistics on total and country-specific trade according to the SITC classification and special statistics relating to foreign trade and customs administration. The publication is also contains the complete statistics on exports by the CN and countries of destination of which 103 categories in 8-digits cover the export of sport related goods and equipment in 9 different manufacturing groups. The data for exports of sport services has been adapted from data in use and supply tables in National Accounts.

The manufacturing of apparel by 35 categories, the manufacturing of sporting goods by 33 categories, the manufacturing of building and repairing of pleasure and sport boats by 13 categories had the highest items in their exports. The manufacturing of sport footwear by 6 categories, the manufacturing of bicycles by 5 categories, the manufacturing of guns and ammunition by 5 categories and the manufacturing of sport related aircraft by 4 categories were following the path. In addition, the manufacturing of toys and games by 2 categories and the manufacturing of vehicles, trailers and semi-trailers only by one category in 8 digits were also among the exporter manufacturers. Moreover, there was only one category in the exports of sport services in Finland. Table 4 presents the exports of sport goods and services in 10 different manufacturing groups and services in Finland in hundreds of Euros from 2002 until 2011.

TABLE 4 Exports of sport goods and services in Finland in 1000 €, 2002-2011

Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Sport apparel	6642	5060	5565	4974	7021	6209	5963	4348	5824	5912
Sport footwear	3367	3515	3935	5822	4169	3893	3066	3454	4151	3909
Sport vehicles	699	61	48	20	1160	736	27	57	4064	10282
Bicycles	3098	2049	2151	1867	1971	2744	2406	1559	1461	2018
Sport Aircraft	96	85	70	74	117	96	113	280	437	460
Sport boats	162545	206526	162883	176975	257724	271235	307250	158339	157558	220430
Sport guns	15792	15660	18260	23022	21074	19990	23348	28697	24517	27137
Billiards	107	104	46	37	35	103600	62	26	81	47
Sporting goods	88529	81915	90415	90055	93508	90160	76527	68211	69863	71159
Sport services	53278	64137	64473	58448	65549	37991	11000	1000	2000	8000

The export of sport goods and services indicated decreases in general in Finland during 2002 until 2011 and faced considerable decreases in 2009 by 61%. This caused the exports generally to decline by 1.8% averagely per year during these ten years. The highest decreases was in 2009 by minus 61% in 2009 while the highest increase recorded in 2011 by 22% which was due to high decreases in 2009 and slow increases in 2010.

There were nine manufacturing groups and one sport service sector in the export of sport goods and services of which the manufacturing of building and repairing of sport and pleasure boats had the highest exports. It shared 57% of total exports of sport goods and services from 2002 until 2011. The second largest export in sport goods was in the manufacturing of sporting goods, which shared 23% of total exports of sport related items although its exports revealed steady decreases over 2008 until 2011.

The third largest exports of sport goods and services recorded in the sport services while its exports shared 10% of total exports while the fourth biggest shipment for exports occurred in manufacturing of sport guns where the manufacturing shared 6% of total exports of sport goods and revealed constant increases from 2002 until 2011. The fifth largest exporter in this regard was the manufacturing of sport apparel, which shared 2% of total exports. Both the manufacturing of sport footwear and manufacturing of bicycle, with 1% shared sixth and seventh place although the amount of exports in footwear exceeded the exports in bicycles. The share of exports in sport related vehicles and trailers, sport related aircraft equipment and billiards in manufacturing of toys and games was already 0% from 2002 until 2011. However, the export in sport related vehicles exceeded the two others and become the eighth highest exporter of sport related items. The ninth highest export was in sport related aircraft equipment as it increased from 5 digits in 2002, 2003, 2004, 2005 and 2007 to 6 digits in 2011 and the exports in the last sector, billiards, in the manufacturing of toys and games showed constant decreases.

#### **4.5.2 The significance of exports of sport sector in Finland's total exports**

The export of sport goods and services shared averagely 0.52% of Finland's total exports in goods and services from 2002 until 2011. It faced considerable fluctuations and sharp decreases during these ten years and draped from 0.58% in 2002 to 0.45% in 2011 in country's total exports. The total export of goods and services in Finland was over 57,960 million € in current prices in 2002 which declined to 56,484 million € in 2003 but increased constantly from 2004 over 2007 and peaked over 87,321 million € in 2008 but declined to 65,661 million € in 2009 although increased moderately over 2010 and reached to 77,093 million € in 2011. However, the share of exports of sport goods and services did not follow the same path in its performance and although increased from 0.58% in 2002 to 0.67% in 2003 declined to 0.57% in 2004 and to 0.55% in 2005. It peaked over 0.61% in 2006, but declined to 0.53% in 2007, to 0.49% in 2008, to 0.41% in 2009, to 0.37% in 2010 and to 0.45% in 2011. Meanwhile, we may note its significance as 0.52% of Finland's total exports of goods and services and a declining area in Finnish economy during these ten years.

### **4.6 Imports of sport goods and services**

#### **4.6.1 Developments in imports of sport sector in Finland from 2002 until 2011**

The annual publication of Finnish Foreign Trade contains detailed basic statistics on foreign trade in accordance with the CN of which 110 categories in 8-digits covered the imports of sport related goods and services in 10 different sectors, nine in manufacturing and one in services. The data for imports of sport services has been adapted from data in use and supply tables in National Accounts. The imports of sport goods and services covered by 33 categories in import of sport related apparel, six categories in footwear and one in vehicles, trailers and semi-trailers. There were also five categories in bicycles, eight categories in sport related aircraft, thirteen categories in building and repairing of pleasure and sport boats and eight categories in guns and ammunition. Moreover, there were two categories in toys and games. These 110 categories in sporting goods in eight digits in imports of sport related goods and equipment in nine manufacturing groups and one category in sport services investigated in Finland from 2002 until 2011. Table 5 presents the exports of sport goods and services in 10 different manufacturing groups and services in Finland in hundreds of Euros from 2002 until 2011.

TABLE 5 Imports of sport goods and services in Finland in 1000 €, 2002-2011

Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Sport apparel	39704	37568	42804	41563	51887	44721	48911	45034	46567	51411
Sport footwear	35849	35857	37224	33799	41567	32172	33397	39264	40994	44344
Sport vehicles	261	139	325	721	521	833	225	115	489	1230
Bicycles	26260	31871	32755	37546	38230	44616	49985	47879	46223	49550
Sport Aircraft	389	699	311	274	787	290	393	447	439	410
Sport boats	18757	26838	37974	44910	66793	69674	53468	27897	37084	45266
Sport guns	5388	4325	5820	6287	7856	8181	8720	6682	6208	7695
Billiards	850	9229	796	1210	1589	1950	1896	1524	1038	735
Sporting goods	82633	91497	98974	101849	114642	121360	116818	114178	134458	142808
Sport services	14715	12075	16706	16773	16404	20403	11000	8000	10000	21000

The imports of sport goods and services indicated stable increases year by year until 2007. Although there were reductions in 2008 and 2009, the imports recovered in 2010 and peaked over in 2011. On the other hand, the changes in price indices in imports revealed that the reduction in the monetary values of import happened in fact in 2008 and 2009. However, the imports in nominal values were growing by 4.9% averagely per year. The lowest amount recorded in 2002 and the highest amount was in 2011. Meanwhile, the nominal amount of imports in these categories increased slightly in 2003, 2004, 2005, 2006 and 2007. The line of growth interrupted in the imports during 2008 and 2009 but moderately recovered in 2010 and peaked over in 2011.

The highest imports of goods and services related to sports came in sporting goods manufacturing items, which shared 37% of Finland's imports in sport goods and services from 2002 until 2011 while the second highest imports of sport goods and services recorded in sport apparel by 15%. The categories in building and repairing of sport boats and bicycles both by 14% shared the third and fourth place. Nevertheless, the amounts of imports during these ten years in sport boats exceeded the bicycles. The fifth highest imports arrived in sport footwear while sport services sector had the sixth place and sport related guns and ammunition occupied the seventh highest imports of sport goods and services in Finland by 2%. The imports in billiards in toys and games sector, sport related vehicles and sport related aircraft equipment by 0% were the rest of other sectors in this regard respectively.

#### 4.6.2 The significance of imports of sport goods and services in Finland

The significance of imports of sport goods and services in total imports of goods and services of Finland was 0.48% during a decade from 2002 until 2011. It indicated a decreasing share in total imports of country despite its increases. Its share although increased from 0.50% in 2002 to 0.52% and 0.53% in 2003 and 2004, decreased to 0.48% in 2005. It improved to 0.51% in 2006, but continued to decline to 0.47% in 2007, to 0.40% in 2008, to 0.47% in 2009 and to 0.46% in 2010



and 2011 respectively. These developments also indicate another fact. The total imports of goods and services revealed considerable increases during these ten years of investigation in Finland and reached from 44,790 million € in 2002 to over 78,768 million € in 2011, while, the imports of sport goods and services did not follow the same speed and level.

## **4.7 Taxes on production of sport sector**

### **4.7.1 Developments in taxes on production of sport sector**

The study estimated taxes on production of sport related products and services by applying input-output tables on output of thirteen sectors out of sixteen. There were production in manufacturing sectors in sport apparel, sport footwear, sport weapons and ammunition, sport related motor vehicles, bicycles, sport and pleasure boats, and sport goods, and in sport service sectors in wholesale of sport goods, retail sale of sport goods, rental services of sport equipment, sport related education, sport services and in sport construction. There were no data on the production of sport aircraft equipment and billiards in toys and games sector. The production in operation of sport arenas and stadiums, and other sporting services combined in one sector as sport services. Table 6 presents the estimated taxes on production in sport sectors in Finland from 2002 until 2011.

TABLE 6 Taxes on production in sport sectors in Finland in €, 2002-2011

Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Sport apparel	151921	166340	106062	79100	66448	46507	36103	32165	40976	73101
Sport footwear	28736	12396	16927	577	1116	202	207	235	174	185
Sport ammunition	65859	73693	95760	138153	115047	101825	78892	99819	112595	155052
Sport motor vehicles	380559	391349	230024	271759	288143	353022	293808	291725	408507	109545
Bicycles	238967	200151	280671	316272	315997	314153	231609	1109859	2331442	4120964
Sport boats	975300	956875	673136	1258630	1927498	2459284	8300559	5496374	10839436	16876968
Sport goods	652898	874826	917501	928266	955150	654471	449751	451376	486574	737468
Wholesale of sport goods	3385330	3469808	8246938	7833479	6943281	5836155	4980268	5055485	5214020	4947903
Retail sale of sport goods	2382777	2641045	316880	3259748	4232146	4672160	4522494	3868397	4264420	6571841
Rental of sport equipment	440776	460467	874401	731647	845571	541124	417068	434588	840873	919728
Sport education	22002126	26980561	32956480	25216665	16564096	20099180	19516665	19637808	21408806	22825984
Sport services	36094542	43090167	41706225	45883224	49177583	51156896	54902492	58764620	56419812	66710862
Sport construction	429647	432951	447999	531723	529011	538270	148382	137722	704756	274780

The results revealed that there were increases in taxes on productions in sport sector. The taxes on production of sport services and goods increased slightly in 2003 and 2004 over 2002 and although declined slightly in 2005 and 2006 increased moderately in 2007, 2008 and 2009. The increases continued moderately in 2010, where it reached to its peak in 2011.

#### **4.7.2 Share of sport sectors in taxes on production**

Sport service sector by 56% share on average per year was the highest source of tax generation on production among thirteen sport sectors during ten years of the study. Sport related education's tax on production was second in this regards and shared 25% of taxes by average while the wholesale trade of sporting goods by averagely 6% shared the third place. The manufacturing of building sport and pleasure boats sector shared also 6% but was in fourth place. The retail sale of sport goods produced the fifth highest taxes on production during these ten years by 4% while the manufacturing of bicycles by 1% share was the sixth largest sector. The manufacturers of sport goods share of taxes on production was also 1% averagely per year during these ten years but its tax generation was lower and reached the seventh highest place.

The rental services of sport equipment sector also shared averagely 1% of industry's taxes during these ten years and became the eighth largest sector. The manufacturing of sport related motor vehicles, sport guns and ammunitions, sport apparel and sport footwear shares was averagely 0% per year during these ten years, but the manufacturing of sport motor vehicles taxes on production was higher than the rest. Following sport motor vehicles, sport guns and ammunitions was the eleventh largest while the manufacturing of sport apparel taxes put the sector in twentieth place and sport footwear manufacturing occupied the last in this regard.

#### **4.7.3 The share of sport manufacturing and service sectors on taxes on production**

There were thirteen sport related sectors in industry of which the manufacturing group was composed of sport apparel, sport footwear, sport weapons and ammunition, sport related motor vehicles, bicycles, sport and pleasure boats, and sport goods. While the wholesale of sport goods, retail sale of sport goods, rental services of sport equipment, sport related education, sporting services and sport construction were active in sport related service group. The study estimated that 92.4% of taxes on production came from sport service sectors group while the manufacturing group produced only 7.2% of total taxes in sport industry and the taxes on production in services were 19 folds larger than manufacturing groups.

The service sectors taxes on production was more than 25 folds higher than manufacturing groups in 2002 and their share was 96% of total taxes on production in industry while the manufacturing group taxes was only 4%. The taxes on production in service sectors increased in 2003 and shared 97% of total

taxes in industry where manufacturing group taxes in 2003, 2004 and in 2005 was only 3% of total taxes in these years and services taxes was 28.8 folds, 37.6 folds and 27.8 folds larger than manufacturing group respectively.

Beginning from 2006, the taxes on production in manufacturing group started to grow and consequently its share became larger in industry. The taxes on production in manufacturing increased in 2006 and 2007, and soared over 2008. It declined in 2009 but increased considerably over 2010 and 2011. This caused manufacturing share to rise to 4% in 2006, to 5% in 2007, to 10% in 2008, to 8% in 2009, to 14% in 2010 and to 18% in 2011. The service sectors, which was 21.3 folds larger than manufacturing started to become smaller and declined to 21 folds in 2007, to 9 folds in 2008, to 11.7 folds in 2009, to 6.2 folds in 2010 and to 4.6 folds in 2011. The reason for decreases in service sectors share was not due to decreases in services taxes on production. The taxes in services increased also in 2006, 2007, 2008, 2009, 2010 and 2011. The main reason for increases in taxes on production in manufacturing was due to the increases in other taxes on production not increases in taxes less- subsidies. The ratios in this category declined from 3 digits to 2 digits in output tables' ratios.

#### **4.7.4 Share of sport sectors taxes on production in Finland's total tax revenues**

The study estimated that the generation of sport sector taxes on production was averagely 0.38% of Finland's total taxes on production per year, from 2002 until 2011. There were increases in both taxes on production in country level and taxes on production in sport sector. The total taxes on production in country level increased from over 19 billion € in 2002 to over 24 billion € in 2011 while the taxes on production in sport increased from over 67 million € in 2002 to over 124 million € in 2011. Meanwhile the share of taxes on production of sport sectors in total taxes on production in country level revealed increases overall over year 2002. It increased from 0.34% in 2002 to 0.38% in 2003 and to 0.42% in 2004. Although it declined slightly to 0.39% in 2005, to 0.35% in 2006, to 0.36% in 2007, to 0.38% in 2008 and to 0.40% in 2009, it advanced to 0.42% in 2010 and peaked to 0.45% over 2011.

## **4.8 Value added of sport sector in Finland from 2002 until 2011**

### **4.8.1 Developments in value added of sport sector in Finland**

The study found out thirteen sub-sectors active in the production of sport services and goods in Finland from 2002 until 2011. Their production outputs have been collected from Official Statistic of Finland to apply for input-output tables in value added and GDP analyses. The ratios in input-output tables were different in every related industry and even for the same industry per year. Therefore, we applied 13 different related tables for every year and continued our investi-

gations for ten years to obtain the closest results, meaning that we used 130 input-output tables in this part of the study. The values used for analyses are in gross at basic prices. Table 7 presents value added of sport related sectors in Finland from 2002 until 2011.

TABLE 7 Value added of sport related sectors in Finland in 1000 000 €, 2002-2011

Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Sport apparel	13	8	7	4	3	2	3	2	2	3
Sport footwear	3	1	1	43	41	22	15	13	14	8
sport ammunitions	4	5	6	7	6	5	8	9	10	8
Sport vehicles	14	18	18	21	20	21	26	17	29	4
Bicycles	14	15	29	19	14	10	12	7	10	18
Sport boats	60	73	71	78	87	83	80	35	50	74
Sport goods	38	39	48	47	42	40	37	35	33	30
Wholesale of sport goods	178	168	306	325	264	225	260	232	247	281
Retail sale of sport goods	302	291	313	316	348	417	556	549	568	584
Rental sale of sport goods	3	3	5	5	6	4	4	3	5	6
Sport education	394	488	596	489	313	361	378	382	423	444
Sport services	666	686	719	758	784	853	936	946	966	1029
Sport construction	10	10	11	12	13	12	4	4	19	7

The value added of the sport sector increased moderately by 5.7% in 2003 and sharply by 15.2% in 2004. It declined by -2.3% in 2005 and by -9.5% in 2006 over 2005 where it declined slightly in 2005 and 2006. It recovered by 6.5% in 2007 and sharply by 11.6% in 2008. It declined by -3.6% over 2009 but increased by 5.9% in 2010 and peaked over in 2011 by 5%.

The results indicated that value added of sport sector increased over previous years, except 2005, 2006, 2007 and 2009 although it revealed notable increases over year 2002. The average increase during these ten years was 3.85% per year. At the same time, the price index was 1.3 in 2002 and -0.7 in 2003, which leveled at 0.5 in 2004 and 2005. It increased to 0.8 in 2006 and peaked over 2007 to 3 but dropped to 2.9 and 1.5 in 2008 and 2009 respectively. It sharply dropped to 0.3 in 2010 and sharply increased to 2.7 in 2011.

By applying this price index to nominal value added, the real value added revealed the same pattern of changes and same fluctuations. The real value added increased from 1,684 million € in 2002 to 1,882 million € in 2003 and to 2,125 million € in 2004 and slightly decreased over 2005 and 2006 but recovered slightly over 2007 and reached over 2,243 million € in 2008. It dropped slightly in 2009 but increased moderately in 2010 and peaked to over 2,426 million € in 2011.

Among the sectors, sport services was the biggest contributor to generation of value added in the industry by 40% during these ten years and its contribution showed increases from 2002 over 2011. Sport education and retail

trade of sport goods by 20% shared the second and third places in this regard respectively. However, the value added of sport education exceeded the retail sector. The fourth biggest value added recorded in wholesale of sport goods by 12% while the fifth highest generation of value added recorded in manufacturing of sport and pleasure boats by 3%. Sport goods manufacturing by 2% placed itself in sixth place while sport related vehicles, bicycles and sport construction by 1% share were in seventh, eighth and ninth ranks respectively. The sport guns and ammunitions, sport apparel, sport rental sector of sport equipment and sport footwear by zero percent occupied the remaining lower rankings respectively.

#### **4.8.2 Value added difference between manufacturing and service sectors**

There were thirteen sectors in value added of sport sector of which the sport apparel, sport footwear, sport guns, sport vehicles, sport boats, bicycles and sport goods were in manufacturing sectors and wholesale of sport goods, retail sale of sport goods, rental services of sport equipment, sport education, sport services and sport construction in services. The results of the study indicated that there is a shift in generation of value added in the industry during ten years of this study as the share of services sectors increased from 91% in 2002, 2003, 2004, 2005 and 2006 to 92% in 2007, to 93% in 2008, to 95% in 2009, to 94% in 2010 and 2011. The value added also in sport service sectors was 10 folds higher than manufacturing in 2002 that increased year by year and reached to 17 folds in 2011.

#### **4.8.3 Significance of value added of sport sector in Finland**

The value added in sport was 1.45% of Finland's value added during a decade on average per year from 2002 until 2011. The share of value added of sport sector was 1.36% of Finland's value added in 2002 while the value added of the country was 125,453 million €. It reached to 1.43% in 2003 and peaked over 1.61% in 2004 but declined to 1.53% in 2005, to 1.33% in 2006 and dropped to its lowest share to 1.30% in 2007. Then it recovered to 1.42% in 2008, to 1.49% in 2009, to 1.52% in 2010 and to 1.53% in 2011.

On the other hand, according to Statistics of Finland, Finland's national economy composed of 22 main head groupings in industrial classification in TOL 2008. They categorized as, A, including agriculture, forestry and fishing, B, mining and quarrying and C, manufacturing. The D group includes electricity, gas, steam and air conditioning supply, E, water supply, sewerage, waste management and remediation activities while F covers construction and G includes wholesale and retail trade, repair of motor vehicles and motorcycles. The H includes transportation and storage, I, accommodation and food service activities and J includes information and communication. The K head grouping includes financial and insurance activities, L, real estate activities, M, professional, scientific and technical activities, N, administrative and support services activities while O includes public administration and defense and P covers education.

The head grouping in Q covers Human health and social work activities and R includes arts, entertainment and recreation while S covers other service activities and T covers activities of households as employers. The head grouping in U covers activities of extraterritorial organizations and bodies while X includes industry unknown. The comparison of the value added, gross at basic prices in current prices revealed that the value of sport valued added at basic prices in current prices was more than B, Mining and quarrying, E, Water supply and waste management, R, Arts, entertainment and recreation and T, Household service activities (appendix 3). Therefore, sport sector's significance noted in this context proves our first assumption in the theoretical background of the study.

## 4.9 Gross domestic product of sport sector in Finland

### 4.9.1 Development in gross domestic product of sport sector in Finland

There were 13 related sectors in sport from 2002 until 2011 which their value added, plus taxes minus subsidies have been added to form GDP of every sector during study's period. Table 8 presents the developments of GDP in sport related sectors in Finland in 1000 € at basic process in current prices from 2002 until 2011.

TABLE 8 Gross domestic product of sport related sectors in Finland in 1000 €, 2002-2011

Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
sport apparel	14144	8152	7654	4973	3666	2676	3579	2164	2755	3298
sport footwear	3246	1140	1111	44	41	22	16	14	14	8
sport am- munitions	5011	5224	6056	7383	6313	5870	8288	9707	10432	9065
sport vehicles	15271	18424	18963	21632	20397	22229	27140	17896	29992	4624
Bicycles	14945	15523	30202	19778	14527	10768	12901	7323	10971	18422
sport boats	60996	74212	72434	78709	88613	84300	81006	36267	50987	75449
sport goods	39229	39592	48813	47893	43012	40401	37957	35518	33521	30753
sport wholesale	180103	171006	311325	330913	268969	229383	263629	235155	250597	284458
sport retail	304670	293804	315543	319125	351586	421344	560288	553143	572513	590632
rental sale	3442	3255	5232	5741	6625	4267	4380	3755	5876	6756
sport education	415046	513844	626463	513016	329168	379640	396472	400588	442679	465949
sport services	694528	719293	752723	794433	822357	894690	984902	998764	1016420	1089711
sport construction	10626	11059	11787	13484	13962	13376	4966	5129	19919	7471

The average size of GDP of sport sector in Finland was 2,180,370,069 € during ten years of investigation and was growing averagely by 3.9% per year in both real and nominal analyses from 2002 until 2011. It increased by 6% over 2003

and faced sharp increases by 15.1% in 2004 but declined by -2% in 2005 and -9.5% in 2006 respectively. It dropped slightly again in 2005 and moderately in 2006. Latter it grew by 6.6% in 2007 and by 11.6% in 2008, but decreased by -3.5% in 2009. Then it increased in 2010 by 5.8% and peaked over 2011 by 5.4%.

At the same period, the price index was 1.3 in 2002 and -0.7 in 2003, which leveled at 0.5 in 2004 and 2005. It increased to 0.8 in 2006 and peaked over 2007 to 3 but dropped to 2.9 and 1.5 in 2008 and 2009 respectively. It sharply dropped to 0.3 in 2010 and sharply increased to 2.7 in 2011. By applying these ratios to nominal GDP, the real GDP showed the same pattern as nominal fluctuations during these ten years. It increased from 1,738 million € in 2002 to 1,887 million € in 2003 and to 2,197 million € in 2004. It dropped slightly over 2005, 2006 and 2007 but increased over 2,316 million € in 2008. Again, it dropped slightly in 2009 but increased to over 2,439 million € in 2010 and peaked over 2,518 million € in 2011.

#### **4.9.2 Share of sport sectors in gross domestic product of sport sector in Finland**

The biggest share of GDP among thirteen sport related sector noticed in sport service sector by 40% during 2002 until 2011. The second biggest sector, sport education shared 21%, while the share of the third highest, retail sale of sport goods was 20% and the fourth biggest sector, wholesale of sport goods was 12%. The manufacturing of building sport boats by 3% was the fifth while the sporting goods manufacturing by 2% share occupied the sixth position. Sport vehicles and bicycles sectors both shared 1% of total GDP in sport sector but the amounts of GDP in sport related vehicles was higher than bicycles during these ten years. The GDP share of five remaining sectors was zero, although sport construction's GDP was higher than the rest. Therefore, we may call sport guns and ammunition the tenth, the sport apparel sector eleventh, rental services of sport equipment the twelfth and sport footwear the thirteenth biggest generator GDP in Finnish sport industry.

There were six out of thirteen sectors in the generation of GDP in sport services while there were seven in manufacturing groups. The results indicated that there was a shift in contribution of GDP from manufacturing to service sectors. Averagely GDP in sport services were 13.2 folds larger than GDP in manufacturing. While in year 2002, it was 10.5 folds, which increased to 10.6 folds in 2003, to 10.9 folds in 2004, to 11 folds in 2005. This size dropped to 10.2 over 2006 but increased to 11.7 in 2007, to 13 in 2008 to over 20 folds in 2009, to 16.6 in 2010 and to over 17 folds in 2011.

The share of GDP in sport service sectors indicated increases too. In 2002 and 2003, the share of sport service sectors' GDP was 91% while the manufacturing sectors' was 9% but the share of service sector in industry's GDP started to increase in the following years. It increased to 92% in 2004 and 2005 but declined to 91% in 2006, and again increased to 92% in 2007, to 93% in 2008, to 95% in 2009, to 94% in 2010 and to its highest level to 95% in 2011. These results indicate that the generation of GDP in sport sector is shifting to service orienta-



tion rather than manufacturing. Figure 5 presents developments of GDP in sport manufacturing and services in Finland from 2002 until 2011.

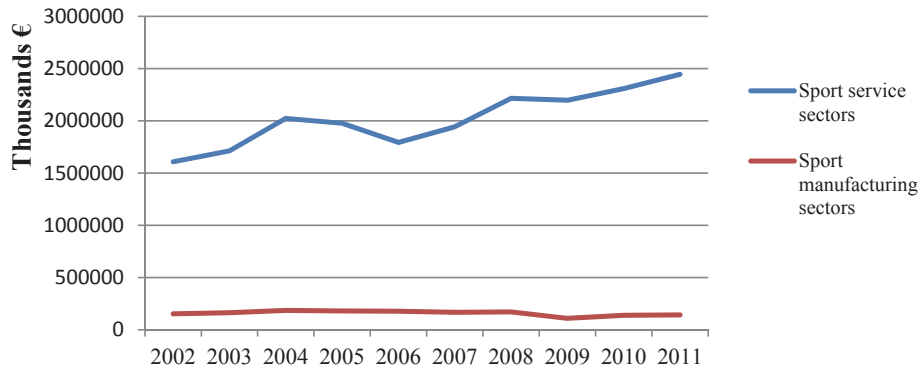


FIGURE 5 Developments of GDP in sport manufacturing and service sectors in Finland, 2002-2011

Figure 5 depicts the general tendency of GDP in sport services sectors and sport manufacturing groups in Finland from 2002 until 2011. As the figure illustrates the trend in both variables was upward but the level in services was considerably high. The direction of the changes in growth line and the speed in changes favored services than manufacturing groups.

#### 4.9.3 Significance of sport gross domestic product in Finland

The study estimated that averagely 1.31% of Finland's GDP by production and expenditure approach allocated to sport sector in the country from 2002 until 2011, as the amounts by both approaches by Official Statistics of Finland were the same. The Finland's GDP at market prices was 143,646 million € in 2002 of which 1.32% was allocated to sport sector. The share of sport sector increased to 1.29% in 2003 and peaked over 1.45% in 2004 while it dropped to 1.37% in 2005 and sharply declined to 1.19% in 2006 and bottomed over 1.17% in 2007. Then sport sector's share in national GDP recovered to 1.28% in 2008, to 1.34% in 2009 and leveled over 1.37% in 2010 and 2011.

#### 4.10 Developments in supply and consumption of sport sector in Finland

The study has found the production (domestic supply), imports (foreign supply) and exports of sport sector in Finland from 2002 until 2011. Thus, by the results

of these three variables we may estimate the total market supply and possible consumption (final use or inventory), in sport sector in country level at current prices on producer prices. Reminding the active sectors of the sport, 2 out of 15 sectors, sport related aircraft equipment and billiards in sport games sector were not involved in production and in exports although they had imports. Therefore, the size of imports in two mentioned (sport aircraft and billiards) should be noticed as supply and consumption. Some sectors like renting trade of sport equipment, education, retail of sport goods, wholesale of sport goods, sport construction and sport arenas and stadiums were not directly involved in foreign trade. Therefore, productions (domestic supply) in these sectors are the total supply of the sectors in question.

The average supply (domestic production plus imports) of sport sector was 4,332,489,563 € per year in Finland from 2002 till 2011 of which 93% were produced in country and 7% were imported while 92% of it were consumed in Finland and 8% were exported. Figure 6 presents developments in supply and consumption of sport sector in Finland from 2002 until 2011.

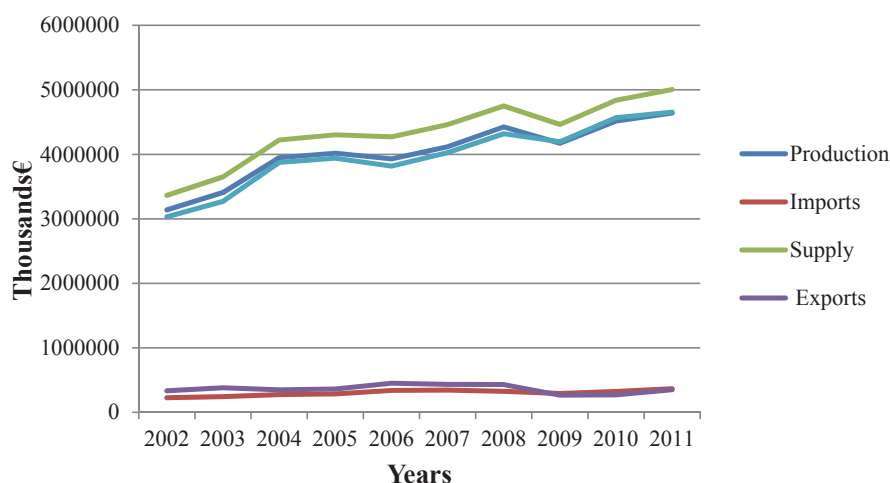


FIGURE 6 Developments in supply and consumption of sport sector in Finland, in 1000 €, 2002-2011

#### 4.10.1 Developments in supply and consumption of sport services

In sport services sector, the supply of sport services was averagely over 3,520 million € per year from 2002 until 2011. About 100% of total sport services were produced inside Finland and although there were averagely over 14 million € imports of sport services per year, it did not made any share in total supply, while 99% of total supply consumed inside Finland and only 1% of it were exported by average during these ten years. Table 9 presents developments in the supply and consumption of sport services in Finland from 2002 until 2011.

TABLE 9 Developments in supply and consumption of sport service sectors in Finland in €, 2002-2011

Years	Production	Imports	Supply	Export	Consumption
2002	2666110700	14715000	2680825700	53278000	2627547700
2003	2931338900	12075500	2943414400	64137000	2879277400
2004	3426161400	16706600	3442868000	64473000	3378395000
2005	3461445100	16773700	3478218800	58448000	3419377080
2006	3305464319	16404800	3321869119	65549000	3256320119
2007	3475439484	20403700	3495843184	37991000	3457852184
2008	3780181855	11000000	3791181855	11000000	3780181855
2009	3776023800	8000000	3784023800	1000000	3783023800
2010	4033205657	10000000	4043205657	2000000	4041205657
2011	4207431617	21000000	4228431617	8000000	4220431617

The supply of sport services moderately increased over 2003, 2004 and 2005. Then slightly decreased in 2006 but increased over 2007, 2008, 2009 and 2010 while it reached to its peak in 2011. On the other hand, the consumption of sport services increased moderately over 2003, 2004 and 2005. Then it decreased slightly in 2006 but started its moderate increases over 2007, 2008, 2009 and 2010 where it reached to its peak in 2011 in 2001.

#### 4.10.2 Developments in supply and consumption of sport goods

The situation in sport goods sector was different as foreign trade played an important role. The sport goods sector supplied averagely 811,498,050 € per year during these ten years of which 65% were produced in the country and 35% were imported, while 40% of the supply were exported and 60% consumed in the country. The nominal supply of sport goods increased moderately over 2003, 2004, 2005 and 2006 while it reached to its peak in 2007. Nevertheless, slightly decreased in 2008 and sharply dropped in 2009, although recovered in 2010 and 2011. On the other hand, the consumption decreased slightly in 2003 but increased sharply over 2004, 2005 and 2006. It peaked over 2007 but decreased slightly in 2008. Then dropped sharply in 2009 but sharply increased in 2010 although faced considerable decline in 2011. Figure 7 presents the developments in the supply and consumption of sport goods in Finland from 2002 until 2011.

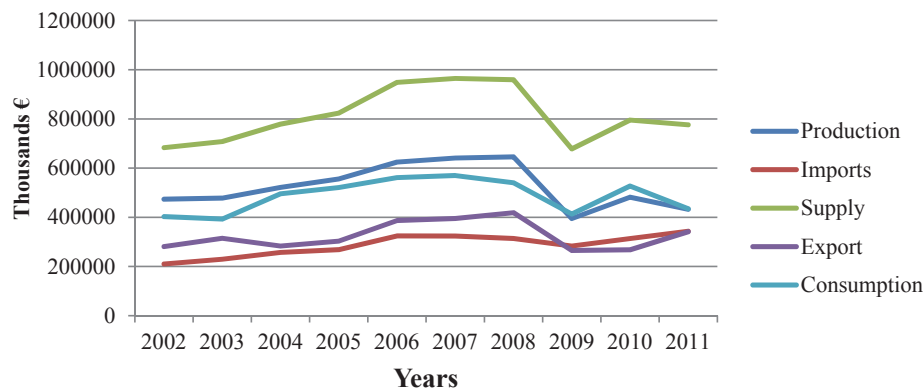


FIGURE 7 Developments in supply and consumption of sport goods sector in Finland in 1 000 €, 2002-2011

The supply of sport apparel was by average 58,326,410 € per year during these ten years, which 23% of it was produced inside the country and 77% were imported while 90% of this supply was consumed inside and 10% of it were exported. The average supply of sport footwear during these ten years was 38,896,030 € per year of which 4% produced in Finland and 96% came by imports while 90% of it consumed inside the country and 10% were exported. The manufacturing groups in sport guns and ammunition sector was one of the sunshine sectors in performance among manufacturing groups in Finland. The sector's average supply was 28,919,300 € per year during these ten years of which 77% produced inside the country and 23% came by imports. About 75% of total supply exported and 25% of it consumed in country.

The average total supply of sport motor vehicles was over 81 million € per year in Finland of which 99% produced in country and 1% of it came by imports. While 98% of this total supply consumed in country and 2% of it exported during 2002 until 2011. The average supply of manufacturing groups of bicycles per year was 92,673,180 € of which 56% were produced in Finland and 44% were imported while 98% were consumed in country and 2% of it exported. The total supply in manufacturing groups of sporting goods sector was over 219 million € on average per year over 10 years from 2002 till 2011 of which 49% were produced in Finland and 51% came by imports.

The manufacturing group in sport and pleasure boats was one of the other sunshine sectors in sport industry in Finland. The total supply of sport boats sector was averagely over 290 million € per year from 2002 until 2011 of which 85% was produced in Finland and 15% came by imports while 28% of it consumed in country and 72% of it exported. On the other hand the consumption of sport boats was over 47 million € in 2002 which decreased moderately in 2003 but sharply increased in 2004. It boosted over 2005 and 2006 while reached its peak in 2007. It sharply decreased in 2008 and plunged in 2009 although recovered in 2010 and 2011.

## 5 DISCUSSIONS

The discussion and conclusion parts are arranged to cover study's two hypotheses and ten main questions in its theoretical background. The author mentioned how and why researchers, governmental organizations and industry analysts in Australia, the United States, the United Kingdom, France, Finland, and those others in EU measure the significance of different industries in their national economies. The study introduced the most recent research works in pointing the significance of sport in national economy of several developed nations. Three related approaches introduced and mentioned why Finnish National Accounts prefers production approach over other methods in measuring the significance of industries in Finland. Finally, author introduced related technics, frameworks, industrial classifications, and sport industrial coverage areas according to guidelines of EU's, the United States, Hong Kong and the like. Despite measuring the GDP and value added, we set eight other variables to support our hypotheses and related questions. The study also aimed to consider if there is a shift in the sport industry towards service or manufacturing directions, and aimed to verify if there is growth in the industry within 10 years from 2002 to 2011. The most significant industrial head-groupings in Finland and hundred thirty five most significant industries as well as their economical values in terms of GDP and value added introduced to compare and find sport sector's place among them. A mountain of data collected, categorized, tested, and analyzed to find an answer to these inquires in one of the complex industries in Finland. The author hopes this study offer entrepreneurs, sport business units, sport related organizations, industry observers, and policy makers a more detailed knowledge and better understanding of the size, structure, developments, weaknesses and strengths of the industry to improve their policies and business plans for increased productivity, competitiveness and efficiency in the sport industry and subsequently in Finnish national economy.

## 5.1 The economic significance of sport sector in Finland

In the study's first premise, the author assumed that sport is economically relevant to Finland's national economy. If its generation of value added or GDP can be comparable with 22 main industrial groups, which the Official Statistics of Finland, EU and the UN Statistics Department have been presented them as head grouping industries in ISIC of all economic activities and we introduced it in our framework. We also learned from our introduction and theoretical background, that value added or GDP is applied to test and identify the significance of an industry by finding and comparing its value added or gross domestic product with other industries or their share in national economy of the country in question.

Supported by our results, we may argue now that the sport sector is one of the 22 main industrial heading groups in Finland's national economy. Our results indicated that the generation of value added of sport may easily fit among these 22 main industrial groups and placed in the ISIC of Finland. The comparison of the value added, gross at basic prices in current prices, revealed that the generation of sport sector's valued added during these ten years was larger than industrial groups in B category: Mining and quarrying; in E category: Water supply and waste management, in R category: Arts, entertainment and recreation: and in T category: Household service activities. Therefore, the sport sector economically occupied the 18<sup>th</sup> among 22 industries in this context; as such our first assumption in the theoretical background of the study is supported.

In addition, these 22 heading industrial groups divided into 135 top industries. Some of the industries in these industrial groups, for instance in manufacturing, wholesale trade and construction generate huge value added. These main 135 industries in Finland are categorized regardless of their belonging to these 22 main heading groups. A comparison of the value added of sport sector with these 135 top industries during the ten years (2002-2011) period revealed that sport was the 50<sup>th</sup> largest industry in terms of its generation of value added. Although in 2004, it was the 46<sup>th</sup> biggest industry in the country which dropped down to 55<sup>th</sup> in 2007. Overall, the sport sector as an industry in this context is also the 50<sup>th</sup> significant industry in Finnish economy from 2002 until 2011.

Moreover, the sport sector presented considerable performance in the other variables of the study. During a ten year period from 2002 until 2011, on average the share of sport enterprises was 1.7% of total enterprises in Finland. The employment in sport averagely constituted 1.15% of total employment of all enterprises in the country. The average production of sport goods and services reached to 1.25% of total output of the country. At the same period, 0.52% of Finland's total exports happened in sport goods and services while 0.48% of total imports of the country were in sport related goods and services. The sport sector on average generated 1.45% of value added of the country while sport

GDP constituted 1.31% of GDP. Close to 0.38% of taxes on production in Finland was generated through sport sector.

These acknowledgements about the economic significance of sport sector guide us to the discussion about why these findings and information are beneficial for our societies, organizations and decision makers. This study may inform them to consider, while they are directing their efforts and resources in economic policies towards sport economic involvement, they are pointing to the 50<sup>th</sup> biggest Finnish industry. Sport as an industry is one of the complex industries in world. Because it is not considered as an industry in any economic industrial classifications, there is lack of information about the importance of sport as an economic sector, while the economic performances of other industries is searched and reported every year by industrial organizations and industry researchers. This study, not only gives a whole picture of the industry, it also explores the most important issues in related sectors to offer us the chance even to know the sector's weight and their standing in the country in terms of their enterprises, employment, exports, imports, generation of GDP, value added, tax revenues and the like. Therefore, this knowledge makes us capable of understanding these weaknesses and strengths in order to make effective policies and improve their performances, to make them more productive, competitive, and beneficial for our societies.

## **5.2 The shifts in industrial outputs of sport sector**

The second hypothesis of the study was concerned with the shift in industrial production of sport sector. Despite many issues concerning this topic, it makes us able to understand the interests of new entrepreneurs and investors in sport business, and to examine in which business areas they are interested and why. By realizing this trend, we understand where and how our industry is expanding. The manufacturing and services have their own different characteristics. Generally, market for services is mostly domestic, and it covers only its national geographic areas. On the other hand, international markets are huge and diverse. The manufacturing market in Finland also attracts foreign competitors while in services the competition is mostly domestic. This will help us to allocate our efforts in assessing right information to encourage business units in right direction, and help them invest and initiate their activities in proper areas in manufacturing and service sectors.

The author has adapted the second assumption from European Union (2014) where they noticed that there is a shift in Europe's industrial production and acknowledged that the long-term shift from manufacturing to services is continuing. Market services have grown to a point where they account for nearly half of EU's gross value added. The share of non-market services has also increased to 23% in 2012. Conversely, manufacturing activities declined to around 15% of overall gross value added in 2012. In our second premise, we also assumed that there is a shift in industrial production of sport sector and its

development in services is getting larger than its manufacturing. We considered additional variables to support the idea. We thought that if we divide our variables each of industrial output, sport enterprises, employment, and the like into two distinctive categories as manufacturing and services, and collect all manufacturing sectors in one category and all services sectors in another as we did. We can realize the sizes, shares and developments in these two sectors during ten years to consider if this phenomenon happening. The results become so obvious that we may claim that there is a shift in sport industry in Finland and it is heading from manufacturing towards more services directions.

We may evidence, for our argument, that in aggregate number of sport enterprises, there was shift from manufacturing towards services. Both size and growth in this variable confirm the idea. We also controlled the sectors to be mindful that the increases in the size and growth of only one or two main sectors, does not to undermine our analyses. Considering the size of sport services and manufacturing, sport services were 5.8 folds larger than sport related manufacturing in 2002 and 2003 while increased to 5.9 folds in 2004, to 6.1 folds in 2005 and continued its increases until 2011, which reached to 6.9 folds. This means that the concentration of sport enterprises in services become larger than manufacturing in the industry. The share of services, which was 85% in 2002 and 2003, increased to 86% in 2004, 2005, 2006 and 2007. It continued to increase to 87% in 2008, 2009, 2010 and 2011. While the industry was developing by average rate of 3.8% per year, the increase in manufacturing was about 1% on average during these ten years whereas in service sectors it was about 3%. Thus, our results in aggregate number of sport enterprises in both manufacturing and services indicate that there is a shift of concentration or a trend in the increases of the number of enterprises in service sectors, and more increases in services has turned sport industry to a more service-oriented direction rather than manufacturing.

We noticed the same trend in our employment variable too. The size, share, and the growth in service sector revealed the same performances. The share of service sector in employment started to rise from 62% in 2002 to 64% in 2003, to 67% in 2004, to 68% in 2005 and 2006, to 67% in 2007 and 2008, to 73% in 2009 and 2010, and to 77% in 2011. This also confirmed that increases in employment are happening mostly in services and is directing industry towards service sectors employment than manufacturing. In the production of sport goods and services, the results revealed that production in the sport industry is heading to be more services rather than manufacturing too. The service sectors' production output was 5.6 folds larger than manufacturing sectors and service sectors produced 85% of total industry's output in 2002. Considering the share of production in service sector shows that it rose to 86% of total output of the industry in 2003 and to 87% in 2004. It declined to 86% in 2005, to 84% in 2006 and 2007, and to 85% in 2008 but soared to 91% in 2009, 89% in 2010, and 91% in 2011.



In value added, we detected this move as well. The share of services sectors in generation of value added increased from 91% in 2002, 2003, 2004, 2005, and 2006, to 92% in 2007, 93% in 2008, 95% in 2009, 94% in 2010 and 2011. In generation of GDP, the share of GDP in sport service sectors indicated increases too. In 2002 and 2003, the share of sport service sectors' GDP was 91% while in the manufacturing sectors' was 9%. The share of service sector in industry's GDP started to increase to 92% in 2004 and 2005 although it declined to 91% in 2006. It advanced again to 92% in 2007, to 93% in 2008, to 95% in 2009, to 94% in 2010 and reached to its highest level to 95% in 2011, indicating that the GDP in sport sector is shifting to be more service oriented than manufacturing. Thus, we may theorize our second hypothesis and claim that the sport industry in Finland is directing to more service-oriented directions rather than manufacturing.

### **5.3 Structure and the scope of industrial sectors of sport in Finland**

One of the most important issues in studying every industry is the recognition of the structure of the industry in question. The structure of an industry is composed of sectors that perform considerable economic activities in their related areas and may differ within regions and countries. In one region or country, a sector of industry might perform huge economic performances and be considered a significant sector of the industry; while in others the same sector may be inactive.

In some countries for instance in China, the sport-related manufacturing in textiles and sports footwear are two significant bodies of the sport industry, while in others, these manufacturing are not considered notable. The college sport in United States is another example which is economically a significant part of sport industry while in others it is not. Thus, if the structure of sport industry in Finland defers from the structure of other countries, it does not create any surprises. It is not up to researchers to draw the real structure of an industry in one country; instead, it is these dynamic sectors which create the structure with their notable activities. However, researchers can compare and report which sectors in one country have been a significant part of the industry, and why. Meanwhile, our investigation resulted to notice 10 sectors of industry in sport enterprises and employment in Finland. We have not however ignored other sectors performances in production, exports and imports of sport products although they revealed low performance and were not included in the structure of sport industry in Finland at first place.

The study found out that there were ten sectors, which were running this industry ahead in Finland in Suomen Yritykest (Finland Enterprises) publications. Four in manufacturing sectors and six sectors in sport related services were the main driving forces in related enterprises. Manufacturing of building

and repairing of pleasure and sport boats, manufacturing of sporting goods, manufacturing of other sport transport equipment, and manufacturing of bicycles were the ones in manufacturing sectors which revealed excellent performance in manufacturing of sport related goods. On the other hand, wholesale trade services of sports goods, retail trade services of sports goods, renting of sports equipment, ballrooms and dance instructors' services (sport education), operation of sports arenas and stadiums, and other sporting activities were those active sectors in sport services. If the business areas of the six sectors in the sport services were covering all related services areas of sport industry except sport construction in Finland, the manufacturing sectors seemed to have more missing grounds in sport textile, sports footwear and other manufactured products in sport related goods. The study of the portfolios of these manufacturing considered in the industry revealed that there were some sport related products, which these 4 aforementioned manufacturers were not engaged to produce them while these products had presence in the foreign trade of Finland, and in the production of industrial outputs of some industries.

By studying the structure of sport industry in other countries, and through our own knowledge from previous research, we know that there are other manufacturing activities in sport industry's related sectors which their profile were not appeared in Finnish enterprises publications. Our research in the other chapters revealed that in fact in Finland there were 9 manufacturing activities which were involved in the production, exports, and imports of sport related products. The products related to sports textiles, sports footwear, sports weapons and ammunitions, sports aircraft equipment and billiards equipment in manufacturing of sport related games were not covered by these four manufacturing activities which were studied in these publications. The main reason was that there were no enterprises to produce these items individually, and the production of some sporting goods was only small part of big enterprises in other manufacturing. So far, there were no data available about the number of enterprises, the aggregate turnover, and the number of employment in these missing manufacturing in Finland's Statistics publications. We should also add the construction of sport facilities to this context in sport services, which had the same situation.

If we want to draw a reliable structure for the sport industry in Finland, the structure of the industry should somehow cover all related areas. The fact that Finnish Statistics and other Statistics Offices around the world are not considering these manufacturing as an independent sectors might have been because of various reasons. One of the facts goes to their low level of manufacturing or production activities. The industrial classifications among countries are adopting manufacturing and enterprises in which their economic activities are responding to the rules and limits of these standard classifications. When, the value of manufacturing or service output, does not meet these standards and regulations, the manufacturing little by little disappears and vanishes from those data collections.

Another reason also concerns structural problems. As sport is not an industry, industrial classifications, are not categorizing these activities by purpose of their use. Therefore, some big enterprises in the industries like textile, footwear, and weapons and ammunition, which are active in many manufacturing activities and production lines in their own related areas, do not produce only sport related products. It is possible that only small parts of their production activities are directed to sport goods and when the market favors economic interests, they raise their productions in sport related categories. When the markets suggest low interest, they simply lower their production activities. These enterprises are so big in size, which we cannot presume that they are sectors of the sport industry, but we can draw a line and study their involvement in our industry by measuring their production value of sport goods, their exports and other related activities by economic tools.

Our research in our chapter revealed that the production value of the sport related products in sport textile, sport footwear and sport aircraft equipment were very low. For instance, the total production value of sport related textile was just over eight million Euros in 2006 in 21 products categories while the production value of sport related footwear was only hundred thousand Euros in five product categories at the same year in the country. On the other hand, the imports in these three manufacturing areas were high and the exports were very low.

It seems that these manufacturing lost so much of their manufacturing activities inside the country and this part of the study confirms the lack of their presence in this regard. The web pages of some of big sport textile and footwear companies in these two manufacturing areas indicated that they transferred some of their manufacturing activities abroad and left major parts of their production activities to their subcontractors in China, Vietnam, India, Bangladesh and some other Asian or low cost European and neighboring countries. According to Moilala (2006) nearly 90% of the clothes and shoes sold by Halti come from subcontractors, with the greatest amount of manufacturing taking place in China. Karhu has all of its ski shoes and boots manufactured in China. Exel has walking and skiing poles manufactured in China out of tubes that made in Finland. Erätukku has shoes and textiles manufactured in China, Thailand and Bangladesh.

A glance to the Finnish Wholesalers Association of Sport Goods members (STL, or Suomen Tukkukauppiaden Liitto Ry), which imports, manufactures, and trades sports and leisure products in Finland reveals another fact. It indicates the membership and presence of the most distinguished sport textile and footwear companies in the world within Finnish markets. The presence of companies like Adidas Suomi Oy, Nike Finland Oy, Puma Finland Oy and Reebok Finland Oy in Finnish markets suggests tense competitions for Finnish manufacturers in this regard and a clue that why Finnish manufacturers in sporting goods are lowering their productions and moving abroad to obtain low production costs. These moves will result to job losses for employees in manufacturing, lower their production costs and other economic co-operation with other sec-

tors inside the country and in return, it will change them from manufacturing units to importers.

Another important issue in studying the structure of the industry goes to the number and size of enterprises in sectors of the industry. These two issues constitute important factors in the sectors and consequently in the industry, in terms of their competitiveness, production, employment, turnover and other economic parameters. For instance, the size of Finnish sport enterprises revealed notable facts in this context. From employment and personnel perspective, we know that the size of one enterprise can be limited to one person as an entrepreneur or many partners as corporation from one to millions of employees. The study suggested that the average size of the enterprises in sport industry in Finland comprised small sizes in related sectors and the size of manufacturing enterprises were bigger than enterprises in sport services. The manufacturing of bicycles appeared to have the largest average size of the enterprises in sport industry in Finland. It had 30 personnel in every enterprise. While the average size of the enterprises in manufacturing of other sport transport equipment comprised 9 personnel, the manufacturing of sporting goods with 7.1 personnel and the manufacturing of building and repairing of pleasure and sport boats with the average of 5.7 personnel had the highest average size in the industry respectively.

Considering the average sizes in services reveals that their average sizes are even smaller than manufacturing. Among the sport services sectors, the operation of sport arenas and stadiums enterprises had the biggest average size with 4.8 personnel for every enterprise. While the retail trade and wholesale trade services of sporting goods with 2.9, and renting of sporting goods services by 1.6 were in second and third place respectively. Other sporting activities services sector by 1.4 and the ballrooms and dance instructor's services (sport education) by 1.7 personnel for every enterprise had the biggest average size of the enterprises in next stages.

This knowledge of the sizes of Finnish enterprises in sport's different sectors creates important notions. Despite their weakness in competitive international markets due to their small sizes, it also reveals how important is the development of new enterprises or closing them in different sectors of the industry in the country. For instance, an entry or closure of one enterprise in manufacturing of bicycle is equal to the opening or closing of more than 20 enterprises in renting, dance instructors or other sporting activities related sectors. Similarly an entry of one enterprise in sporting goods manufacturing is equal to at least 4 enterprises in other sporting activities sector. So far, these small sizes reveals that Finnish sport enterprises might be competitive in their own markets, but in international arenas they will not be able to compete with giant international corporations in obtaining desired market shares and achieving competitive edges like mass production, huge capital and the like. This requires Finnish enterprises to develop new approaches and strategies to overcome these weaknesses.

So far, we faced the same problems in construction of sport facilities and billiards equipment in Finland, as there were no data in Finnish Enterprises publications from 2002 until 2011 although there were clear codes in industrial classification of construction and toys and games industry in Finland. Again, it seems that large construction companies in Finland devoted to accomplish construction of sport facilities in country. Furthermore, we found the value of their involvement in sport construction from their supply tables in Statistics of Finland. In billiards equipment, there was no data on production, but there were import and exports data in these items. It might be either production by other production units or high amount of imports and then exports to second destination.

Now by these finding we can argue that Finland's sport industry has composed of 16 notables sectors. The manufacturing of sport apparel, manufacturing of sport footwear, manufacturing of sport guns and ammunitions, manufacturing of sport and pleasure boats, manufacturing of sporting goods, manufacturing of sport aircraft, manufacturing of bicycles, manufacturing of games and toys (billiards), and manufacturing of sport transport are those active in manufacturing groups. The wholesale of sport goods including bicycles, retail trade of sport goods including bicycles, rental trade of sport equipment, sport education (ballrooms and dance instructors'), operation of sport arenas and stadiums, other sporting services and construction of sport facilities in sport related services comprised the notable sectors in services.

## **5.4 The size and growth of sport industry**

One of the main questions and aims of the study was to find out the size of the industry (sport sector) in introduced subjects in sport enterprises, employment, production, exports of sport goods and services, imports of sport goods and services, value added of sport sector, sport GDP, tax revenues, total supply, and consumption. The study also aimed to find out if there is real growth in these variables.

The study can claim that the sport industry was a growing industry in Finland. The nominal increases in the aggregate number of sport related enterprises, the increases in the number of employment in these enterprises and the real growth in the production of the related enterprises, imports, value added, GDP, taxes on production, total supply, and consumption all indicated growth during targeted years from 2002 until 2011. The study may claim that there were growth in all variables in industry except exports, but this is not enough and may mislead us to ignore what is really happening in the industry.

#### 5.4.1 Growth in sport enterprises

One of the main questions of our study was the size and growth in sport enterprises. The study found that there were 3 952 enterprises in sport industry's related sectors in Finland in 2002 which increased to 5317 in 2011. The results suggested that average rate of increases in the number of sport enterprises was 3.8% per year during these ten years. All sectors faced increases except the manufacturing groups of sporting goods and other sport transport equipment. The lack of growth in enterprises in manufacturing of sporting goods is one of the disappointing facts in this regards as although manufacturing groups in sport related boats, sport guns, sport air craft and the like produce sport related goods and items, sporting goods manufacturers are in the center of production units in the industry.

Meanwhile, one might argue that the growth in the number of enterprises is not a good indicator for growth in one industry because the size of enterprises may differ considerably from one to another. One enterprise, which faces closure, might have thousands of personnel with a very high output or turnover while another enterprise, which has been joined the industry might have only one personnel with a very low level of output or turnover. On the other hand, the high rate of inflation in the country might influence the output or turnover during the years of the study. The argument is correct only when we consider just one or two variables. However, the analyses of the size of sport related enterprises revealed that the industry is enjoying small and medium size of enterprises in many sectors.

The average number of the personnel in these enterprises hardly reached over five persons in sport services. Among the manufacturing, only the manufacturing of bicycles had personnel over thirty and the manufacturing of building and repairing of pleasure and sport boat, the manufacturing of sporting goods, and the manufacturing of other transport equipment's personnel had under 10 personnel which can be concluded that the industry comprises small size of enterprises in the country. The decreases in the number of enterprises in two manufacturing activities in 2003, 2004 and 2006 did not caused any decreases in the number of enterprises, employment and the turnover of whole industry. So far, the industry faced high employment and production output during these ten years, which even by applying the increments of inflation rates in these years cannot hurt the line of the increases in the industry. Moreover, the employment increased significantly to approve the developments in these variables and to confirm the growth in the industry.

The question for discussion in this context raises here that the industry received more entries in the services sectors than manufacturing sectors. Even the biggest sector in manufacturing, the building and repairing of pleasure and sport boats, comprises both building and repairing enterprises, and we do not know whether the increases happened in building of these boats which is more manufacturing related issue, or it occurred in repairing of these boats which seems more of a service related context. The fact that the entry of new enter-

prises in the industry happened in service sectors reveals the idea that entry in service sectors is much easier than manufacturing sectors as the opening of new enterprises in some service related sectors do not need large capital, educated and high number of workforce for example. The fact that more increases among service related sectors happened in other sporting activities sector indicates that new entrepreneurs are targeting the sectors, which comprises one of the smallest sizes of the enterprises in the industry. Our analyses in the size of the enterprises revealed that this sector was holding one of the smallest sizes of the enterprises in industry.

The growth in the number of new entries in the industry reveals another significant fact too. It indicates the interest and willingness of the investors and new entrepreneurs for embarking their business activities in sport industry in Finland. Considering the addition of 1,365 new enterprises in the industry, even if we assume one person for ownership, means 1,365 new applications of interests for doing business in this industry. The application of 1,365 new enterprises, even in sectors with smallest sizes secures many families' economic health. This brings responsibility to both organizations in sport and the Ministry of Trade and Industry to grab this high willingness and interest of these entrepreneurs to direct them to some business areas of sport industry, which is more profitable for them and for the society.

#### **5.4.2 The size and growth of labor in sport sector**

One of the main interests of the study was concerning the size and growth in labor in the industry. The size of labor in sport sector was 13,567 in 2002 which increased to 17,673 in 2011. The employment in industry was increasing on average by 2.8% per year during these ten years. The highest rate of increases was in 2007 by 8% while the industry's biggest loss happened in 2009 by 4.1% (loss of 699 jobs). Considering the results, the outlook for employment in sport manufacturing groups did not look promising as it exposed that most of the decreases in the number of employment in the industry were due to the decreases in manufacturing groups, while the service sectors performed well in this regard.

For instance, the review of results revealed that the main reason for decline in 2009 was due to decreases in the manufacturing groups. The sectors in services, except wholesale of sport goods which lost some jobs in this year, were enjoying increases. On the other hand, all manufacturing groups except sport weapons faced decreases. These related results in employment chapter reveals why we should go to details and consider what really is happening inside the sectors. Otherwise superficial analyses may mislead us and cause ignorance of the most important facts in the industry.

Gain and lose of employment in the industry during these ten years indicate that the gain of seven out of fifteen sectors in the industry was negative. Meaning that during these ten years these sectors not only did not attracted additional employees but also lost their own and this negative performance happened in five manufacturing sectors and in two sectors in services. Ten years

manufacturing activities in sporting goods sector resulted in more than three hundred job cuts in the sector. The manufacturing groups in bicycles lost more than two hundred jobs during these ten years, while sport apparel sector by more than five hundred, sport footwear sector by more than one hundred twenty, and sport related motor vehicles by more than three hundred fifty were those heavy loser sectors. The rental services of sport equipment sector by eleven, and the sport construction by one hundred forty-seven additional job cuts in service sectors were worst among services.

Considering our methodology, we applied two methods in obtaining the number of employment in sport related sectors. First, we collected direct number of the employees from ten sectors while they directly presented their number of employees. Second, we applied input-output tables presented by Statistics of Finland for those, which did not presented employment data, while they had considerable production output. Four out of six manufacturing had production output values, which we were able to conduct input-output analyses. We also found generation of clear amount of production value in sport construction in this context, while the production value of items in sport aircraft equipment and billiards in manufacturing of toys and games was zero. Now, by considering these seven loser sectors, we notice that four of them were those which we collected their employment data directly.

Our results in generation and size of labor in sport sector in direct employment by 10 sectors increased from 11 853 personnel in 2002 to 17,039 employees in 2011. There were regular year by year increases except in 2009 which the sector faced small drops but recovered its regular increases rate. The situation in other five sectors which were analyzed by input-out tables differed considerably as the number of employment in these five sectors decreased from 1,714 employees in 2002 to 634 in 2011. The employment only in manufacturing of sport guns and ammunition showed increases, while in other four sectors the number of employment dropped sharply. The results were logical due to sharp decreases in their production outputs.

Another point in this regard is considering the increases inside the sectors, to note if the increases in employment in these sectors was due to new entries or old enterprises attracted new personnel. Our results during these ten years revealed that only eight sectors gain employees. Considering our results, we had only 10 sectors, which presented their number of enterprises and employment. Among five sectors, which we applied input-output analyses only the manufacturing of sport ammunition gained 78 additional personnel and other sector lost so much of their personnel. Seven out of ten sectors, which presented their related data in enterprises and employment, were those who gain new enterprises and employment.

The closure, opening, and business activities of old enterprises resulted in gain of 90 enterprises and 318 additional personnel in manufacturing of sport boats. About 1 enterprise and 69 new employees in the other sport related transport manufacturing was created. About 23 new enterprises and 208 employees in wholesale of sport goods and 187 new enterprises, 1,287 additional



employees in retail sector of sport goods, 235 enterprises, and 474 employees in sport education joined industry. In addition, 460 enterprises and 3,275 employees in operation of sport arenas and stadiums, 373 new enterprises and 109 additional employees in other sporting services sectors happened from 2002 till 2011.

On the other hand, our analysis of the size of Finland's enterprises in terms of their employees revealed that the average employee per enterprise in building and repairing of sport boats was 5.7 employees per every enterprise. While the rate was 7.1 per one enterprise in sporting goods, 9.8 in other sport transport equipment, 30.7 in bicycles, 2.9 in wholesale of sport goods, 3.2 in retail of sport goods, 1.6 in rental services of sport equipment, 1.7 in sport educations, 4.8 in operation of sport arenas and 1.4 in other sporting services.

According to these results, we may argue that in sport boats the average size of enterprises become smaller as it was 5.7 employees per enterprise. But the gain of additional employees per additional enterprise shows 3.5 employees per enterprise. We may assume that new enterprises in this sector used or employed the personnel of old enterprises or the job cuts in the old enterprises were high. There might be the case of repairing enterprises too and might be possible that most of the increases in this sector were in repairing enterprises not in manufacturing. Thus, we may surely argue that in sport boats new enterprises were the main source of employment.

The size of additional employees per enterprise in bicycle indicated that new enterprises at first place attracted new employees in the sector and old enterprises were at second stage. In the wholesale trade of sporting, the average size was 2.9 employees per enterprise, now there are 23 additional enterprises and 208 more employees indicating 9 per every new enterprise which is higher than the average size. Therefore, we can argue that the old enterprises in this sector at first stage were the main source for attracting new employees and new enterprises were the second.

The average size in retail trade of sport goods was 3.2 employees per enterprise. While the gain of sector during these ten years was additional 187 enterprises and 1,287 additional personnel, which indicate about seven employees per enterprise which looks bigger than average size. Therefore, we can argue that old enterprises in this sector were the main source of employment for new employees during these ten years and new enterprises were in second place. In sport education, the average size was 1.7 employees per enterprise; the sector witnessed the gain of 235 additional enterprises and 474 new employees. This indicates that new enterprises were the main source of attracting new employees while the old enterprises were the second source.

In operation of sport arenas and stadiums sector the average size per enterprise was 4.8 employees while the gain of the sector was additional 460 enterprises and 3,275 employees which indicate 7.1 per enterprise. This indicates that new enterprise at first were the main source of employment in the sector. In the other sporting services sector, the average size was 1.4 employees per an enterprise while the sector gained 373 enterprises and additional 109 employees,

which indicate 0.3 per an enterprise. This means that new enterprises were the main source of employment in the sector and old enterprises lost most of their employees. Thus, we may argue that during these ten years the increases of employment in sport sector in Finland was due to formation of new enterprises, while in wholesale and retail sale of sport goods it was the old enterprises, which created the grounds for new employment in the industry.

### 5.4.3 Size of production and growth in output of sport goods and services

The size of production or industry's output comprises the central topic for an industry as it substantially influences all other issues. The productions in sport sector follows two distinguish lines; in goods and in services. While the manufacturing produces tangible goods, service sectors provide certain intangible services that may not be easily identifiable. The role of the production units in goods and services, the decisions that they make, the strategies that they apply on what and how to produce or even to whom and where to produce, is the concern of every economy. Furthermore, foreign trade affects the production performance in an individual country and this expands these issues to more complicated boundaries.

Regarding the results in output, we may claim that Finland's sport sector is more service based industry rather than manufacturing. The results indicated that averagely services sectors produced more than 86 % of total output, while less than 14 % produced by manufacturing in sport goods. We may also claim that the shares of service sectors were increasing; in 2002 their share was 85%, which increased to over 87% in 2011, and the trend in the growth line of the share of service sector was upward. Meanwhile, the discussion in production of sport should cover dozens of industries in manufacturing groups and services. According to Pedersen and Thibault (2014) sport is one of the most diverse industries in the business world.

Reminding the task of this study, which aimed to find and analyze the size of output of sport sector in Finland, the study found out that the nominal production output was over three billion Euros in 2002 which increased over four and half a billion Euros in 2011. There were growth year over previous years except 2006 and 2009. The analysis also revealed real growth in industry's output after application of the increments in producer prices during these ten years and noticed that there were in fact decreases in 3 years in 2005, 2006 and 2009. The rate for producer prices were 3.6% in 2005, 5.9% in 2006 and -6% in 2009. Now, by these results, we will consider first, if all sectors had reduction or just some sectors were responsible for the interruption in growth line of the production in these periods. Which sectors were the driving forces of the growth in the industry and which one was hindering the growth? Was the imports the main reason for reduction or the consumption lowered the production?

In our results, there were 16 sectors active in sport industry in Finland of which two sectors; toys and games (billiards) and the manufacturing of sport aircrafts (gliders, hang gliders and balloons) were totally importers. The operation of sports arenas and stadiums, and other sporting activities sectors com-

bined and their production data presented in one title. Out of 14 sectors in the industry, the sport guns and ammunition sector, motor vehicles, sport boats, wholesale trade of sport goods, retail sale of sport goods, rental services of sport goods and equipment, sport education and sport services were those which were running the industry towards growth. While the situation in remaining sectors sport textile, sport footwear, and sporting goods was grim.

Considering the decreases in 2006 and 2009 in nominal output, the manufacturing of sport apparel, sport footwear, sport guns, bicycles, sporting goods, wholesale of sport goods and sport related education indicated decreases, of which five sectors belongs to manufacturing sectors, and two sectors to services. In 2009, the manufacturing groups in sport apparel, sport footwear, sport related motor vehicles, bicycles, sport boats and sporting goods revealed decreases while in services the wholesale, retail trade services of sport goods and renting of sport equipment were among those sectors which exposed decreases. This indicates that out of ten sectors with decreases, six belong to manufacturing and four to services. Interestingly three out of these four sectors in services, wholesale, retail sale of sporting goods, and renting of sport equipment were the closest sectors to manufacturing groups. Thus, the decreases in these years were the concern of the sport goods sectors rather than services.

To find out about the decreases in these sectors during 2006 and 2009, first we look at the production developments in these sectors over 10 years and noticed that the decreases in 2006 in sport education, wholesale, bicycle, sport motor vehicles and sport guns was not due to the constant decline in their growth as their production were high in 2003, 2004 and 2005. The same situation did apply for the decreases in rental services of sport goods, retail trade of sporting goods, wholesale of sport goods, sport boats, bicycle, and motor vehicles in 2009, while the situation in sport apparel, sport footwear, and sporting goods was very different.

In considering the effects of consumptions and imports on the production of these 3 sectors from 2002 till 2011, the study didn't find any considerable decline in consumption while imports increased considerably. For instance, the production of sport apparel was over thirty-seven million Euros in 2002, the imports amounted to over thirty-nine million Euros meaning that the total market supply of sport apparel was over seventy-six million Euros of which over six million Euros were exported. Therefore, more than seventy million Euros possibly consumed or stored in the country, which reveals this fact that Finnish market favored foreign supply (imports). Considering the performances of sport apparel and footwear sectors revealed that seventy-seven percent of total supply in this sector came by imports, meaning that there was high consumption in the country but it was nourished by imports. Thus, for the Finnish companies in sale or customers in Finland, the imports (foreign supply) were more attractive than production (domestic supply). Therefore, it might be true that the production input costs directed the suppliers (producers and providers) in these categories to produce these items in low cost countries, leave the production to sub-contractors, or just import these items directly from foreign suppli-

ers. There are also some famous brands in these sectors, which are very popular worldwide and might have their own customers. Now we consider if situation was same in other sectors and other years.

Considering the total supply (domestic and imports) in these manufacturing groups reveals that during these ten years seventy-seven percent of total supply in sport apparel came by imports while ninety percent of it was consumed or stored in the country and only ten percent were exported. The imports in sport footwear constituted ninety-six percent of total supply while four percent of total supply was domestic production. In bicycles, 56% of total supply produced in country and forty-four percent imported while ninety-eight percent of total supply consumed and only 2% exported. In sporting goods, 59% of total supply was domestic and 51% came by imports while 63% of total supply consumed and only 37% of it exported. Considering the production output of these manufacturing sectors reveals that the production in sport related apparel were decreasing constantly year by year from 2002 until 2011. The production in sport footwear followed the same path ever more sharply. The sporting goods manufacturing which were struggling until 2005 started to reveal constant decline on its production year by year until 2011 and lowered its production. Looking at the general tendency of the imports variable in these manufacturing sectors reveals an upward trend and in some such sport apparel, sport footwear, bicycles and sporting goods was the main source for consumption. Thus, imports played a crucial role in decreases of production in these manufacturing sectors in Finland during these ten years when the consumption was high.

The manufacturing of sport guns and ammunition, manufacturing of sport related motor vehicles and the manufacturing of building and repairing of sport boats (the largest sector among manufacturing groups) were the sunshine sectors of sport manufacturing sectors in the industry. Nevertheless, answering the question that why these sectors performed excellently but other manufacturing groups had misfortunes requires industrial experts' responses. There are however some general facts about them. Boating and hunting have strong historical backgrounds in Finnish culture. Due to its enormous number of lakes, forests, natural resources, and technological advances, the manufacturing in these sectors enjoy considerable demands. Ensuring good reputation for the manufacturing and their brands in lucrative markets in Finland, Europe, North America, and Asia opens the doors for Finnish companies to compete for market shares in these sectors. Baltic Yachts Oy Ab Ltd, Degerö Boat Oy, Eurofinn Marine Oy Ltd, Finn Yachts Ltd, Finngulf Yachts Oy, Maestro Boats, Nauticat Yachts Oy, Konekesko Oy Termalin, Suomi-veneet Oy and Terhi Tec Oy combine their historical and modern skills in making sports and pleasure boats with modern marketing tools to acquire market shares in most competitive markets. Huju, J, the CEO of Finnish Marine Industries Federation (2011) stated that currently Finnish companies are selling their products over 40 countries and the federation produces over 20,000 boats annually.

Finland like United States of America, Yemen and Switzerland has small arms ownership rights. The strong historical, natural and cultural background have created favorite environment for producers in manufacturing of sport guns. Although there are many competitive brands from USA, Russia, Germany and others, nevertheless the absence of popular brands like Adidas or Nike in textile, footwear, and sporting goods causes the manufacturing in these sectors to increase their production and enjoy the market. These sectors have the potentials to grow and claim more market share in international markets. There is a good potential market for the producers of sport guns and a business opportunity for Finnish manufacturing in Europe and United States of America if marketing units come up with some plans. In addition to international markets, sport boats, the manufacturing of sport guns and golf carts in motor vehicles benefit the rewarding domestic market too. According to Finnish Shooting Sport Federation (2013), over 300 societies are members of SAL. There are approximately 35,000 people in SAL and approximately 15,000 of them are active. In golf, according to Finnish Golf Union (2014), Finland is becoming a golf country. Nowadays the country's 132 golf clubs have altogether 144,000 members. The number of golfers has still been growing rapidly by 15% during the last 5 years.

The environment in sport manufacturing is very competitive all around world. The world's most popular brands from United States of America, Japan, Germany, France, United Kingdom, and Italy make efforts to win market share in world's lucrative markets. The presence of these companies with their well-known brands created very harsh environment to operate. The Finnish companies and manufacturers have shut down their production activities or moved their production units to other countries. The data related to these years revealed inactivity in Finnish production line in categories like ice-skates, roller-skates, parts and accessories of ice skates as well as roller skates. The production in categories in water-skis; surfboards; sailboards and other water-sport equipment, golf clubs and other golf equipment (incl. golf balls), articles and equipment for table-tennis (incl. bats; balls and nets), lawn-tennis rackets and in badminton; squash and similar rackets (incl. short-tennis rackets) was very weak. Finnish markets used foreign products or the Finnish companies' products, which produced their products outside of Finland in these categories.

The domestic sporting goods manufacturing was in strong position in the production of winter sporting goods like "cross-country skis", "snow skis (excl. cross-country skis)", and in "ski-bindings; ski brakes and ski poles". Finnish manufacturing showed good performance in the ball categories like "balls (excl. golf balls; table-tennis balls; medicine balls and punch balls)". In out-door sporting goods like "other articles and equipment for sport and open-air games". The country also performed well in "line fishing tackle; fish landing nets; butterfly and similar nets".

The technological advances in Finland and the expertise of Finnish world known brands like Amer sports, Pletonen or Karhu and their know-how knowledge in winter skis can be easily expanded to categories like water-skis

which the country suffering the benefit of its production lines. The winter oriented manufacturing should expand their vision to categories in summer sports too and not restrict their products to just domestic demands.

So far, the production in manufacturing only covered fifteen percent of the output of the industry while the service sectors produced more than eighty-five percent. Thus, services should take special attention in industry, as their production output was 5.6 folds larger than manufacturing sectors. Moreover, the manufacturing group's average growth was negative about minus three over these ten years but the services group's average growth was over four percent per year. Interestingly, the service groups raised their output by sixty-three percent in 2011 over 2002. Thus, it is important to discuss and consider the conditions on the other side of the coin where eighty-five percent of total production produced. As the production in sport services are not substitute for manufacturing products what might be the causes for growth in production in services sectors and the difference between these two sectors in the industry? Does demand and consumption in services require high production?

Considering the differences between sport goods and services in terms of their tangible or intangible products, inventories, customers, labor and location, the last 3 factors customers, labor, and location seems played more effective roles in the development of service sectors during these years. Among service sectors, sporting services, retail, sport education, and wholesale were the industry's top producers. As the results indicated the general tendency in all sectors in the services were all upward. Looking on the supply side of these sectors indicated that despite sporting services sector, which had small imports, the industry used domestic supply for the consumption meaning that the imports did not play any role in these sectors. So far, we may also claim that the significance of sport sector output is increasing in total output of Finland as we noticed that although there were increases in both sport sectors' output in one hand and in Finland's total output on the other hand, the share of sport sector revealed increases in total output of the country. However, the general tendency indicated upward trend in the growth line of the share of sport sector in total output of the country.

#### **5.4.4 The size and growth of imports in sport goods and services**

The imports of sport goods and services constitute only seven percent of total supply of sport goods and services in Finland. It is one of the factors affecting sport related GDP, employment and other business activities in national level. Therefore, needs careful analysis and follow-up in details. The study suggested growth in the real and nominal monetary values of total imports of sports goods and services in Finland over 2002 until 2011.

The imports averagely increased per year by 4.9% during these ten years while the highest increases happened in 2005 by 16.3%, and the lowest decreases recorded in 2009 by minus 11.6%. Meanwhile, the changes in the price indices showed that in fact there were reductions in 2008 and 2010 as the prices in imports changed by 3.5% in 2008, minus 11.4% in 2009, and 6.7% in 2010. Re-

minding our literature and the notions of the Organization for Economic Cooperation and development on the performance of Finnish national economy during these years suggests that unfavorable function of Finnish national economy is one of the factors affecting the imports of sport goods. Yet, the real imports, although differed with nominal results in 2009 and increased, showed reduction over 2008. Now by decreases in the nominal values in 2008 and 2009 that faced sharp fall in prices in 2009 by minus 11.4%, and it was the main reason for decline, we consider first, if the imports in all sectors of industry faced decreases or the level of decreases in some sectors caused interruption in the growth line of imports in these years. Then, we discuss other factors such domestic supply (production), if it became more active to prevent more imports or the consumption came down during these two years.

Considering the results in nominal monetary values, there were decreases about nineteen million Euros in 2008 and thirty-three million Euros in 2009, and there were decreases in imports of five sectors. There were decreases in manufacturing of sports boats by over sixteen million, the imports in sporting services fall by over nine million and the imports in sporting goods dropped by over four million Euros. The imports in sport related vehicles lowered by over half a million and in billiards dropped by over fifty-three thousands Euros. On the other hand, the decreases in 2009 over 2008 lowered eight sectors imports. Again, the biggest drop happened in the imports of sport boats. The imports in sport apparel and sporting services dropped by over three million Euros while in sporting goods, bicycles, and sport guns decreased by more than two million. In toys and games (billiards) it fell by over three hundred thousands of Euros.

Regarding the results in the performances of imports in these sectors, it reveals that the general tendency in all of these 10 sectors was upwards. The decreases in 2009 was largely due to the changes in the prices while in 2008 was due to the high imports of the items in these sectors in previous years and the high imports in 2010 and 2011 reveals that there is no sign of decreases in these items. If our result indicates that there is no shortcoming in the imports of sport goods and services, we may focus on whether the high domestic production or consumption caused the imports to fall during these years.

Regarding the domestic production of these items in their related manufacturing in Finland, it reveals that the production only in sport guns increased and although there were increases in sport services and bicycles in 2008 the production in sport footwear, sport apparel, sport services, sport boats, sport goods, and bicycles decreased. Regarding the consumption in these five sectors in 2008 and 2009, it indicates that the consumption in sport boats dropped from over one hundred fifty-eight million Euros in 2007 and ninety-three million Euros in 2008. The consumption in sporting goods and sport vehicles showed decreases too. In 2009, we got already the same results, as there were decreases in the consumption of sport boats, sport apparel, sporting services, sporting goods, bicycles, and sport guns. Thus, we think the decreases in the level of imports during 2008 and 2009 were largely due to low consumption.

There were so many categories with direct code in foreign trade of Finland related to imports of different items in sports which imported from different countries. Categories more than 100 € values were registered in the custom as imported items. All these categories and the items related to every year from 2002 till 2011 have been viewed and controlled to find out which categories are related to sports goods, or if new items and categories have been adapted or perished.

The study found out 111 categories in sport related goods and 1 in sport services. However, the same problem of defining sport goods and sport equipment existed here too. For instance whether we should include items such as motor cycles, motor cars and other motor vehicles designed for racing, tables for casino games, automatic bowling alley equipment, other funfair equipment, table or parlor games, video games for use with a television receiver, playing cards, and electric car racing sets as sport goods or not.

The import of sporting services that we adapted from a different source (National Accounts) was more general. The author believes that there is a need for a comprehensive study about this issue. Meanwhile, the study in the imports of sport sector covers nine sectors in sport goods and one in services. The imported products related to different manufacturing groups separated deliberately. It relates the imported items to concerned manufacturing in production in order to inform them for instance the level, value, categories names and the main exporter countries.

We emphasized the significance of the import of sport goods by its share in national economy of Finland in this study, and we may argue that the significance of imports of sports is declining in total imports of Finland. Our results indicated that the share of imports in total imports of Finland was averagely 0.48% during these ten years, but the trend of this share in national economy was downward. The share of imports of sports in total imports of Finland was 0.50% in 2002, which increased to 0.52% in 2003 and 0.53% in 2004. Then decreased to 0.48% in 2005 and although increased to 0.51%, in 2006 it started to decrease. It declined to 0.47% in 2007 and sharply decreased to 0.40% in 2008 although increased to 0.47% in 2009 declined and slightly to 0.46% in 2010 and 2011. Considering the monetary value of the import in our results indicated that there were increases in the imports of goods then why its share in total imports of Finland showed decreases. The fact is that the total imports of Finland have increased considerably during these ten years while the increases in the imports of sports did not follow the same path by the same speed in growth rate.

The imports of sport goods' data that this study presented were in imported items by countries of origin, meaning that study presents the countries who directly exported these products to Finland. The author would like to mention three major exporter countries in every category in every year to find out the main exporter countries in every category and in every year. These imports imported by different trade partners like wholesalers, retailers, producing manufacturers, and even by travelers.



The study revealed that the imported sport products almost coming from all countries in all around the world meaning that all European, Asian, African, American countries had accesses to Finnish markets or the Finnish importers had the possibility to reach all producer countries to practice the efficiency in this matter. However, this is only one side of the coin. For instance, most of the sport textile, sport shoes, and some items in sporting goods are coming from China, Thailand, Vietnam, India, Pakistan and other Asian countries. And, when we checked these sport shoes, sport cloths and other sport items although they have been made in these countries, but they are carrying American or European brands meaning that big American, European and even Finnish companies like Nike, Adidas, Puma, Wilson, and others are producing their products in these countries and selling them in target markets. Although this statement is not new and it is very well known in the industry for management in sport companies, we should know also the original countries and their competitive advantages which are mixed with know-how of the companies in Europe and in USA. Moreover, this issue applies to the other industries too, and is not only the concern of sport goods in Finland. Will the automation respond to this matter?

It is not wrong if we claim that the Finnish sport related imports are Chinese. China was the major exporter country of sport goods to Finland. This country was one of the 3 major exporter country in more than 70 out of 100 sport related categories which appeared most of the time as a first exporter and sometime among 3 top exporter nations of sport goods to Finland. Only in categories related to sport weapons and ammunition, and sport boats this country was not highly involved. Other Asian countries like Taiwan, Vietnam, Pakistan, Hong Kong, India, South Korea and Indonesia along with other European countries like Sweden, Estonia, Italy, Germany, France, United Kingdom, Denmark, and the Netherland were the main provider of sport related textile and sport footwear to Finland.

In sport related transport equipment, Canada and the United States of America were the major exporters and other industrialized countries like Japan, United Kingdom, Belgium, Germany, Sweden, and China appeared as top exporters during these years. In sport bicycles, European countries like Italy, Czech Republic, Turkey, France, Sweden, and Germany along with Asians like Taiwan, China and Indonesia were the main exporter nations of their items to Finland.

The total imports of air-craft equipment includes products like motors and engines for aircraft or spacecraft, aircraft launching gear, deck-arresters, ground flying trainers, and parts thereof and other categories like balloons and dirigibles, gliders, hang gliders, and other non-powered aircraft. Despite the items in these categories, the amounts of the imports were low in some years and it did not exceed even 10,000 €, only in 2006 it increased considerably. Meanwhile the low value of the imports does not suggest even the salary for one employer in this manufacturing. However, the main providers of these categories to Finland spread out around the world and included countries like Germany, Russia, Vi-

etnam, Australia, Czech Republic, Lithuania, Norway, United States of America, South Korea, Bulgaria, South Africa, China, Brazil, Hong Kong and United Kingdom.

Sweden, Germany, Italy, United Kingdom, Estonia, France, and the United States of America were the major exporter nations of sport and pleasure boats to Finland and countries like Spain, France, Canada, Norway, Denmark, Netherlands, Australia, Slovenia, Malaysia, Russia, Belgium, Poland, China, and Ukraine were also among main providers of these categories to Finland. Italy was the major exporter of sport weapons and ammunition although countries like Germany, Russia, the United states of America, Sweden, Turkey, Japan, Belgium, Austria, Czech Republic, India, Switzerland, Slovenia, Taiwan, and China were among the top 3 exporter nations of these items to Finland.

In sporting goods categories, European countries like Austria, Sweden, Germany, Estonia, France, Norway, Russia, Ukraine, Spain, Slovenia, Italy, Germany, United Kingdom, Czech Republic, Romania, Ireland Netherlands, Denmark, Poland, and Belgium were among top exporter countries. Asian countries like China, Taiwan, Japan, Hong Kong, Philippines, Indonesia, Thailand, Pakistan, India, South Koran and Malaysia as well as the United States of America and Canada along with Australia and New Zealand appeared as top 3 exporter nations of these items to Finland. The most apparent argument about the exporter countries was the issue that most technology- intensive products came from European and other advanced countries like the United States of America, Canada, Japan and China while the most labor- intensive products came from Asian countries.

#### **5.4.5 The size and growth in the exports of sport goods**

The exports of sport goods and services is another factor affecting the GDP, employment and other variables in our study, therefore needs careful and detailed attentions. The export of sport goods and services indicated very weak performance in Finland during these ten years and faced sharp decreases in 2009 and 2010, and slight fall in 2008. The nominal exports increased slightly over 2003 but decreased slightly in 2004. It recovered in 2005 and peaked over in 2006 although declined in 2007 and 2008. Then it sharply dropped in 2009 and 2010 although recovered over 2011. While there was downward trend in the general tendency of the nominal growth line of exports of sport goods and services in Finland from 2002 until 2011, the trend in the real growth line of the exports was downward too. However, both nominal and real exports revealed sharp decline during 2009 and 2010. Our results indicated averagely minus 1.8% in growth rate of exports of sport goods and services but it was due to plunge in exports in 2009 and 2010 over 2008 while the exports dropped by 62% in 2009. Otherwise, by ignoring plummets in 2009 and in 2010 over 2008, the exports would enjoy growth.

The author would like to divide the exports in two distinct eras. In first, from 2002 until 2006, we had growth in the exports, while the decreases occurred in 2007 and continued until 2011. Compared to monetary value in 2006,

we witnessed 23% increases in 2011 over 2010, and 1.5% in 2009 over 2008, but the plunge by about 62% in 2008 was so huge that the exports did not recover over until recent years. Moreover, the increases in 2010 by 1.5% over 2009 which faced decreases by 62%, was not recovery at all. In fact, the year 2010 although showed increases, had also huge loss over year 2008. Meanwhile, our first question is that if all sectors faced decreases during these two years, and, the second question is if the production, import, or consumption hindered the growth line in exports.

Regarding the exports in 2009, six out of ten sectors faced decreases in their exports. Sport apparel, bicycles, billiards, the sporting goods and sporting services were those in agenda. Meanwhile, the decreases in sport boats while the sector's exports declined sharply from 307 million € in 2008 to 157 million € in 2009 was the main reason for decline of the industry's exports in this year, as the total decline of the exports of industry was 163 million € in 2009 over 2008. Although the exports recovered slightly in 2010, some sectors still were in loss. Bicycles, sport boats, and sport guns were also in the list.

Considering the exports of all these ten sectors over ten years of our investigation, it reveals that exports in sport apparel, sport related motor vehicles, bicycles, billiards, sporting goods, and sport services were in decline. While the exports in sport boats, sport guns, sport footwear, and sport related aircraft were increasing. Moreover, one of the most important notions in the exports of sport goods is that the Finnish exporters are using the imports for exports. As we noted in the production part of the study, there were no production in billiards and sport related aircrafts. The production in sport footwear and sport apparel was even lower than the exports.

Regarding the fact that decreases in exports in 2009 was due to the decreases in the exports of sport apparel, bicycles, sport boats, billiards, sporting goods and sporting services. Now we consider how the performance of consumption was in 2009. Interestingly, the consumption in sport apparel, bicycles, sport boats, and sport goods decreased and the levels of the changes in remaining sectors was not much to affect the exports. Considering the production in all these sectors in 2009, it reveals that the production in sporting services, sport apparel, bicycles, sport boats, and billiards was in decline too. The situation in 2010 also was already the same as 2009. Therefore, the low domestic consumption and low demand from abroad caused the exports and production of the items in these manufacturing to fall.

The export of sport goods and services is losing its significance in total exports of Finland and we may present our argument by revealing its decreasing share in total exports of country from 2002 until 2011. The share of exports of sport sector averagely constituted 0.52 % of total exports of Finland from 2002 until 2011 but did not follow the same path as total exports of the country. Its share in total exports of Finland revealed sharp decline as although increased in 2003, it declined sharply in 2004 and 2005. Then, it increased slightly in 2006 but dropped sharply in 2007, 2008 and in 2009. It dropped again in 2010 although increased slightly in 2011. It seems that the exports in services caused most of

the decreases of the exports' shares in total exports, otherwise the share of exports of sport goods was averagely over 0.60% of total exports of goods in Finland and did not face the same decreases although did not reveal increases too.

The most attractive markets for Finnish products were the neighboring countries. Countries like Russia, Estonia, Sweden, Norway along with Latvia and Lithuania were the main importer countries of sport goods during these ten years of the study. These countries appeared to be the main importers in all sport related manufacturing during these years but there were other top importers too. In addition to neighboring countries, European countries like Switzerland, Germany, Denmark, Spain, Netherlands, France, Austria, Italy, United Kingdom, Czech Republic, Portugal, and Ukraine along with United States of America, Canada, Japan, Thailand, Singapore, Kuwait, Trinidad, Australia, and Panama were among the top importers of the products of sport textile manufacturing from Finland.

Most of the Finnish products in footwear manufacturing exported to neighboring countries too. Russia, Estonia, Latvia, Lithuania, Sweden and Norway along with European countries like Germany, Austria and Czech Republic and Japan were among the top 3 importer countries for the items in this manufacturing. However, the most attractive markets were Russia, Estonia, and Latvia. Again, the most attractive markets for sport other transport equipment were neighboring countries. Sweden, Russia, Estonia and Norway imported most of the Finnish made products in this manufacturing. Canada, Turkey, Ethiopia, and Gambia were in second category of top importer countries.

Most of the Finnish products in manufacturing of sport aircraft equipment exported to countries like Czech Republic, Estonia, Russia, Colombia, United States of America, Latvia, Iceland, the Netherlands, Greece, Argentina, and India. One of the most interesting points in studying the exports in this manufacturing was the accesses of exporters in this manufacturing in covering worldwide markets in this business by paying attention to the values involved in this manufacturing. Another interesting point was that there was no production of these items recorded in Finland; meaning that the imports used as source for exports.

The study indicated that neighboring countries like Sweden, Norway, Russia, Estonia, and Latvia along with the United States of America were the most attractive markets for Finnish products in sport and pleasure boats manufacturing. The European countries like United Kingdom, Germany, Ukraine, Netherlands, France, Italy, Greece, Switzerland, Denmark, Poland, and Croatia along with Costa Rico, Faroe Islands, Antigua and Barbuda, Japan, Israel, Australia, China, and Singapore were among main importers from Finland.

Most of the Finnish products in the weapons and ammunition manufacturing exported to industrialized countries like the United States of America, United Kingdom and neighboring countries like Sweden, Norway, Russia, Estonia, and Lithuania. Australia, Canada, Latvia, Switzerland, France, Poland, Serbia and Iceland were also among the main importer countries of these items from Finland. Most of the Finnish products in sporting goods manufacturing

exported to neighboring countries. In fact, Russia, Estonia, Sweden, Latvia, and Lithuania were the top importers of sporting goods items from Finland while Germany, the United States of America, and Switzerland were in second category. Norway, Denmark, Canada, Japan, United Kingdom, and the Netherlands were other main importers of sporting goods category from Finland in third category. Countries like Ukraine, China, France, Czech Republic, Austria, Belgium, and Singapore were also among the main importers of these items from Finland.

Sweden, Estonia, Latvia and France were the most attractive market for Finnish products in bicycles manufacturing although countries like Switzerland and Mozambique also appeared one of the top 3 importer nations of these categories. The study tried to find out if the numbers of the importer countries have also any connections with increases of the exports in related manufacturing. Although there were some clues that whenever the number of importer countries increased, the exports in some categories increased too. However the idea is not supported in all categories, and in some categories the study indicated that even with the increases of the amount of the exports, the number of importers decreased, or although the number of importers countries decreased, the exports at the same category increased. About 60 categories were tested and 21 of them revealed that although the sum of exports increased but the number of importer countries decreased. About 29 of these categories revealed that with the increases of the number of importer countries the amount of the exports increased too. The study showed strong tendency in many categories that whenever the exports turned from its neighboring also to other European countries, the amount of the exports increased sharply. In other words, when Finnish suppliers in addition to Russia, Sweden, Estonia, Latvia, Norway, and Lithuania tried to find other European markets or access to the United States, Canada and Japan the amount of their exports increased.

#### **5.4.6 The size and growth in sport's value added and gross domestic product**

In the discussion of the value added and GDP of sport, we tried to discuss these two issues in one part as both the value added and gross domestic product are already the same. The only difference is that if we add taxes minus subsidies to value added we obtain GDP. Value added defined as the revenue from selling a product minus the amount paid for goods and services purchased from other firms (Baumohl, 2012). Nominal GDP is the market value of all final goods and services produced in a geographical region, usually a country while real GDP is a macroeconomic measure of that value, adjusted for price changes. The adjustment transforms the nominal GDP into an index for quantity of total output (Barro, 2007). In addition, there is also Potential GDP which illustrated as a vertical line because it does not change when the price level changes. Potential GDP depends only on the economy's ability to produce real output on full employment quantity of labor.

Out of the three nominal, real, and potential GDP, the nominal and real GDP are the main interests of our discussion. Real GDP is better indicator of the

growth in GDP rather than nominal GDP. For instance, Carbaugh (2013) suggested that in using GDP to assess growth, we must realize that part of the growth that we observe may be the result of rising prices rather than an increase in output. Thus, we also use real GDP to consider if the growth in sport GDP is due to increased prices or increases in the output of the industry. Nevertheless, the study may claim growth in the value added of sport sector and sport GDP of sport in Finland from 2002 until 2011, as there was upward trend in general tendency of growth in both real and nominal GDP of sport sector in Finland.

Regarding the nominal value added, the prices index for GDP according to Finland's National Accounts and application of the price indices in nominal GDP, the real GDP increased slightly in 2003 and 2004. Then, it dropped slightly in 2005 and moderately in 2006, again increased slightly over 2007 and moderately in 2008. Then again dropped slightly in 2009 but increased considerably in 2010 and peaked over 2011. By noting on the general tendency in value added, nominal and real GDP, we had upward trends in all these three variables during these ten years, indicating that there was growth in the value added and GDP of sport sector in Finland and it was not due to increases in prices. On the other hand, the deviations around value added, nominal and real GDP lines were happening around the growth lines of the variables as the sport value added and real GDP never declined under the level of the year 2002. Therefore, the research can claim that there was growth in real GDP and value added of sport sector over 2002 until 2011 in Finland in spite of declines in 2005, 2006, and 2009.

McTaggart et al. (2012) pointed out that we call the fluctuations in the pace of expansion of real GDP business cycles. The business cycle is a periodic but irregular up-and-down movement of total production and other measures of economic activity. Every cycle has two phases; expansion and recession, and two turning points; peak and trough. An expansion is a period during which real GDP increases. Thus, we noticed expansion of sport sector's GDP from 2002 over 2004, over 2007 and 2008, and over 2010 and 2011. The recession in sport sectors' happened over 2005, 2006 and 2009.

Meanwhile, we noticed that there were decreases in real GDP during 2005, 2006, and 2009. Therefore, first we consider in which sectors these decreases took place, or do decreases happen in whole industry level. Secondly, we consider the output of the industry during these ten years to see if there were decreases in output during these three years, to make sure that the decreases were not due to the ratios in our input-output matrices. Then, we consider aggregate supply, consumption, imports and exports to see what their role in this context was. Finally, we consider intermediate inputs during these years to consider if the intermediate inputs in our input-output matrices had any effects in this issue. If they do, then, we decompose the intermediate inputs to consider the increases in which factors might cause the decreases.

In country level, there was much going on in Finnish economy during these years. The OECD (2014) pointed out that strong growth, innovation, and structural reforms in the decade preceding the 2008 global economic and financial crisis transformed Finland into one of the world's most competitive economies, ensuring a high level of well-being for its citizens. More recently, however, competitiveness has deteriorated and output has fallen. The big productivity challenge of the Finnish economy is that since 2007 Finland have lost its leading global positions in the electronics, and in the forest sector. On the other related statement, the European Parliamentary Technology Assessment (2014) pointed out that Finnish economy is undergoing deep restructuring as the electronics and forest sectors collapsed. Weak household income growth and confidence weigh on private consumption and residential investment, while low capacity utilization and uncertainty holds back business investment. The gradual improvement in the world economy and especially in the European economy will support the recovery, but strong growth will require innovation and gains in competitiveness to revive exports and investment.

Meanwhile, in considering the decreases in sport sector GDP in 2005, there were increases in all other variables except in output (real production). The level of values in aggregate supply and consumption were increased. Even there were increases in both imports and exports of sport goods and services. Thus, the main reason for decline in sport value added and GDP should be on the low production of the industry in 2005. Moreover, there was huge output in 2004 and this might be due to high production in previous year where the production of previous year was not absorbed by the domestic consumption and exports. On the other hand, in 2006 the production (domestic supply), aggregate supply, consumption indicated considerable decreases. In 2009, the industry faced the same condition in 2006, and the monetary value of all variables dropped sharply. When the output or production becomes low, everybody's first attention directly goes to demand and consumption in this case aggregate supply and aggregate demand. While in this study, we have collected data in consumption as the final purchase of goods and services constitutes consumption.

In searching the decreases among industry's sectors, the output (domestic production) in 2005 dropped in four sectors. Among industry sectors, sport education sector, bicycles, sport apparel and, sport footwear faced decline in their output. In 2006, there were drops in six sectors. Sport education, wholesale of sport goods, sporting goods, bicycles, sport apparel, and sport footwear were those faced drops in their output. In 2009, nine sectors faced decreases. The decreases in sport boats, wholesale of sport goods, sport related motor vehicles, bicycles, retail trade, sporting goods, sport apparel, rental services of sport goods, and sport footwear pointed that all sectors of the industry revealed decreases.

Regarding the consumption during these three years, there were almost decreases in consumption of all mentioned sectors that had low outputs except sporting goods in 2006, and footwear in 2006 and in 2009. While there were

huge imports in these two sectors in these years, seemingly the consumption was in favor of foreign supply, although the increases in exports in 2005 and 2006, to sharply decline in 2009.

Regarding the total intermediate inputs in our inverse matrixes in 2005, 2006, and 2009, it indicates normal increases in 2005 and in 2006 to previous years although the total intermediate consumption showed decreases in 2009. But considering the data in production (domestic supply) in nominal and real calculations revealed that there were increases in output or production value in sport sector over previous years over 2002 until 2011 except the years 2006 and 2009 in nominal and 2005, 2006, and 2009 in real production output. In addition, there were sharp decreases in exports of sport goods and services in 2009. Thus, if we argue that the decreases in real GDP in 2005, 2006, and 2009 were due to decreases in output of the industry during these three years at first place we are not wrong. In addition, we may argue that the low output during these 3 years among mentioned sectors was due to low consumption in most of these sectors and every low demand in exports in 2009. Although in sport apparel, footwear and sporting goods, foreign supplies played important role to satisfy the Finnish consumption.

Many factors affect the growth and decline of GDP in national level where we may relate them to growth in industry level such sport in long run and short run. From some distinguished factors such consumption, investment, government spending, export, interest rate, consumer confidence, asset prices, real wages, value of exchange rate, banking sector, levels of infrastructure, human capital, development of technology and the like in the aggregate supply and demand sides which may play an important role in the development of sport sector in Finland. In the short run, GDP fluctuates around its trend. Explaining these fluctuations is difficult, and the theory of economic fluctuations is controversial. Most economists use the model of aggregate demand and aggregate supply to study fluctuations. This model differs from the classical economic theories, which economists use to explain the long run. Yet, in the long- run, an economy's production of goods and services depends on its suppliers of labor, capital, natural resources and technological advances.

Policies may affect the GDP in sport sector in Finland by policy makers to offset economic fluctuations. They may help both the supply and demand side of sports, and even foreign trade in a free market country such in Finland. They may increase aggregate demand in sport in both services and in goods by increasing participation in sports and spectating, and consequently the level of equilibrium output. On the other hand, they may push prices even higher and decrease aggregate demand, they can reduce the price level but they will also push equilibrium output further away from the natural rate. They can also use either monetary policy or fiscal policy to move aggregate demand curve back to its original position. In terms of monetary policy, the central bank could increase or decrease interest rates in sport related money supply. That would cause a change in investment and thus a shift back or forward of the aggregate



demand curve. The fiscal authority, on the other hand, could both increase or decrease taxes and spending.

Stimulation of the prices in sport goods and services also may offset the level of GDP as a decrease in the price level makes consumers to spend and raise the level of demands in sport while the lower prices affects interest rates and stimulates spending on investment goods and services to increase the quantity. The fall in price level may cause interest rates to fall and real exchange depreciation and stimulation of exports in sport goods and services.

Trading with other economies also alters GDP in sports. If an economy imports more than it exports, then it will have a lower GDP, because they consume more than they produce. Conversely if an economy exports more than imports, it will have a higher GDP because it will be producing more goods than its people are capable of consuming. Therefore, changes to the structure of trade can result in fluctuations in GDP.

We find out that Finland was enjoying surplus in its foreign trade of sport goods and services. The size of the exports in sport goods and services average-ly was over seven hundred million Euros per year in Finland, while the average size of imports was over three hundred million Euros, but we find alarming signals too. The average growth rate in imports was about five percent while in exports was minus around two percent. The share of imports of sport goods and services in total imports of goods and services of Finland constitute 0.48% while in exports, it was 0.52% but their share in total imports and exports of country were declining.

The growth in production of sport goods stopped in 2008 and dropped considerably over 2009, 2010 and 2011, while imports shared more of aggregate supply, which sends alarming signals. We already showed that in which sectors in exports of sport goods Finland is suffering; also, we revealed that in which sectors imports are coming, therefore, we need more attentions from those involved in promoting the exports to contribute to expansion of the sport GDP.

#### **5.4.7 The growth in taxes on production in sport goods and services**

The taxes on production in sport sectors indicated growth from 2002 until 2011 although there were decreases in 2005 and in 2006. The average growth per year was 6% and the biggest growth recorded in 2011 by 17%, and the lowest by minus five in 2006. This indicates the close relationship between increases or decreases on taxes on production and the industrial outputs or production which is proved fact and do not require discussion. Reminding our results about the taxes on production in 2002, it increased moderately over 2003 and 2004, and declined slightly in 2005 and in 2006. It recovered in 2007 and moderately increased in 2008 and in 2009. It increased again in 2010 and peaked over 2011, indicating that it already doubled in 2011 over 2002. Now, our first interest is to discuss in which sectors these decreases happened, or if the whole industry faced decreases, then why these decreases happened. Then, we decompose the ratios in our related sectors in our input-output matrices to find out if there were some changes in these ratios.

Considering our results, it indicates that 5 out of 15 sectors faced decline in 2005. Sport education had the highest decline followed by the rental services of sport equipment. Wholesale trade of sporting goods, sport apparel and sport footwear were other sectors that faced decreases. In 2006, again the taxes dropped in five sectors, sport education, wholesale sector, sport ammunition, sport apparel, and bicycles were those sectors that had decreases. Therefore, taxes on production dropped only in five sectors in 2005 and 2006 not in all sectors. By considering the production output of these sectors, to find out if their output caused the decreases in their taxes, we find that there were decreases in the output of the all these sectors except wholesale of the sport goods and rental services of sport equipment. Looking to ratios of taxes in our input-output matrices revealed that the ratios in rental services decreased from 0.0016 in 2004, to 0.0012 in 2005 and in 2006. The ratios also in wholesale of sport goods decreased from 0.005041 in 2004, to 0.003923 in 2005, and to 0.003938 in 2006. Thus, the ratios in these years showed decreases not increases. Therefore, we can argue that the decreases in output of these sectors and decreases in the ratios of the taxes on production were the main reasons for the dropping of taxes in these sectors.

Reminding the year 2009, which industry faced reduction in production, exports and imports now one might concern why the taxes on production revealed increases? We may argue that the increase in ratios in our matrices was the main reason for increases in taxes on production. The ratios in main sectors like in sport services increased from 0.024 in 2007, to 0.028 in 2008, and to 0.029 in 2009. In sport education, it increased from 0.034 in 2007 to 0.037 in 2008 and 2009. In sport boats, it increased from 0.0019 in 2008 to 0.0021 in 2009. In rental services, it increased from 0.017 in previous year to 0.032 in 2009 and in wholesale from 0.0056 in 2008 to 0.0060 in 2008 and in motor vehicles sector; it increased from 0.0016 in 2008 to 0.0026 in 2009.

#### **5.4.8 The size and growth in the total supply and consumption in sport sector**

The aggregate supply increased constantly over 2002 until 2005 but dropped slightly in 2006, recovered in 2007, and moderately increased in 2008. It declined moderately in 2009 but increased sharply in 2010 and peaked over 2011. The industry faced decline during 2006 and 2009, now the first question is if all sectors faced decreases during these two years, or decreases in some sectors caused interruption in the growth line of aggregate supply. Looking to the results in consumption in 2006 and 2009 indicates decline during these two years, meaning the low consumption, consequently low demand was the main reason for the decreases. The second question is whether the decreases was due to general decline in the consumption, or low consumption in some sectors caused poor demand in some sectors to interrupt the growth in the supply. Looking to the results in the imports had increases by 16% and even the exports showed 2% increases over previous year in 2006, but in 2009, imports decreased by 12 % and exports revealed decline by 62%. It means that low demand by domestic

and foreign market caused the domestic supply to lower its production level in 2009. As the level of decreases in consumption was very low in 2006, still foreign supply not affected much, while in 2009 the low demand from domestic and foreign market caused both imports and domestic supply and exports to decline.

Looking for decreases in supply among individual sectors in 2006, it revealed that the decreases in 2006 happened in sport guns, bicycles and sporting services. These sectors at the same time faced decreases in their consumption. In addition, these sectors imports and exports also revealed shortcoming in this year. In 2009, the severe low consumption (demand) in sport boats, sport guns, sport motor vehicles, bicycles, sporting goods, sport apparel, and even sporting services caused the supply, imports, and exports to decline. Meanwhile, we mentioned that the general tendency of the aggregate supply was upward and it revealed growth during these ten years. Averagely 93% of aggregate supply provided by domestic supply, and only 7% came by imports. We should mention that averagely 95% the imports came in sport goods and only 5% of it was in services. At same time, the consumption followed the same path, although the level was little less. The consumption increased constantly over 2002, 2003, and 2004 but declined slightly over 2005. It increased slightly over 2006 and 2007 while recovered in 2008. It declined slightly in 2009 but sharply increased over 2010 and peaked over 2011.

Interestingly, even the average growth rate of these two variables (supply and consumption) was 4% during these ten years. However, the structure of the aggregate supply and consumption was changing gradually by the increasing growth rate of the imports and declining the exports. Although the monetary value of the exports was higher than imports, and Finland was enjoying surplus in foreign trade of sport goods, the average growth of the exports was about minus 2% while the growth rate of imports was 5%. Considering the growth rate from 2002 until 2011, the growth rate of the exports was declining while the growth rate of the import was increasing.

The 2009 and 2006 were not promising years for consumption in sports. One of the most important reasons of all was that the national economy was not in good health. When the national economy is not working properly and incomes and jobs are affected, the entertainment and sport industry suffer the most. The OECD (2009) pointed out that the global economy has slowed, dragging Finland also. In the 2008-09 recession, the Finnish economy contracted by 10% peak-to-trough despite being cushioned by relatively resilient domestic demand, prudent fiscal policy, and a sound financial sector. Exports fell dramatically and unemployment peaked at 9%.

## 6 CONCLUSIONS

### 6.1 The economic significance of sport sector in Finland

Sport is one of economically significant industries in Finland as its generation of value added and gross domestic product is comparable with twenty-two main industrial groups, which the Official Statistics of Finland, EU, and the UN Statistics Department have presented them as head grouping industries in International Standard Industrial Classification of all economic activities. The generation of value added of sport may easily fit among these twenty-two main industrial groups and be sited in the International Standard Industrial Classification of Finland. The comparison of the value added, gross at basic prices in current prices, revealed that the generation of sport sectors' valued added during these ten years was larger than industrial groups in B category in, Mining and quarrying, in E category, Water supply and waste management, in R category, Arts, entertainment and recreation and in T category, Household service activities. As a result, sport sector economically was nineteen significant among these twenty-two industries.

In addition, the Statistics of Finland, National Accounts divide these twenty-two heading industrial groups into one hundred thirty-five top industries. Some of industries in these industrial groups for instance in manufacturing, wholesale trade and construction generate huge value added and some industries in one group even generate higher than heading groups. Nevertheless, the Statistics of Finland categorized these one hundred thirty-five main industries according to their generation of value added. A comparison of the value added of sport sector with these top industries during these ten years revealed that the value added of sport as an industry averagely was the fiftieth largest industry in terms of its generation of value added although in 2004 it was the forty-sixth biggest industry in the country and fifty-fifth in 2007. Therefore, we regarded sport sector as fiftieth significant industry in Finnish economy.

Moreover, during these ten years, averagely the sport sector generated one point forty-five percent of value added of the country while sport gross domestic product constituted one point thirty-one percent of Finland's gross domestic product. The share of sport enterprises was one point seven percent of total enterprises in Finland. The employment in sport averagely constituted one point fifteen percent of total employment of all enterprises in country and its average production of sport goods and services reached to one point twenty-five percent of total industrial output. At the same period, zero point fifty-two percent of Finland's total exports happened in sport goods and services while zero point forty-eight percent of total imports of country were in sport related goods and services. Moreover, zero point thirty-eight percent of taxes on production in Finland generated by sport sector.

## 6.2 The structure and shift in the industry

There were sixteen distinguished industrial classes, which comprised the structure of Finland's sport sector or sport as an industry. The findings comprised nine manufacturing groups as the manufacturing of sport apparel, manufacturing of sport footwear, manufacturing of sport weapons and ammunition, building and repairing of pleasure and sporting boats, manufacture of bicycles, manufacturing of sport aircraft equipment, manufacturing of other sport transport equipment, manufacture of sporting goods and manufacturing of toys and games. Seven sectors constituted the sport services as the wholesale trade services of sports goods, including bicycles, retail trade services of sports goods, including bicycles, renting of sports equipment, sport education, operation of sports arenas and stadiums, other sporting activities, and sport construction.

Some of these sectors in manufacturing appeared to be active in production, exports, imports, and employment. While some sectors for instance, manufacturing of sport aircraft equipment and manufacturing of games and toys did not offer any data in production and employment, they were active in imports. Some, due to the types of their businesses didn't get involve in imports and exports for instance rental services of sport goods, operation of arenas and stadiums, sport education and sport construction.

The sport industry in Finland is shifting from manufacturing to more service orientations in its industrial aspects. Most of our variables indicated growth in the shares of services sector over manufacturing. In sport enterprises, while the number of enterprises in services was about six folds larger than manufacturing in 2002, it showed constant increases during this ten years period and increased to seven folds larger in 2011. The share of enterprises in industry increased from eighty-five percent in 2002 to eighty-seven in 2011. The average growth rate in the number of enterprises in services was developing by three percent, while in manufacturing it was one percent.

In the employment, sixty-two percent of employment produced by service sectors and thirty-eight percent by sport manufacturing in 2002. The share of service sectors in employment started to rise from sixty-two percent in 2002 to sixty-four in 2003, to sixty-seven in 2004, to sixty-eight in 2005 and 2006, to sixty-seven in 2007 and 2008, to seventy-three in 2009 and 2010, and to seventy-seven percent in 2011. In industrial output, the production headed towards more service production than manufacturing too. The share of production in sport services rose from eighty-five percent at the starting year to ninety-one percent at end. At same period, the generation of value added in sport services increased from ninety-one percent to ninety-four and in generation of gross domestic product, the share of gross domestic product in sport services increased from ninety-one to ninety-five percent.

### 6.3 Developments in the sport enterprises

Sport is an attractive industry for entrepreneurship and new business ventures in Finland. The industry was a growing area for new businesses as the number of sport enterprises was growing by about four percent averagely per year, while the number of enterprises increased from nearly four thousands enterprises from the base year of investigation to over five thousands at the end. The service sectors were more attractive than manufacturing as they were progressing by three percent while the manufacturing sectors were increasing by less than one.

The concentration of enterprise in other sporting activities sector by thirty percent was the largest in the industry followed by retail sale of sport goods and operation of sports arenas and stadiums sectors. The concentration of the number of enterprises in building and repairing of sport boats, wholesale of sport goods, sport education, and rental services of sport equipment were in next stages. However, the operation of sport arenas and stadiums sector was the most popular sector which attracted new-comers, while the other sporting activities sector, sport education, retail sale of sport goods, and the manufacturing of sport boats followed the suit. Overall, the average share of sport enterprises in total number of enterprises in country was one point five percent during these ten years where it revealed increases from one point four in 2002 to one and seven percent in 2011. Nevertheless, the general tendency in the number of sport enterprises in service sectors was upward while this trend converted in 2007 in manufacturing to downward and continued over 2011.

The Finnish enterprises are averagely small and medium size in terms of their employment. The sizes of employment in these enterprises hardly reach over thirty personnel in manufacturing sectors and five personnel in services sectors. This might make them competitive in domestic market but in international scenes, they will suffer from competitive advantages as mass production, capital, and the like.

## 6.4 Developments in the employment

The average size of employment in sport industry engages over sixteen thousands as employees and entrepreneurs. Its peak recorded over 2010 by nearly eighteen thousands while the lowest was in 2002 by over thirteen thousands and five hundreds. The employment in the industry was growing averagely by two point five percent per year and the highest growth was by eight percent in 2007 while its highest decline was in 2009 by minus four. While the employment was growing by five percent in services sectors, it was declining by minus three and two percent in manufacturing by average per year. The share of employment in sport enterprises was increasing in total number of all Finnish enterprises where it increased from one point three percent in 2002 over one percent nineteen in 2011 and by average one point fifteen percent of total employment in Finnish enterprise devoted to employment in sport industry.

The operation of sport arenas and stadiums sector had the largest employees by twenty-four percent in the industry, followed by the retail sale of sport goods sector by twenty-one percent, and sport boats by seventeen percent. Other sporting services by twelve percent, sporting goods manufacturing sector and wholesale trade of sporting goods by seven percent each, followed by sport education sector and sport related motor vehicles by three percent, sport construction by two percent occupied the latter remaining ranks respectively. Sport bicycles, sport guns, sport apparel, rental services of sporting goods, and sport footwear manufacturing by one percent were in next ranks while renting of sport equipment and manufacturing of sport footwear were the industry's smallest sectors in employment ranking respectively.

The most attractive sector for new employees in the industry was also operation of sport arenas and stadiums by additional one thousands six hundred new employees followed by retail sale of sport goods, manufacturing of sport boats, sport education, other sporting services, wholesale of sport goods, other sport related transport, manufacturing of sport guns, sport related motor vehicles. On the other hand, the highest job cuts happened in manufacturing of sport apparel, manufacturing of sporting goods, manufacturing of bicycles, manufacturing of sport footwear, and sport construction services. The formation of new enterprises was the main source of new employment in Finland in sectors in operation of sport arenas and stadiums, other sporting services, sport education, manufacturing of sport boats, and manufacturing of bicycles; the old enterprises in retail sale and wholesale of sport goods was the main source for new jobs.

## 6.5 Developments in the industrial output

The size of sport industrial output was over four billion Euros by average per year, which increased from over three billion in 2002 and reached over four and half billion in 2011. The industrial output in nominal and real output was growing over four percent averagely per year in sport industry, while the average growth per year in sport services sector was close to five percent and in manufacturing sector minus three. Sport sector produced by average one and twenty five percent of Finland's industrial output. The share of sport sector also was increasing in national output of the country as it increased from one point eighteen percent in 2002 over one point twenty three percent in 2011.

Finland's sport sector is more service based industry rather than manufacturing. The services sectors produced averagely more than eighty- six percent of total output in the industry per year while less than fourteen percent produced by manufacturing in sport goods. The share of service sectors were increasing as in 2002 their share was eighty-five percent, which increased to over eighty seven percent in 2011, and the trend in the growth line of the share of service sector was upward, while in manufacturing sectors, the slow growth until 2008 turned to downward.

The largest sector among sport sectors, which produced the highest output, was sporting services by thirty-nine percent followed by the retail trade of sporting goods by nineteen percent, sport related education by fifteen percent and wholesale trade of sporting goods by thirteen percent. The manufacturing of sport boats by six percent, manufacturing of sport goods by three percent, and sport related motor vehicles by two percent were in the remaining ranks. The manufacturing of bicycles, sport constructions, and sport weapons shared only one percent, while the share in manufacturing of sport apparel, rental services of sport equipment, and footwear was zero.

## 6.6 Development in the exports

Finland's exports in sport goods and services covers one hundred and three categories in the export of sport related goods in nine manufacturing groups and one in services. The size of the exports in sport goods and services averagely was over seven hundred million Euros per year in Finland, which was by average point fifty-two percent of Finnish total exports of goods and services during these ten years and its share was declining in total exports of the country. The general tendency in both nominal and real growth was downward. The export in sports goods and services was declining by minus one point eight percent averagely per year during these ten years and declined sharply after 2008.

The manufacturing of building and repairing of sport and pleasure boats by average of fifty seven percent was the most largest exporter of sport goods



and services followed by the manufacturing of sporting goods by twenty three percent and the sporting services by ten percent. The manufacturing of sport guns and ammunitions by six percent and the manufacturing of sport apparel by just two percent were in the next ranks. The next highest shipment in exports came in sport apparel with two percent, while the exports in sport manufacturing of sport footwear and the manufacturing of bicycles were one percent. Although there were exports in sport related vehicles and trailers, sport related aircraft equipment and billiards; their level of exports did not reach any share in exports of sport goods and services. Among these sectors, the exports in categories in sport boats, sport guns, sport footwear and sport related aircrafts were increasing areas.

## 6.7 Developments in the imports

The imports of sport goods and services covered one hundred ten categories in eight digits in foreign trade of Finland. There were one hundred nine categories in the import of sport goods and one in sport services. In addition, the imports of sport related goods and services were covering nine manufacturing in sectors and one services. The average size of imports in Finland was over three hundred million Euros during these ten years and was growing by about five percent per year. The imports of sport goods and services averagely shared point forty-eight percent of total imports of goods and services in Finland and its share was decreasing despite its increases due to high imports in other goods and services in country.

The imports of sport goods and services covered by thirty-three categories in import of sport related apparel, six categories in footwear, and one in vehicles, trailers and semi-trailers. There were also five categories in bicycles, eight categories in sport related aircraft, thirteen categories in building and repairing of pleasure and sport boats, and eight categories in guns and ammunition. Moreover, there were two categories in toys and games.

The highest imports of goods and services related to sports came in sporting goods manufacturing items by thirty seven percent and had upward trend. The second highest import of sport goods and services was in sport apparel by fifteen percent while it was fourteen percent in building and repairing of sport and pleasure boats, and bicycles. The fifth highest imports arrived in sport footwear by thirteen percent followed by sporting services by five percent, sport guns by two percent while the imports in billiards in toys and games sector, sport related vehicles, and sport related aircraft equipment did not reach any percentages. Interestingly, the imports in all sectors, in sport apparel, footwear, sport related motor vehicles, bicycles, sport related aircraft equipment, boats, sport guns, billiards, and sporting goods were growing.

## 6.8 Developments in the taxes on production of sport sector

The size of tax revenue from production in sport sector in Finland was over ninety million Euros averagely per year and averagely, it was growing by six percent per year during these ten years of investigation. Its share was point thirty-nine percent of total taxes on production in the country and its share was increasing in total taxes on production in Finland.

The highest tax on production in the industry by fifty-six percent was in sport services sector. Sport education sector by twenty five percent was the second contributor; the wholesale trade of sport goods and the manufacturing of sport boats by six percent were in third and fourth place respectively. The retail trade sector of sport goods by four percent shared the sixth rank. The manufacturing of bicycles, manufacturing sport goods and rental services of sport goods sector produced one percent of taxes in industry and they occupied following ranks respectively. The share of taxes on production in manufacturing of sport related motor vehicles, sport guns and ammunitions, sport apparel and sport footwear was averagely zero however they may rank as the following respectively.

In general, ninety-three percent of taxes on production in industry level generated in sport services sector and was averagely nineteen folds larger than manufacturing sector but the share of taxes in production in industry is growing in manufacturing sector more rapidly as their share grew from four percent in first year of investigation to eighteen percent at the end.

## 6.9 Developments in the value added

The size of value added of sport sector was averagely slightly over two billion Euros in Finland of which more than ninety-two percent of it generated by sport services while about eight percent produced in manufacturing. The generation of value added was growing averagely by three point eight percent per years and its growth at resent years was speeding rapidly. The value added in sport sector shared averagely one point forty five percent of total value added of Finland and was a growing area. The generation of value added in sport sector averagely was 15<sup>th</sup> industrial head grouping industries among nineteen industrial head grouping industries in International Standard Industrial Classification of Finland, the EU, and the UN. In addition, the value added in sport industry was averagely fiftieth largest industry among Finland's one hundred thirty five top industries introduced by National Accounts of Finland.

Among the sectors, sporting services was the biggest contributor to generation of value added in the industry by forty percent averagely per year during these ten years followed by sport education and retail trade of sport goods by twenty percent in the second and third respectively. The fourth biggest value added recorded in wholesale of sport goods by twelve percent and the manu-

facturing of sport and pleasure boats by three percent, and sport goods manufacturing by two percent were in latter ranks. Sport related vehicles, bicycles, and sport construction by one percent were in next ranks followed by manufacturing of sport guns and ammunitions, sport apparel, sport rental sector of sport equipment, and sport footwear respectively. There was a shift in generation of value added in the industry during ten years of this study as the share of services sectors was increasing while the share of value added of manufacturing sectors was decreasing in the industry level.

### **6.10 Developments in the sport gross domestic product**

The average size of gross domestic product of sport sector in Finland was over two billions and one hundred eighty million Euros, of which averagely ninety three percent produced by services and seven percent by manufacturing. The gross domestic product in sport sector in real and nominal analysis was growing averagely by three point nine percent in the industry level. However, the growth rate in sport services was four point two percent while the generation of gross domestic product was declining by two point six percent in manufacturing. Meanwhile, averagely, sport sector was producing one point three percent of Finland's gross domestic product and its share in country level was increasing.

In industry level among thirteen sports related sectors, sporting service sector by forty percent was the first producer of the gross domestic product followed by sport education sector by twenty-one percent, and retail sale of sport goods by twenty percent. The wholesale of sport goods by twelve percent was the fourth while the manufacturing of sport boats by three percent, and the manufacturing of sporting goods by two percent were in the fifth and sixth ranks. Sport vehicles and bicycles sectors both shared seventh and eighth place by one percent followed by sport construction, manufacturing of sport guns and ammunition, manufacturing of sport apparel, manufacturing of sport footwear, and rental services of sport equipment in next stages by zero share respectively.

### **6.11 Developments in aggregate supply**

The average aggregate supply (domestic production plus imports) of sport sector in producer prices was over four billions and three hundred millions of Euros per year in Finland during these ten years, of which ninety three percent produced in country and seven percent were imported, while ninety-two percent of it were consumed in Finland and eight percent were exported. The aggregate supply was growing by averagely over four percent per year. The domestic supply was growing by four percent and the foreign supply, the imports

was growing by four point eight percent, regarding that the monetary value of the imports was only seven percent by average in aggregate supply of Finland.

The situation in sport goods sector was different as foreign trade played an important role. The sport goods sector supplied averagely over eight hundred million Euros per year during these ten years of which sixty five percent were produced in the country and thirty five percent were imported, while forty percent of the total supply were exported and sixty percent were consumed in the country.

In sport services sector, the aggregate supply of sport services was averagely over three billions and five hundred millions Euros. About hundred percent of total sport services were produced inside Finland; although there were averagely over fourteen million Euros imports of sport services per year, it did not made any share in total supply. While ninety nine percent of total supply consumed inside Finland only one percent of it were exported by average during these ten years.

## **6.12 Developments in the consumption**

The consumption in sport sector was averagely over three billions and nine hundred million Euros during these ten years and was growing by four point five percent averagely per year. It was ninety-two percent of total supply while seven percent of the total supply was provided by the imports. The consumption in sport services was averagely over three billions and forty hundred millions of Euros in the country per year, which was growing by about five percent averagely per year. It was averagely ninety-nine percent of total supply in services while only one percent of total supply in services exported and the imports although averagely was over fourteen million Euros per year did not reach any share. In sport goods, the monetary value of the consumption was averagely slightly less than five hundred millions of Euros which declining by minus point four percent. It was averagely sixty percent of total supply while thirty-five percent of total supply in sport goods came by imports.

## **6.13 Further studies and researches**

Sport as an industry is a fascinating industry with dynamic sectors and new for explorations in many contexts in all around world and especially in Finland. It has very close relationships with some industries and affects them in many ways. Other industries also play an important role in the development of this industry. The relationship, which sport shares with other industries and affects them to flourish, is unknown to many. Tourism, hotels, beverage, food, airlines, bars and restaurants raise their sales by sport events. Construction of sport facilities and maintenance of these arenas offers jobs and injects money to the en-

terprises involved. Entertainment by sport events attracts visitors to host cities and countries and viewers to mass media and offers them opportunity to captivate big companies' interest for advertising. Issues like these examples comprises interesting topics for upcoming researches in this context, yet sport industrial dimensions raises significant research areas for more explorations.

Sport as an industry, like others, consists of economic systems such as labor, capital, land resources, production, exchange, distribution, and consumption of goods and services. Any inquiries in these issues will result to new knowledge and better understanding of the performance of the industry and will help the involved enterprises and decision makers to adapt the right policies for enhancing sport industry and consequently our national economy. Despite the above mentioned research issues, sports industrial sectors also make interesting areas to focus. Looking to the segments in the industry and issues related to them provides fascinating topics to seek knowledge. In addition to voluntary and public sector involvements in sports, other issues in manufacturing and service sectors comprise notable topics for investigations. Issues such school and college sport programs, professional sports, amateur sport and their related organizations, sport clubs, other commercialized sport establishments, arenas, coliseums, civic centers and stadia may reveal many interesting areas.

The community recreation programs, industrial sport programs, sport programs in social agencies (associations), military sport programs, sport marketing and consulting firms developmental programs for sport, corporate sponsors, firms in sports, academic programs in sport management, lottery, athlete images and the kind of intangible capital, sport events, and new trends in sports industrial all are new search arenas in Finland.

## YHTEENVETO

### Johdanto

Maan poliittinen ja kulttuurinen sekä koulutukseen, terveyteen ja vapaa-aikaan liittyvä hyvinvointi riippuu sen talouden tilasta. Kansakunnan tuottaman vaurauden määrä on riippuvainen sen teollisuudessa, maataloudessa ja palvelusektorilla toimivista aloista. Zhong (2010) on todennut, että yhteiskunnan tuottavuus on eri alojen muotoutumisen ja kehittymisen prosessi. Eri alojen kehitys kulkee taloudellisen kasvun mukana ja vaikuttaa kansantalouden suuntaan. Liikunta on nouseva ala, jolla on suuri kansantaloudellinen merkitys. Se on ollut kauan huomion kohteena kulttuuristen, terveydellisten, kasvatuksellisten, sosiologisten ja poliittisten yhteyksiensä takia, mutta sen taloudelliset hyödyt ovat jääneet taka-alalle. Itse asiassa vasta viime vuosikymmenien aikana eri alojen tutkijat ovat alkaneet kiinnittää huomiota liikunnan suureen taloudelliseen merkitykseen maansa kansantaloudelle (esim. Meek, 1995, Milano and Chelladurai, 2011, Cambridge Econometrics, 2003, Sport England, 2010, Nana et al., 2002, Andreff, 2006, the European Commission, 2012 ja Berwert et al., 2007).

### Tutkimuksen tarkoitus

Alakohtaisen tuottavuuden ja kokonaistuottavuuden välinen yhteys kiinnostaa analyytikkoja ja päättäjiä, koska se muodostaa sillan talouden mikro- ja makrotasojen välille ja auttaa vastaamaan kysymyksiin, jotka koskevat esimerkiksi yksittäisten alojen vaikutusta kokonaistuottavuuden kasvuun (OECD, 2001). Tutkimuksen tarkoituksena on valottaa liikuntateollisuuden kokoa, merkitystä ja kehitystä Suomessa vuodesta 2002 vuoteen 2011. Tässä käytetään apuna tuotantolähestymistapaa ja Tilastokeskuksen panos-tuotos matriiseja. Tutkimuksen keskiössä on seuraavan kymmenen muuttujan volyyymi sekä kehitys ja osuus kansantaloudesta kymmenen vuoden ajanjaksolla 2002-2011: 1) liikuntayritykset, 2) työllisyys, 3) teollisuustuotanto, 4)

tuonti, 5) vienti, 6) arvonlisäys, 7) bruttokansantuote (BKT), 8) verot, 9) kokonaistarjonta ja 10) kulutus. Esitän kaksi hypoteesia alan merkityksestä ja rakenteellisesta muutoksesta. Ensimmäisen hypoteesin mukaan liikuntasektorin voidaan teoriassa katsoa kuuluvan yhteen Suomen kansantalouden 22 keskeisestä toimialasta ja 135 suurimmasta alasta, jos sen tuottama arvonlisäys tai BKT on näiden 22 toimialan ja 135 alan joukossa. Toinen oletamus oli, että Suomen liikuntateollisuudessa on käynnissä rakenteellinen siirtymä tavaranvalmistussektorilta palvelusektorille. Seuraavat alakysymykset tarkentavat tutkimuskysymyksiä:

1) Millainen on Suomen liikuntateollisuuden rakenne? 2) Kuinka monta liikuntayritystä alalla ja sen alasektoreilla toimii? 3) Kuinka monta henkilöä ala ja sen alasektorit työllistävät? 4) Mikä on alan tuotannon volyyymi? 5) Onko alan tai sen alasektoreiden kehitys nousevaa tai laskevaa? 6) Kuinka suuri on alan arvonlisäyksen, BKT:n ja verotulojen määrä ja osuus kansantaloudesta? 7)

Kuinka suuri on liikuntatuotteiden tuonnin rahallinen arvo ja osuus ulkomaankaupasta? 8) Kuinka suuri on liikuntatuotteiden viennin rahallinen arvo ja osuus ulkomaankaupasta sekä niiden ulkomaankaupan tase ja liikevoiton ylijäämä? 9) Kuinka suuri on liikuntapalveluiden ja -tuotteiden kokonaistarjonta? ja 10) Kuinka paljon Suomessa kulutetaan liikuntapalveluita ja -tuotteita?

### **Tutkimusmenetelmät**

Tutkimuksessa käytettiin määrällisiä menetelmiä numerotietojen suoraan tai laskennalliseen keräämiseen, tulosten kuvaamiseen ja analysointiin sekä teorianmuodostukseen. Numeeriset tekijät kuten osien prosentuaalinen osuus ja tietyn pituinen ajanjakso tekevät tilanteista ja tuloksista kvantitatiivisia. Määrällisellä tutkimuksella tarkoitamme alan määrällisten ominaisuuksien ja niiden suhteiden systemaattista tutkimista. Tutkimuksessa käytettiin kuvailevaa tilastoanalyysiä, jotta tulokset voitiin esittää lyhyesti ja ymmärrettävästi. Tuloksia asetettiin myös suuruusjärjestykseen ja laskettiin keskiarvoja diskreettien määrällisten muuttujien avulla.

Makrotaloustieteessä BKT voidaan selvittää kolmella eri menetelmällä. Tässä tutkimuksessa käytettiin tuotantolähestymistapaa ja sen viitekehyksiä sekä kansantalouden tilinpidon panos-tuotos matriiseja. Panos-tuotostaulukoita käytetään myös täyttämään työllisyyden ja tuotantoverojen väliset aukot. Tiedonkeruussa käytettiin Tilastokeskuksen kymmentä tilastollista vuosikirjaa, jotka käsittelevät yrityksiä, työllisyyttä, teollisuustuotantoa, tuontia, vientiä ja kokonaissuureita. Tutkimuksessa käytetyn kansainvälisen 8-numeroisen toimialaluokituksen (International Standard Industrial Classification; TOL-toimialaluokitus Suomessa; NACE Rev. 2) kattavuus on verrattavissa Euroopan komission VOCASPORT-projektin liikuntateollisuuden määrittelmään ('hard core' ja 'upstream') sekä Euroopan komission urheilua koskevaan ns. Vilnan määrittelmään ('statistical' ja 'narrow'). Se on myös yhtenevä Meekin (1997), Milanon ja Chelladurain (2012) konservatiivisten ja maltillisten ennusteiden sekä Nanan et al. (2002) esittämien suorien ja epäsuorien arvioiden kanssa.

### **Tulokset**

Suomen liikuntateollisuussektoriin kuuluu 16 alasektoria, joista yhdeksän on urheilutuotteiden valmistajia ja seitsemän palveluntuottajia. Vuosina 2002–2011 liikuntasektorin arvonlisäyksen osuus oli keskimäärin 1,45 % ja bruttokansantuote 1,31 % Suomen bruttokansantuotteesta. Liikuntayritysten osuus oli 1,7 % kaikista yrityksistä, ja liikuntateollisuuden työpaikat muodostivat 1,15 % suomalaisten yritysten työpaikoista. Alan tuotteiden ja palveluiden tuotanto oli 1,25 % teollisuuden kokonaistuotannosta. Samalla ajanjaksolla 0,52 % Suomen kokonaisviennistä oli peräisin liikuntateollisuudesta, ja liikuntatuotteiden ja -palveluiden osuus kokonaistuonnista oli 0,58 %. Lisäksi liikuntasektorin osuus tuotantoveroista oli 0,39 %. Liikuntasektorin kokonaistarjonta oli keskimäärin

yli neljä miljardia euroa vuodessa. Tästä määrästä 93 % oli tuotettu omassa maassa ja 7 % tuotu ulkomailta, ja 92 % siitä kulutettiin ja 8 % vietiin maasta. Kokonais- ja kotimaisen tarjonnan keskimääräinen kasvu oli yli 4 %, ja ulkomaisen tarjonnan kasvu ylitti 4,8 %.

### **Pohdinta ja johtopäätökset**

Tutkimustulosten perusteella liikuntasektori kuuluu Suomen kansantalouden avainaloihin. Sen arvonlisäys ja BKT oli sijalla 50 maamme 135 suurimman alan joukossa, ja se oli 18. suurin maamme 22 päätoimialasta.

Lisäksi liikuntateollisuus kasvoi ja tuotti merkittävän määrän keskeisiä kansallisia kokonaissuureita. Huomionarvoista oli myös, että Suomen liikuntateollisuus on siirtymässä tavarantavalmistuksesta kohti palveluntuotantoa. Suurimmassa osassa muuttujiamme palvelusektorin osuudet lisääntyivät jatkuvasti valmistuksen kustannuksella, mikä on jo tehnyt Suomen urheilu- ja liikuntateollisuudesta palvelupainotteisen. Alan yritykset olivat pieniä: valmistukseen keskittyvissä yrityksissä oli harvoin yli 30 ja palveluyrityksissä harvoin yli viisi työntekijää. Tämä saattaa olla niille kilpailuetu kotimaan markkinoilla, mutta kansainvälisesti ne kärsivät esimerkiksi pääoman ja massatuotannon tuomasta kilpailuedusta. Pääosa alan uusista työpaikoista syntyi tutkimuksen aikana uusiin yrityksiin. Lisäksi liikuntatuotteiden vienti laski ja tuonti kasvoi, vaikka Suomen liikuntatuotteiden ulkomaankauppa oli ylijäämäinen. Kansantalouden heikosta tuloksesta johtunut kulutuksen lasku tiettyinä vuosina keskeytti alan kasvusuunnan ja aiheutti heilahteluja.

Muiden alojen lailla urheilu- ja liikuntateollisuus kytkeytyy talouden järjestelmiin, esimerkiksi työhön, pääomaan, maavaroihin, tuotantoon, vaihtoon, jakeluun ja kulutukseen. Näiden alueiden kartoitus tuottaa uutta tietoa ja ymmärrystä myös urheilu- ja liikuntasektorin toiminnasta. Lisätutkimuksen avulla voidaan auttaa alan yrityksiä ja päättäjiä tekemään oikeita linjauksia yritysten, urheilu- ja liikuntateollisuuden sekä kansantalouden kasvun vauhdittamiseksi.



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**Appendix 1 Industrial Sectors in Standard Industrial Classification TOL 2002**

A	Agriculture, hunting and forestry
B	Fishing
C	Mining and quarrying
D	Manufacturing
E	Electricity, gas and water supply
F	Construction
G	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
H	Hotels and restaurants
I	Transport, storage and communication
J	Financial intermediation
K	Real estate, renting and business activities
L	Public administration and defense; compulsory social security
M	Education
N	Health and social work
O	Other community, social and personal service activities
P	Private households employing domestic staff and undifferentiated production activities of households for own use
Q	Extra-territorial organizations and bodies
X	Industry unknown

**Appendix 2 Industrial Sectors in Standard Industrial Classification TOL 2008**

A	Agriculture, forestry and fishing	(01-03)
B	Mining and quarrying	(05-09)
C	Manufacturing	(10-33)
D	Electricity, gas, steam and air conditioning supply	(35)
E	Water supply; sewerage, waste management and remediation activities	(36-39)
F	Construction	(41-43)
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	(45-47)
H	Transportation and storage	(49-53)
I	Accommodation and food service activities	(55-56)
J	Information and communication	(58-63)
K	Financial and insurance activities	(64-66)
L	Real estate activities	(68)
M	Professional, scientific and technical activities	(69-75)
N	Administrative and support service activities	(77-82)
O	Public administration and defense; compulsory social security	(84)
P	Education	(85)
Q	Human health and social work activities	(86-88)
R	Arts, entertainment and recreation	(90-93)
S	Other service activities	(94-96)
T	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	(97-98)
U	Activities of extraterritorial organizations and bodies	(99)
X	Industry unknown	(00)

**Appendix 3 Value added of Finland's main industries and sport sector's value added in gross at basic prices in million Euros from 2002 until 2011**

Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0 Industries total	125453	126266	132631	136782	143779	157084	162525	149895	155560	162665
A Agriculture, forestry and fishing	3988	3869	3806	3789	3479	4723	4463	4244	4486	4711
B Mining and quarrying	333	356	371	368	505	542	638	537	725	717
C Manufacturing	30481	29647	30193	30726	33297	36662	34959	25188	27063	27076
D Electricity, gas, steam and air conditioning supply	2325	2604	2808	2628	3061	3245	3305	3656	4162	3742
E Water supply and waste management	768	820	849	896	988	1036	1157	1191	1401	1458
F Construction	7229	7633	8334	9273	9945	11098	11874	10683	10460	11018
G Trade	12539	12710	13565	14117	14066	15194	16551	15043	15210	16760
H Transportation and storage	7984	7929	8023	8144	8026	8623	8775	8058	8424	8706
I Accommodation and food service activities	1883	1928	2146	2271	2392	2569	2677	2526	2616	2767
J Information and communication	6940	6811	7469	6797	6836	7477	7834	7692	7783	8236
K Financial and insurance activities	4551	3085	3471	3390	4200	5086	4577	4361	4407	4680
L Real estate activities	12822	13561	14214	14759	15368	16181	17515	17871	18440	19767
M Professional, scientific and technical activities	4452	4725	5062	5362	5719	6563	6989	6724	6911	7530
N Administrative and support service activities	2615	2763	3085	3465	3857	4374	5237	4995	5242	5622
O Public administration and social security	7264	7613	7966	8327	8592	8941	9449	9571	9712	10027
Q Human health and social work activities	10018	10540	11103	11812	12348	13073	14121	14804	15259	16159
R Arts, entertainment and recreation	1417	1482	1523	1596	1683	1797	1991	1961	2034	2192
S Other service activities	1829	1895	2032	2156	2347	2495	2575	2666	2776	2833
T Household service activities	57	77	108	122	124	128	123	162	179	206
Sport goods and services	1707	1810	2135	2087	1906	2040	2310	2228	2368	2493